

For the use of Examiners and Centre Superintendents  
Vocational Education Programme

# VOCATIONAL COURSES

## GUIDELINES *for* PRACTICAL EXAMINATIONS

(Bye-Laws Governing Examination & Certification 2012)



**National Institute of Open Schooling**

(ISO 9001 : 2008 Certified)

(An Autonomous Institution Under MHRD, Govt. of India)

A-24-25, Institutional Area, Sector-62, NOIDA-201309

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Open Vocational Education Programme**

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## **GUIDELINES**

*for*

## **PRACTICAL EXAMINATIONS**

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Examination & Certification 2012)**



विद्याधनं सर्वधनप्रधानम्

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## **1:0 Background**

Vocationalisation of education is the need of the hour. National Institute of Open Schooling (NIOS) pioneers vocational education through the Open Learning mode. The demand from the youth is, for the courses which will impart a skill and make them capable of wage earning or make the employment generators in their own right. Keeping this in mind, there are life oriented skill based courses which can lead to self employment. Since vocational courses stress is on 'Hands on Experience' emphasis is on the practical component. Hence this book on Guidelines for Practical Examination is being provided.

## **2:0 General Guidelines**

- 2.1 Practical Examination will be conducted as per the schedule fixed by NIOS at the identified examination centres.
- 2.2 Qualified practical examiners may be appointed by the Centre Superintendent. The dates and timing of the practical examination should be displayed on the Notice Board for the students in advance.
- 2.3 The maximum marks for practical vary from course to course.
- 2.4 In each center the practical paper is to be set by the practical examiner appointed, based on the guidelines provided in the book.
- 2.5 Passing Criteria varies from course to course.
- 2.6 The total marks obtained by each student in practicals should be entered carefully in award lists sent by NIOS for each practical subject. The absentees must be marked clearly. Practical awards are to given in whole numbers and not in fractions. Similarly marks for the internal assessment are to given in whole numbers.
- 2.7 The Center Superintendent, should personally ensure that award of all the candidates have been filled in and that the awards are given by the examiner out of the prescribed maximum marks.
- 2.8 The practical examiners, center superintendent are request to go through these guidelines carefully.

## **3:0 Specific Guidelines for Centre Superintendent**

- 3.1 He/She should make proper arrangements for conducting the theory and practical examinations.
- 3.2 He/She should display list of materials/items which the candidates are required to bring themselves for the examination, in advance.
- 3.3 He/She should ensure that all the required materials are available for the examination in advance.
- 3.4 He/She should check frequently the process and conduct of the examination.
- 3.5 He/She is responsible for the fair conduct of practical & theory examination at his/her center through the external examiner appointed for the purpose.
- 3.6 He/She should maintain secrecy of confidential matters.
- 3.7 He/She should support the External examiner.
- 3.8 He/She should send the Answer Scripts/Award list and other relevant papers to respective Regional Centre without delay. List of the Regional Centre is given on the last cover page of the Guidelines.

#### **4:0 Specific Guidelines for the Practical Examiner**

- 4.1 Examiner should ensure that every job is performed by the student.
- 4.2 Examiner should maintain punctuality about the time allotted and see that the given task is finished on time.
- 4.3 As far as possible each examinee should be given separate experiment activity. (Practical in groups should be avoided).
- 4.4 Examiner should check that the list of tools, raw materials required for the practicals is adequate and correct.
- 4.5 Main emphasis should be given on evaluation of work done, professional approach competency, finish and presentation.

#### **5.0 Instruction to be given to the students during examinations**

- 5.1 Maintain proper discipline in the lab/practical examination
- 5.2 Check up the material and tools as per the requirement of the practical given.
- 5.3 Note the time allotted so that they finish the given activity on time.
- 5.4 Observe safety precautions during their practical examination.
- 5.5 In case of any problem in handling the tools etc. immediately contact the instructor/examiner.
- 5.6 Unfair means should not be adopted, otherwise action will be taken.

## GUIDELINES FOR PRACTICAL EXAM. IN AGRICULTURE

**Table – I**  
**Scheme of Practical Exam**

S. No.	Name of the Course	Level	Practical	Pass
			Max. Marks	Min. Marks
1.	Jute Production Technology (251)	Secondary	40	13
2.	Plant protection (351)	Sr. Secondary	40	13
3.	Water Management for crop production (352)	Sr. Secondary	40	13
4.	Oyster Mushroom Technology (353)	Sr. Secondary	40	13

Maximum Marks 40

Time: 3 hours

Item	Distribution of Marks	Remarks
Spotting	10 (10 Spots of 1 mark each)	10 spots may be selected from the list enclosed, course wise.
Problem/Exercise	20 (2 problems /Exercise of 10 marks each)	2 problems/exercise may be selected from the list enclosed course wise.
Practical Record	5	Student have to produce Practical Record, at the time of Practical Exam.
Viva Voce	5	Knowledge and understanding of the students should be ascertain by the examiner.

**Table 2**

**Design of the Practical Sample Paper**

Subject: **Jute Production Technology**

Max. Marks:40

Class: Secondary

Time: 3 hrs.

The weightage or the distribution of marks over the different dimensions of the practical question paper shall be as follows:

Weightage of content/module/units.

<b>S. No.</b>	<b>Contents</b>	<b>Marks</b>
1.	Module 1	20
2.	Module 2	20

**Table 3.**

**Weightage to types/forms of questions**

<b>S. No.</b>	<b>Forms of Questions</b>	<b>Marks for each Question</b>	<b>No. of Question</b>	<b>Total Marks</b>	<b>%</b>
1.	Spotting	1	10	10	25
2.	Problem / exercise	10	2	20	50
3.	Practical Records	5	–	5	12.5
4.	Viva voce	5	–	5	12.5

Note: Learning material should also be sent to the examiner with this Guidelines.

## **JUTE PRODUCTION TECHNOLOGY (251)**

### **Sample Question Paper**

*Spotting – 10 marks:* Identify and comments on any 10 spots of the following 1x10 = 10 Marks

1. Tossa Jute (Plant)
2. White Jute (Plant)
3. Seed of Toosa Jute
4. Seed of White Jute
5. Superphosphate
6. Urea
7. Potash
8. Weed (Echinochola)
9. Weed (Elusine)
10. Weed (Brochiana)
11. Weed Melochia
12. Weed Cyhprus
13. Weedicide – Vasoline
14. Weedicide – Fluchloraline
15. Weedicide – Dolapan
16. Stem Rot (Disease Symptom)
17. Root Rot (Disease Symptom)
18. Collar Rot (Disease Symptom)
19. Seedling Blight (Disease Symptom)
20. Anthracnose (Disease Symptom)
21. Semilooper (Insect)
22. Bihar Hairy Caterpillar
23. Treated Seed of Jute (fungicide or Insecticide coated seed)
24. Endosulfan (Insecticide)

25. Dimethore (Insecticide)
26. Dimethore (Insecticide)
27. Jak
28. Indicator paper
29. Lime
30. Sprayer
31. Farm Yard Manure
32. Hand lens
33. Microscope
34. Sickle
35. Spade
36. Jute fibre
37. Jute Bag
38. Seed pod of capsulari
39. Seed pod of Toosa
40. Infected/Infested Plant of Jute.

## Problems / Exercise

Attempt Any two problems of 10 marks each.

10 x 2 = 20 Marks

### Problem 1:

1. Calculate the quantity of Butachlor for spraying a field of 100 sq. ml. the Conc-of Butachlor is 50 B.C. and the rate to be applied is 2 kg. a.i. (active ingredient / ha.) by adopting the following formula.

$$Q = 10 \times R \times A/P$$

Q = Quantity of Herbicide in ml. / gm. for the required area

R = Dose of Herbicide in kg. / h (a.i.)

Where

A = Area in Sq. m

P = Active ingredient

### Solution

$$Q = 10 \times 2 \times 100/50$$

$$= 40 \text{ ml.}$$

### Problem 2:

Determine the pH of given soil sample by using indicator paper.

### Material Required:

pH Indicator paper, colour chart, 100 ml. beaker, distilled water and glass rod.

### Solution

1. Weigh 20 gm. of soil.
2. Transfer in 100 ml. beaker
3. Add. 50 ml. Distilled water
4. Stir the content with Glass rod
5. Keep it for half an hour.

6. Stir it again and dip the pH indicator paper
7. After few area seconds take the paper out
8. Compare the paper with colour chart
9. Note the pH.

**Problem 3:**

Comments on given material under following heads:

Identification

Nature

Damage

Diagnosis

Management

Note: Provide Stem rot/Root rot / Collar rot or seedling blight diseased material.

**Solution**

1. Identify Stem rot/Root rot/Collar rot/Seedling blight
2. Nature Disease caused by *Macrophomina Phaseolina*
3. These are different phases of same disease

Damage / Black to Dark colour lesions shape or longate shape Diagnose appear on leaf or stem.

4. Management
  - (i) Use of Disease free seed
  - (ii) Liming if required
  - (iii) Use Suitable Crop rotation
  - (iv) Seed treatment with fungicides.

**Problem 4:**

Draw the sketch of White and Tossa Jute and label the different parts. Bring out the major differences and their Nutritional requirement. Give one / or two variety of each species.

## Sample Question Paper I

Max. Marks: 40

Time- 3 hrs

1 x 10 = 10 marks

Q 1. Identify and comments on spots:

- (i) Tossa Jute (Plant)
- (ii) Urea (Granules)
- (iii) Seed of white Jute
- (iv) Lime
- (v) Sprayer
- (vi) Farm Yard Manure (FYM)
- (vii) Seed pod of capsuliris
- (ix) Jute fibre
- (x) Weed (Echinochola)

Q 2. Determine the pH of given soil sample by using indicator paper. 10 marks

Q 3. Calculate the quantity of Butachlor for spraying a field of 100 Sq. m. the conc. of Butachlor is 50 E.C and the rate to be applied is 2 kg. a.i. (active ingredient/ha) by adopting the following formula

$$Q = 10 \times R \times A / P$$

Q = Quantity of herbicide in ml. / gm. for the area required

R = Dose of Herbicide in kg. / h (a.i.) 10 marks

Q 4. Practical Record 5 marks

Q 5. Viva-voce 5 marks

## Sample Question Paper II

Max. Marks: 40

Time – 3 hrs.

1 x 10 = 10 Marks

Q 1. Identify and comments on spots:

- (i) Seed pod of Tossa
- (ii) White Jute (plant)
- (iii) Super phosphate
- (iv) Potash
- (v) Weed (Brochiana)
- (vi) Weedicide-Vaseline
- (vii) Weedicide – Dolapan
- (viii) Root Rot
- (ix) Jute fibre
- (x) Bihar Hairy caterpillar

Q 2. Comments on given material under following heads

10 marks

Identification

Nature

Damage

Diagnosis

Management

Note = Provide seedling of blight diseased material of jute

Q 3. Determine the pH of given soil sample by using indicator paper.

10 marks

Q 4. Practical Record

5 marks

Q 5. Viva-Voce

5 marks

## PLANT PROTECTION (351)

**Table 1**

<b>Item</b>	<b>Distribution of Marks</b>	<b>Remarks</b>
Spotting	10 (10 Sports of 1 mark each)	10 spots may be selected from the list enclosed.
Problem/Exercise	20 (2 problems/exercise of 10 marks each)	2 problems/exercise may be selected from the list enclosed
Practical Record	5	Student have to Produce Practical Record at the time of Practical Exams.
Viva Voce	5	Knowledge and understanding of the students should be ascertain by the examiner.

**Table 2**

### Design of the Practical Sample Paper

Subject: **Plant Protection**

Class : **Sr. Secondary**

Max. Marks: 40

Time: 3 hrs

The weightage or the distribution of marks over the different dimensions of the practical question paper shall be as follows:

Weightage of content/module/units:

<b>S. No.</b>	<b>Contents</b>	<b>Marks</b>
1.	Part 1 (Booklet)	20
2.	Part 2 (Booklet)	20

**Table 3**

### Weightage to types/forms of questions

<b>S. No.</b>	<b>Forms of Questions</b>	<b>Marks for each Question</b>	<b>No. of Questions</b>	<b>Total Marks</b>	<b>%</b>
1.	Spotting	1	10	10	25
2.	Problems/exercise	10	2	20	50
3.	Practical Records	5	–	5	12.5
4.	Viva voce	5	–	5	12.5

Note: Learning material should also be sent to the examiner with this Guidelines.

## Sample Questions

10 Marks

1 x 10 = 10 marks

### I. Spotting:

Identify and comments on any 10 of the following spots:

- |                                 |  |
|---------------------------------|--|
| (1) Root rot                    | (26) Bed bug                             |
| (2) Wilt                        | (27) Ant                                 |
| (3) Collar rot                  | (28) Silver fish                         |
| (4) Damping off                 | (29) Termite                             |
| (5) Stem rot                    | (30) Cricket                             |
| (6) Leaf Spot                   | (31) Cockroach                           |
| (7) Leaf blight                 | (32) Lady bird beetle                    |
| (8) Downy mildew                | (33) Aphid                               |
| (9) Late blight of potato       | (34) Shoot fly dead heart                |
| (10) Powdery mildew             | (35) Stem borer dead heart               |
| (11) Rust                       | (36) White ear                           |
| (12) Ergot                      | (37) Silver shoot                        |
| (13) Smut                       | (38) Pinhole damage in leaf              |
| (14) Fruit rot                  | (39) Bunchy top of sugarcane             |
| (15) Canker                     | (40) Damaged pod (pea/gram)              |
| (16) Necrosis of leaf           | (41) Holed tomato                        |
| (17) Leaf curl                  | (42) Holed brinjal                       |
| (18) Bunchy top                 | (43) Damage grain                        |
| (19) Nutritional disorder (NPK) | (44) Serpentine mines on leaves          |
| (20) Ring spots                 | (45) Fluid oozing fruit of bitter gourd  |
| (21) Tumour and Gall            | (46) Dropping of tender shoot and leaves |
| (22) Gall (Midge)               | (47) Pulse seed with round exist hole    |
| (23) Mosquito                   | (48) Damage fruit/guava                  |
| (24) Head louse                 |  |
| (25) Flea                       |  |

## Problems/Exercises

20 Marks

10 x 2 = 20 marks

Attempt any two problems of 10 marks each

### Problem 1:

Prepare the Bordeaux mixture by using the different components supplied. Also write the procedure.

Components to be supplied Copper sulphate, lime, water

Solution: Student must combine all the ingredients in following ratio:

---

Copper sulphate	1 kg
Lime	1 kg
Water	1 kg

---

Note: Quantities of different ingredients can be reduced but ratio will remain the same.

### Problem 2:

Observe any infested plant under the following heading.

---

S. No.	Part Damage	Injury Symptom	Causal organism	Management
--------	-------------	----------------	-----------------	------------

---

Note: Bore infested plant or fruit, infested plant can be provided. If plants are not available any damaged fruit, vegetable or leaf can be given.

### Problem 3:

Observe and comment on the material provided under following heads.

Note: Provide webbing of grains in sorghum/presence of Bore holes (Paddy).

---

Injury Direct-Indirect	Casual organism	Management method Preventive/Curative
------------------------	-----------------	--

---

## Solution

Case

Webbing of grains in sorghum    Direct    Rice    Preventive-moisture should be maintain 10%  
Injury    Moth    Curative-malathion 10ml./1.

Bore holed                                  Direct    Rice    Preventive-moisture should be maintain 10%  
Paddy    Injury    Weevil    Curative-Aluminium phosphide. Fumigation in  
air tight chamber.

## Problem 4:

Observe and comments on following material under different heads.

Material required: Diseased plant of maize/sorghum/Bajra/Rice/Wheat/Any pulse

S. No.	Symptom	Causal organism	Management
--------	---------	-----------------	------------

# Sample Question Papers

## Sample Paper-I

Max. Marks: 40

Time : 3 hours

1 x 10 = 10 marks

Q. 1. Identify and comments on spots

- (i) Cockroach
- (ii) Damping off
- (iii) Late blight of potato
- (iv) Rust
- (v) Mosquito
- (vi) Bed bug
- (vii) Aphid
- (viii) Serpentine mines on leaves
- (ix) Pulse seed with round exit hole
- (x) Holed brinjal

Q.2. Prepare the Bordeaux mixture by using the different components supplied. Also write the procedure.

10 marks

**Components to be supplied:** Copper sulphate, lime, water

Note: Quantities of different ingredients can be reduced but ratio will remain the same.

Q. 3 Observe and comment on the material provided under following heads

10 marks

Note: Provide webbing of grains in sorghum/presence of Bore holes (Paddy)

Injury Direct-Indirect	Causal organism	Management method Preventive/Curative
---------------------------	-----------------	--

Q. 4 Practical Record

5 marks

Q. 5 Viva Voce

5 marks

## Sample Paper-II

Max. Marks: 40

Time: 3 hours

1 x 10 = 10 marks

Q. 1 Identify and comment on spots

- (i) Late blight of potato
- (ii) Rust
- (iii) Mosquito
- (iv) Bed bug
- (v) Silver fish
- (vi) Termite
- (vii) Cockroach
- (viii) Aphid
- (ix) Holed brinjal
- (x) Pulse seed with round exit

Q. 2. Observe and comments on following material under different heads.

10 marks

Material Required: Diseased plant of maize/sorghum/Bajra/Rice/Wheat /Any pulse.

S. No.	Symptom	Causal organism	Management
--------	---------	-----------------	------------

Q. 3. Prepare the Bordeaux mixture by using the different components supplied. Also write the procedure.

10 marks

**Components to be supplied:** Copper sulphate, lime, water

Note: Quantities of different ingredients can be reduce but ratio will remain the same.

Q. 4. Practical Record

5 marks

Q. 5. Viva voce

5 marks

## WATER MANAGEMENT FOR CROP PRODUCTION (352)

**Table 1**  
**Scheme of Practical Exam**

Max. Marks: 40  
Time: 3 hours

Item	Distribution of Marks	Remarks
Spotting	10 (10 Spots of 1 mark each)	10 spots may be selected from the list enclosed.
Problem/Exercise	20 (2 problems/Exercise of 10 marks each)	2 problems/exercise may be selected from the list enclosed.
Practical Record	5	Student have to Produce Practical Record at the time of Practical Exams.
Viva Voce	5	Knowledge and understanding of the students should be ascertain by the examiner.

**Table 2**  
**Design of the Practical Sample Paper**

Subject: **Water Management for Crop Production**

Class: Sr. Secondary

Max. Marks: 40  
Time: 3 hours

The weightage or the distribution of marks over the different dimensions of the practical question paper shall be as follows:

Weightage of content/module/units:

S. No.	Contents	Marks
1.	Unit 1 to 3	20
2.	Unit 4 to 6	20

**Table 3**  
**Weightage to types/forms of questions**

S. No.	Forms of Questions	Marks for each Question	No. of Questions	Total Marks	%
1.	Spotting	1	10	10	25
2.	Problems/exercise	10	2	20	50
3.	Practical Records	5	–	5	12.5
4.	Viva Voce	5	–	5	12.5

Note: Learning material should also be sent to the examiner with this Guidelines.

## Sample Questions

10 Marks

1 x 10 = 10 marks

### Spotting

Identify and comments on any 10 of the following spots.

1. Sand
2. Clay
3. Wet soil
4. Saturated Soil (with excess water)
5. Soil mixed with manure
6. Khurpi
7. Spade
8. Tube Auger
9. Screw Auger
10. Balance (Scientific)
11. Aluminium Moisture Box
12. Weights
13. Irrigation Channel Section (Metal Concrete)
14. Spray Can
15. Nozzle Head
16. Sunflower Plant as indicator plant for irrigation
17. PVC Pipe (piece)
18. Aluminium Pipe
19. Water Pump
20. Tap Root (Pulse crop)
21. Fibrous Root (Wheat/maize/Sorghum)
22. Crown Root Stage of Wheat
23. Tillering Stage of Wheat
24. Flowering Stage of Bajra
25. Bucket

26. Tensiometer
27. Dry and Wet Thermometer
28. Sprinkler set
29. Paddy Straw

**Problems**

20 Marks

Attempt any two problems of 10 marks each.

10 x 2 = 20 marks

**Problem 1:**

Determine the moisture content of given soil sample by following formula and record the observation.

Material required - Soil sample in Aluminium Box, Balance, Drying oven

$$P_w = \frac{(W_1 - W_2)}{W_1} \times 100$$

$P_w$  = moisture % over dry basis or air dry basis

$W_1$  = Fresh or initial weight of sample

$W_2$  = Oven dried or air dried final weight of sample

**Problem 2:**

Demonstrate the irrigation method for following crops.

1. Cereal Name (any)
2. Vegetable Name (any)
3. Fruits Name (any)

**Solution:**

1. Border System, or
2. Check Basin or Drip irrigation, or
3. Ring system or Drip irrigation

**Problem 3:**

Calculate the moisture in c.m. for the given root zone depth in c.m. by given formula. If field capacity of soil, wilting point of soil and Root Zone Depth of particular crop is given.

**Example:**

Field Capacity = 35%

Wilting point = 10%

Bulk density of soil = 1.4 gm/cc

Root Zone Depth = 60 cm

**Formula:**

Net Depth = FC – M/100 x BD X E

When M = Soil Moisture percentage before irrigation

FC = Soil moisture percentage at FC

BD = Bulk density

E = Effective Root Zone Depth

**Solution:**

$35 - 10/100 \times 1.4 \times 60$

$25/100 \times 1.4 \times 60 = 21 \text{ cm}$

**Problem 4:**

Calculate the Total Water requirement of a Crop by the following formula if water requirement and irrigation efficiency is given

**Formula :**

$T = W \times 100/E$

T = Total Water requirement (cm)

W = Water requirement

E = Irrigation efficiency

**Example:**

The water requirement of wheat crops 60 cm and irrigation efficiency of the system is 70%. Calculate the total water requirement.

**Solution:**  $6 \times 100/70 = 85$

# Sample Question Papers

## Sample Paper - I

Max. Marks: 40  
Time: 3 hours  
1 x 10 = 10 Marks

Q. 1. Identify and comments on spots

- i. Sand.
- ii. Khurpi
- iii. Weights
- iv. P.V.C. Pipe (piece)
- v. Water Pump
- vi. Crown Root Stage of Wheat
- vii. Bucket
- viii. Sprinkler set
- ix. Paddy Straw
- x. Tap Root (Pulse Crop)

Q. 2 Determine the moisture content of given soil sample by following formula and record the observation. 10 marks

**Material required:** Soil sample in Aluminium Box, Balance, Drying oven

$$P_w = \frac{(W_1 - W_2)}{W_1} \times 100$$

$P_w$  = Moisture % over dry basis or air dry basis

$W_1$  = Fresh or initial weight of sample.

$W_2$  = Oven dried or air dried final weight of sample.

Q. 3 Calculate the moisture in c.m. for the given root zone depth in c.m. by the given formula. If field capacity of soil is given, wilting point of soil and Root Zone Depth of particular crop is given. 10 marks

**Example:** Field Capacity = 35%  
Wilting point = 10%  
Bulk density of soil of =  $\frac{1}{4}$  gm/cc  
Root Zone depth = 60 cm.

**Formula:** Net Depth =  $FC - M/100 \times BD \times E$   
When M = Soil Moisture percentage before irrigation  
FC = Soil moisture percentage at FC  
BD = Bulk density  
E = Effective Root Zone Depth

Q. 4 Practical Record 5 Marks

Q. 5 Viva Voce 5 Marks

## Sample Paper - II

Max. Marks: 40

Time: 3 hours

1 x 10 = 10 Marks

Q. 1 Identify and comments on spots

- i. Wet soil
- ii. Soil mixed with manure
- iii. Khurpi
- iv. Screw Auger
- v. Balance (Scientific)
- vi. Nozzle Head
- vii. Tillering Stage of Wheat
- viii. Flowering Stage of Bajra
- ix. Bucket
- x. Paddy Straw

Q. 2 Determine the moisture content of given soil sample by following formula and record the observation. 10 marks

**Material required:** Soil sample in Aluminium Box, Balance, Drying oven

$$PW = \frac{(W_1 - W_2)}{W_1} \times 100$$

P = moisture % over dry basis or air dry basis

$W_1$  = Fresh or initial weight of sample.

$W_2$  = oven dried or air dried final weight of sample.

Q. 3. Calculate the Total water requirement of a crop by the following formula if water requirement and irrigation efficiency is given. 10 Marks

**Formula:**

$$T = W \times 100/E$$

T = Total Water requirement (cm)

W = Water requirement

E = Irrigation efficiency

**Example:** The water requirement of wheat crops 60 cm and irrigation efficiency of the system is 70%  
Calculate the total water requirement.

Q. 4 Practical Record 5 Marks

Q. 5 Viva Voce 5 Marks

## OYSTER MUSHROOM PRODUCTION (353)

**Table 1**

<b>Item</b>	<b>Distribution of Marks</b>	<b>Remarks</b>
Spotting	10 (10 Spots of 1 mark each)	10 spots may be selected from the list enclosed.
Problem/Exercise	20 (2 problems/Exercise of 10 marks each)	2 problems/exercise may be selected from the list enclosed.
Practical Record	5	Student have to Produce Practical Record at the time of Practical Exams.
Viva Voce	5	Knowledge and understanding of the students should be ascertain by the examiner.

**Table 2**

### Design of the Practical Sample Paper

Subject: **Oyster Mushroom Production**

Class: Sr. Secondary

Max. Marks: 40

Time: 3 hours

The weightage or the distribution of marks over the different dimensions of the practical question paper shall be as follows:

Weightage of content/module/units:

<b>S. No.</b>	<b>Contents</b>	<b>Marks</b>
1.	Module 1	15
2.	Module 2	15
3.	Module 3	10

**Table 3**

### Weightage to types/forms of questions

<b>S. No.</b>	<b>Forms of Questions</b>	<b>Marks for each Question</b>	<b>No. of Questions</b>	<b>Total Marks</b>	<b>%</b>
1.	Spotting	1	10	10	25
2.	Problems/exercise	10	2	20	50
3.	Practical Records	5	–	5	12.5
4.	Viva Voce	5	–	5	12.5

Note: Learning material should also be sent to the examiner with this Guidelines.

### Spotting

10 Marks 1 x 10 = 10 Marks

Identify and comment on any 10 spots.

1. White button mushroom
2. Shitake mushroom
3. Winter mushroom
4. Paddy straw mushroom
5. Oyster mushroom
6. Panther
7. Blusher
8. Honey mushroom
9. PDA (Potato Dextrose Agar)
10. Pilled and sliced Potato
11. Oat Meal
12. Agar
13. Auto clave
14. Pressure cooker
15. Petri Dish
16. Forcep
17. Jowar Grain
18. Paddy Straw
19. Compost (FYM)
20. Chaff Cutter
21. Hessian Cloth
22. Wall Thermometer
23. Sprayer
24. Bavistine (Fungicide)
25. Dithane Z 78
26. Mushroom Fly
27. Mushroom
28. Fresh Mushroom
29. Dry Mushroom
30. Wire Basket
31. pH. Paper/Indicator
32. Mushroom Pickle
33. Maida
34. Pearl Millet/Bajra
35. Non absorbent cotton

### Problems/Exercise

20 Marks

10 x 2 = 20 Marks

Attempt any two problems of 10 marks each.

#### Problem 1:

How will you prepare media, (Potato Dextrose Agar)? Give constituents, and preparation for the medium

#### Materials Required:

Potato Dextrose Agar

Water

Peeled and sliced potatoes

Dextrose (Glucose)

Agar

pH paper

**Procedure:**

- a. Wash 250g of potatoes, peel off the skin with sharp knife. Cut potatoes into small pieces.
- b. Cook the potatoes in 500 ml of water for one hour, steam for 30 minutes in an autoclave/pressure cooker.
- c. Melt 20g of agar in another 500 ml of water by heating over a water bath or in pressures cooker.
- d. Squeeze and strain the cooked potatoes through muslin cloth.
- e. Add glucose to the filtered potato juice.
- f. Adjust pH to 7.0
- g. Add the molen agar while hot to potato juice, thoroughly mix and make up the volumes to 1 lit.
- h. Distribute the medium in 100 ml quantities to 250 ml conical flasks.
- i. Plug the mouth of conical flasks with non-absorbent cotton cover the plug with a piece of paper and the paper tied with thread.
- j. Sterilize (steam heating under pressure) the conical flasks containing the medium in an autoclave at p.s.i. for 20 minutes.

**Problem 2:**

How will you prepare Oat Meal Agar medium? Give constituents and preparation for the medium.

**Materials Required:**

Oat Meal Agar (OMA)

Water

Oat meal

Agar

pH paper

**Procedure:**

- a. Boil 40 g of champion oats in 500 ml of water, squeeze and strain the oat meal through muslin cloth
- b. Melt 20 g of agar in another 500 ml of water by heating over a water bath or in pressure cooker.
- c. Add the molten agar to filtered juice of oat meal.

- d. Restore volume to 1 litre
- e. Check the pH before adding agar, if needed, adjust the pH to 7.0 (normally for oat meal agar medium will be neutral)
- f. Follow the steps h. i. and j described for PDA medium preparation

**Problem 3:**

What steps will you adopt to use an Autoclave or Pressure Cooker for sterilizing media

**Solution:**

Autoclave is an equipment used to generate steam under pressure in which media are sterilized. An autoclave has a pressure and temperature gauge, steam outlet and safety valve while a pressure cooker is not provided with pressure and temperature gauges. Following are the steps to use an autoclave:

- a. Add potable water to a level just well above the heating coil.
- b. Keep a special tripod stand inside the autoclave.
- c. Place that inner (perforated) container over the stand. See that the water level just touches the base of the perforated container.
- d. Carefully arrange the bottles or conical flasks in the container of the autoclave in a circular fashion. Bottles or flasks with media may be arranged one above the other without tilting.
- e. Close the lid. Lid should not touch the flasks or bottle Tighten the bolts in opposite direction.
- f. Keep open the steam outlet.
- g. Switch on the main (for electrically heated autoclave) or heat with a gas burner.
- h. Note the steam coming out of steam outlet with a hissing noise. Now, close the steam outlet. Never close the steam outlet before seeing the steam coming out.
- i. Maintain the pressure at 15 p.s.i. for 20 minutes for sterilizing media or (2 hours for spawn).
- j. Switch off the main after sterilization. Gently allow the steam to escape through steam outlet by slightly opening the outlet. Avoid sudden opening of steam outlet.
- k. After cooling, open the lid and remove the materials from the autoclave.

**Problem 4:**

How will you prepare sorghum grains for mother spawn production.

**Materials required :**

1. Jowar or Wheat grains. Jowar is preferable: Avoid hard coated grains. Select good quality, well, filled bold grains free from pests and moulds. This is the food base for the fungus.
2. Glucose drip bottle: This is the container.
3. Cotton wool: Use non-absorbent cotton for plugging to avoid absorption of water-during sterilization.
4. Used papers: Use approximately 10 x 10 cm size papers to cover cotton plug of spawn bottle.
5. Jute thread: Use about 10 to 15 cm long threads to tie the paper intact with the neck of the bottle.
6. Vessel: To cook jowar grains over a chulah.
7. Hessian cloth: To spread on it half cooked grains.

**Method of preparing Mother Spawn**

Mother spawn is the mushroom fungal growth maintained on grain based medium. This is the 'seed' material for cultivating mushroom. The first generation fungal culture is called the 'mother spawn'. Normally, from the 'mother spawn' bed spawn can be produced upto third or fourth generation. Continuous subculturing may reduce the efficiency of the 'spawn'. Following are the steps for preparing mother spawn:

- a. Put the grains in water to remove chaffy and damaged grains
- b. Half cook the jowar grains (30 minutes)
- c. Test the cooked grains by gently pressing them between fingers. Grains should slightly break but should not be sticky or hard when pressed.
- d. Remove the half cooked grains, drain out water and spread over a hessian cloth evenly to allow excess water to evaporate (approximate time required is 60 minutes). Soak hessian cloth in fungicide solution containing 5g bavistin + 10 g indogo M 45 dissolved in 10 liters of water.
- e. Mix 20 g of Calcium Carbonate for every kg of grains thoroughly
- f. Fill the grains in glucose drip bottle (which are previously cleaned with soap & water, rinsed with fresh water and sun dried) upto 3/4th height (300 g/bottles).
- g. Tightly plug the mouth of the bottles with non-absorbent cotton. Loosely plugged bottles may get contaminated.
- h. Cover the cotton plug with the paper and tie it around the neck of the bottle using jute thread.
- I. Keep the bottles in an autoclave or pressure cooker. Maintain sufficient water.
- J. Sterilize the bottles with grains at 20 p.s.i. for 2 hours.
- k. After cooling, the bottles are ready for use.

**Problem 5:**

How can you prepare mushroom Soup/Mushroom Pickle.

**Solution****1. Mushroom soup****Materials Required :**

Mushroom 150g, Onion 8-g, Ginger 10gms, Garlic 5 cloves, Maida 10g, Milk 150ml, Butter 15g, Water 150 ml, Salt to taste, Pepper powder.

**Procedure:**

- i. Chop onion, ginger and garlic.
- ii. Wash and boil mushrooms in salted water, Drain and cut into pieces.
- iii. Heat butter, add onion, ginger, garlic and then the flour, cook, over a slow fire for some time.
- iv. Add milk gradually stirring continuously
- v. Cook the sauce over a slow fire for 10 minutes.
- vi. Strain the sauce. Adjust the consistency by adding mushroom stock.
- (vii) Add salted mushroom, Add pepper powder and garnish off with cream.

**2. Mushroom pickle****Materials Required :**

Mushroom 500 g, Red chillies, powder 10 g., Turmeric powder 5 g, Ginger 25 g, mace, (ground) 2 gm Fenugreek (ground coarsely) 10 gm. Pepper powder 2 g, oil to fry, salt to taste.

**Procedure:**

- i. Immerse mushrooms in cool water for a few minutes and drain water
- ii. Fry mushrooms in a pan
- iii. Add salt, pepper, mace, fenugreek, and red chillies powder,
- iv. Fry ginger in oil to light brown colour and add to the above
- v. Add Vinegar and cook for 10 minutes
- vi. Preserve in bottles

# Sample Question Papers

## Sample Paper - I

Max. Marks: 40

Times: 3 hours

1 x 10 = 10 Marks

- Q. 1 Identify and Comments on following spots
- i. White button mushroom
  - ii. Paddy straw mushroom
  - iii. Agar
  - iv. Pressure cooker
  - v. Petri Dish
  - vi. Jowar Grain
  - vii. Compost (FYM)
  - viii. Hessian Cloth
  - ix. Media
  - x. Non-absorbent cotton
- Q. 2 How will you prepare Oat Meal Agar Medium. Give its constituents and preparation of steps. 10 Marks
- Q. 3 How will you prepare sorghum grain for mother spawn production. 10 Marks
- Q. 4. Practical Record 5 Marks
- Q. 5. Viva Voce 5 Marks

## Sample Paper - I I

Max. Marks: 40

Times: 3 hours

1 x 10 = 10 Marks

- Q. 1 Identify and Comments on following spots
- i. White button mushroom
  - ii. Oyster mushroom
  - iii. PDA (Potato Dextrose Agar)
  - iv. Auto clave
  - v. Petri Dish
  - vi. Forecap
  - vii. Paddy Straw
  - viii. Chaff Cutter
  - ix. Hessian Cloth
  - x. Wall Thermometer
- Q. 2 How will you prepare Potato Dextrose Agar medium? Give its constituents and preparation steps. 10 Marks
- Q. 3 How will you prepare Oat Meal Agar medium. Give its constituent and preparation steps. 10 Marks
- Q. 4. Practical Record 5 Marks
- Q. 5. Viva Voce 5 Marks

**GUIDELINES FOR PRACTICAL EXAMINATION IN  
TECHNOLOGY GROUP**

**Scheme of Examination**

S. No.	Course	Course Code	Level	Total Marks = 100	
				Theory	Practical
1.	Carpentry	252	Secondary	30	70
2.	Solar Energy	253	Secondary	30	70
3.	Bio-gas Energy	254	Secondary	30	70
4.	Furniture & Cabinet Making	354	Sr. Sec.	30	70
5.	Electroplating	355	Sr. Sec.	30	70

**Duration of Examination**

COURSE CODE	COURSE	PAPER	DURATION	MAXIMUM MARKS	MINIMUM PASS MARKS 33/100 in aggregate of Theory & Practical
252	Carpentry	Theory	2Hrs.	30	10
252	Carpentry	Practical	3Hrs	70	23
253	Solar Energy	Theory	2Hrs.	30	10
253	Technician Solar Energy	Practical	3Hrs	70	23
254	Bio-gas Energy	Theory	2Hrs	30	10
254	Technician Bio-gas Energy	Practical	3Hrs.	70	23
354	Furniture and Cabinet making	Theory	2 Hrs.	30	10
354	Furniture and Cabinet making	Practical	3Hrs.	70	23
355	Electroplating	Theory	2 Hrs.	30	10
355	Electroplating	Practical	3 Hrs.	70	23

### **Practical Papers:**

A Student will be given any 3 practicals/jobs out of which student will have to successfully complete any 2 jobs / practicals in stipulated period of 3 hrs. Practical / jobs given for evaluation will be mainly of skill oriented. Each practical will be of 25 marks and viva-voce pertaining to the activities given will be of 10 marks. Marks for presentation of work performed will be 10 marks. Table below presents the detailed format of practical examination:

### **Practical Papers:**

<b>S. No.</b>	<b>Practical/Job/Activity</b>	<b>Maximum Marks</b>
1.	2 Practical/ Jobs	25 x 2 = 50
2.	Viva Voce	10
3.	Presentation of work	10

**70 Marks**

**Passing Criteria :** A student will have to pass in both theory and practical papers separately in Senior Secondary level Courses (354, 355) passing marks for theory paper in each Course will be 10 (i.e. 33% of 30) while in practicals, minimum passing marks are 23 (33% of 70). Student will have to secure 33% i.e. 33 marks out of 100 in aggregate of Theory & Practical to pass in Secondary level Vocational subjects (252, 253, 254).

### **Duration of Examinations**

Practical examination will have to be completed in maximum time of 3 Hrs.

## CARPENTRY (252)

Max. Marks : 70

Time : 3 Hrs.

### List of Practicals :

- (1) Identification of wood, introduction to look, safety precautions to be observed in carpentry shop of workshop, general safety, causes of accident and its remedies.
- (2) Identification of hand tools. Demonstration and uses of marking & measuring tools. Safety precautions to handle carpentry tools.
- (3) Sawing : use of different types of saws.

Planning : uses of planes, setting of plane, holding and planning techniques.

Chiselling : use of different types of chisels, chiseling along the grains, across the grains, vertical and horizontal etc., Grinding, sharpening and honing of chisel.

- (4) Preparing farming Joints: halving joints, trenching and housing joints.
- (5) Preparing mortise and tenon joints, plain, haunched, stob tenon, fareface tenon, bridle joints etc. sharpening and setting of different types of saws.
- (6) Making Dove-tail joints : Single dove tail, common dove tail, lapped dove tail.
- (7) Making different types of broadening joints, simple butt, related butt pocket screw, glued butt, tongue and groove butt joints etc.
- (8) Making lengthening joints.
- (9) To prepare a frame of different types of joints and a small articles involving above joints may be made.

## SOLAR ENERGY TECHNICIAN (253)

Max. Marks : 70

Time : 3 Hrs.

### List of Practical:

- (1) To fabricate a simple box type solar cooker.
- (2) To Study the working and efficiency of self fabricated solar cooker.
- (3) Construction and testing a solar basket type solar cooker using aluminium foil for preparing the reflection surface.
- (4) Disassemble & reassemble a given natural circulation type domestic solar water heater and test it for correct operation.
- (5) Study and prepare a report on the operation of an Industrial Solar Water heating System.
- (6) Prepare a trouble shooting chart for common operational problems on Industrial Solar Water Heat in System.
- (7) To Construct a bamboo type solar dryer.
- (8) To Carry out drying at various, times and note % drying in given time.
- (9) Operate a basin type solar distillation unit and note the amount of distilled water collected at hour intervals.
- (10) Construct a simple basin type solar still using given materials.
- (11) Install a solar photovoltaic lighting system, connect the light points and battery. Carry out preventive maintenance on storage batteries.
- (12) Carry out preventive maintenance on storage batteries.
- (13) Operate given solar powered pumping system and note the discharge for various heads.
- (14) Install the given solar powered pumping system and test it for rated operation.
- (15) You are given a conical solar water still. Record the amount of distilled water collected with its help after every 15 minutes of time interval.
- (16) You are given aluminium foil and a bamboo basket. Fabricate a solar dryer with its help.
- (17) A solar photovoltaic cell is given to you; measure its voltage every fifteen minutes. Plot the graph between time and voltage for the recorded readings.
- (18) What precautions are taken to maintain a storage battery connected with solar photovoltaic cell.

## BIO-GAS ENERGY TECHNICIAN (254)

Max. Marks : 70

Time : 3 Hrs

### List of Practicals:

- (1) Identify & collect locally available feed materials for Biogas generation
- (2) Prepare mixture of cow dung of 10 kg each of various concentration.
- (3) To find out pH of Bio-gas slurry.
- (4) Dry the cow dung slurry and find out its solid % and moisture %.
- (5) In a family there are 5 members. Decide the size of Bio-gas plant and how many cattle they should have to meet the requirement for cooking of food. Draw the layout of Bio-gas plant that will be installed.
- (6) Dig a pit of 1.5 m diameter and 1 m. deep, that is required for making a Biogas plant.
- (7) Make a circular honey comb structure of 1 m. diameter and do back filling of 25 cm.
- (8) Construct 2m diameter circular will of 23 cm. width & 1 m height.
- (9) List out construction materials required for 4 cu. Metre capacity K.V.I.C., type Bio-gas plant.
- (10) Identify & list various parts of K.V.I.C. & Janata type Bio-gas plants .
- (11) Identify & list various defects in a Bio-gas plant.
- (12) List out the parts of a Bio-gas burner.
- (13) List out construction materials required for 4 cu. metre capacity Janata type Bio-gas plant.
- (14) Make the layout for 2, 4 & 6 cu. meter capacity Deenbandhu Bio-gas plant.
- (15) List out 10 main parts of
  - (i) K.V.I.C. type Bio-gas plant
  - (ii) Janata type Bio-gas plant and (iii) Deenbandhu Bio-gas plant.
- (16) Do thorough checking of a given Bio-gas plant: Do water leakage testing, air leakage testing, leakage testing for gas out let and gas pipe line testing.
- (17) Construct a manometer of 50 mm height.
- (18) Conduct a study of non functional bio-gas plants of a block and identify problems and their causes.
- (19) Prepare a wax melt and do 8 mm of 1m<sup>2</sup> surface area.
- (20) Clean the given Bio-gas burner.
- (21) Disassemble, clean & reassemble a given Bio-gas burner.
- (22) Disassemble, clean & reassemble a given Bio-gas lamp.
- (23) Dry out given 10 kg slurry and pack in 1 kg packets.

## FURNITURE AND CABINET MAKING (354)

Max. Marks : 70

Time : 3 Hrs.

### List of Practicals:

- (1) Wood working machines and work shop safety, acquaintance with machine parts, function and operational techniques of different machines/Band saw, circular saw; planning machine, drilling machines, grinding machines, mortiser, sander etc.
- (2) Use of special saws: Compass saw, frame saw, Bow saw etc. Use of special planes: compass planes, moulding planes etc.
- (3) Making a small wall Bracket.
- (4) Prepare chalk box, Tea tray or office tray.
- (5) Making a notice-board or display board.
- (6) Making a small rack or meatshelf.
- (7) Fabrication of simple straight leg and table-top.
- (8) Fabrication of chair.
- (9) Fabrication of single bed without boxes.
- (10) Fabrication of bed with boxes.
- (11) Fabrication of wooden sofa set frame.
- (12) Fabrication of center table.
- (13) Fabrication of cabinet of T.V & VC.R.

## ELECTROPLATING (355)

Max. Marks : 70

Time : 3 Hrs.

### List of Practicals:

- (1) Preparing simple electrical circuits with a switch and fuse, connecting the measuring instruments such as voltmeter and ammeter etc.
- (2) Connecting simple parallel circuit and study the difference between series and parallel circuits, connecting different domestic appliances & measuring the current take by them, connecting different electrical accessories such as switches, wall sockets, lamp holders etc.
- (3) Measuring of power and energy by using a voltmeter, ammeter & stop watch or by using K. WE. meter.
- (4) Dismounting of DC generator and study the different parts and reassemble the machine. Measuring resistance of armature, shunt field, series field etc. & identifying the terminals of a D.C. machine.
- (5) Testing and connecting of shunt and compound generators, building up the voltage and study the load characteristic of shunt.
- (6) Connecting a DC generator for load with controlling and protecting devices such as circuit breakers fuses etc.
- (7) Use of multi meter in measuring
  - (a) Resistance
  - (b) Voltage A.C./D.C.
  - (c) Current A.C./D.C.
  - (d) Testing of various types of electrical and electronic components such as capacitor, resistance Transistor, Rectifier etc.
- (8) Setting up the plating vat securing vat rods in position, mixing of electrolyte for copper plating an-filling the electroplating vat for copper.
- (9) Experimental determination of electro-chemical equivalent value for different solutions; cleaning the articles before plating.
- (10) Cleaning articles before plating by different methods such as
  - (a) Scrubbing with emery paper
  - (b) Wet sand

(c) Scratch brushes.

(d) Wire wheels etc.

Suspending anode & cathode in electroplating vat, cleaning by means of tumbling and burnishing barrels, preparing of suitable dips & pickles, removing of scale from surface of iron & steel, ultrasonic cleaning.

- (11) Cleaning of metallic surfaces of oil, grease and gritty matters, roughing smooth surfaces, preliminary electroplating by electric current such as cathodic cleaning, anodic cleaning, electro cleaning & striking in one step. Cleaning specific metals such as iron, steel, stainless steel, nickel, brass, copper etc.
- (12) Plating articles for different thicknesses of deposition (copper plating), Electroplating iron rods and plates with copper, electroplating involving copper deposition adjusting current and time required.
- (13) Preparing an article for nickel plating, preparation and testing of solution for electro deposition of Nickel, preparation and setting up of Nickel plating vat, determination of electrochemical equivalent of Nickel plating, Electroless nickel plating.
- (14) Barrel plating of small article like pins, screws, washers, studs, buttons etc. with Nickel.
- (15) Preparing the jobs for chrome plating, chromium plating of different ferrous metals.
- (16) Preparation of job for cadmium plating, preparation of solution, testing the acidity and density of solution, setting the vat for plating.
- (17) Preparing articles made of copper, nickel, iron and steel etc. for silver plating, silver plating adjusting current density and time for the required thickness of plating on different articles such as wrist watch cover, spectacle frame and camera parts etc..
- (18) Preparation of jobs made of non ferrous metals and alloys for gold plating by hot cleaning or decreasing, pickling etc. gold plating.

## HOME SCIENCE BASED VOCATIONAL COURSES

### Scheme of Examination

	Name of Course with code number	Level of the subject	Total Marks = 100	
			Theory	Practical
1.	Laundry Service (255)	Secondary	40	60
2.	Bakery & Confectionery (256)	Secondary	40	60
3.	Housekeeping (356)	Senior Secondary	40	60
4.	Catering Management (357)	Senior Secondary	40	60
5.	Food processing (358)	Senior Secondary	40	60
6.	Play Center Management (359)	Senior Secondary	40	60
7.	Hotel Front Office Operations (360)	Senior Secondary	40	60
8.	Preservation of Fruits & Vegetables (363)	Senior Secondary	40	60

### Duration of Examination

Course Code	Course	Paper	Duration	Maximum Marks	Pass Marks
255	Laundry Services	Theory	2 Hrs.	40	33/100 aggregate of
255	Laundry Services	Practical	3Hrs.	60	Theory & Practical
256	Bakery & Confectionery	Theory	2 Hrs.	40	33/100 aggregate of
256	Bakery & Confectionery	Practical	3 Hrs.	60	Theory & Practical
356	Housekeeping	Theory	2 Hrs.	40	13
356	Housekeeping	Practical	3hrs.	60	20
357	Catering Management	Theory	2 Hrs.	40	13
357	Catering Management	Practical	3 Hrs.	60	20
358	Food Processing	Theory	2 Hrs.	40	13
358	Food Processing	Practical	3 Hrs.	60	20
359	Play Centre Management	Theory	2 Hrs.	40	13
359	Play Centre Management	Practical	3 Hrs.	60	20
360	Hotel Front Office Operations	Theory	2 Hrs.	40	13
360	Hotel Front Office Operations	Practical	3 Hrs.	60	20
363	Preservation of Fruits and Vegetables	Theory	2 Hrs.	40	13
363	Preservation of Fruits and Vegetables	Practical	3 Hrs.	60	20

## **BAKERY & CONFECTIONERY (256)**

### **Marking Scheme:**

Max. Marks : 60

#### **(I) Distribution of Marks**

Time : 3 Hrs.

(i) Performing Activities : any two, of 20 marks each.

#### **(II) Distribution of marks for each activity (out of 20 marks)**

correct identification/ selection of materials/ equipments 3 marks

correct weighment/measurement of ingredients 2 marks

performance and product 8 marks

presentation of work 4 marks

write the precautions taken of 3 marks

(ii) Viva voce based on 2 activities 2 x 10 = 20 marks

### **List of Activities**

1. Evolve new recipes following appropriate methods for baking various types of

(i) Cakes

ii) Biscuits

(iii) Pastries

(iv) Breads.

2. Decorate the given cake with appropriate icings for

i) Birthday

ii) Wedding

3. Identify the cake faults and suggest appropriate remedies.

4. Prepare the tin for baking and also piping bag.

5. Activate yeast.

6. Judge the quality of given bread

7. Maintain record for

- journal
- ledger
- trial balance.

**List of consumables required**

**Bakery & Confectionery**

- |                    |                       |
|--------------------|-----------------------|
| (i) Baking powder  | (ix) Coco powder      |
| (ii) Baking soda   | (x) Sugar / salt      |
| (iii) Caster sugar | (xi) Maida            |
| (iv) Oil/fat       | (xii) Essence-vanilla |
| (v) Eggs           | (xiii) Food colour    |
| (vi) Milk          | (xiv) Icing sugar     |
| (vii) Butter       | (xv) Butter paper     |
| (viii) Chocolate   |                       |

**Non consumables**

- |   |                      |
|---|----------------------|
| (i) Oven                                    | (x) Biscuit cutter   |
| (ii) Mixer                                  | (xi) Weighing scales |
| (iii) Egg beater                            | (xii) Degchi         |
| (iv) Spoons                                 | (xiii) Sieve         |
| (v) Moulds/pans of various shapes & sizes   | (xiv) Grater         |
| (vi) Refrigerator                           | (xv) Scissors        |
| (vii) Baking trays                          |                      |
| (viii) Steel thalis                         |                      |
| (ix) Knives-palate / Sharp peeler / scraper |                      |

The arrangement for non consumables items can be made by hiring them or from else where.

## LAUNDRY SERVICES (255)

Max. Marks : 60

Time : 3 Hrs.

### Marking Scheme

#### Distribution of Marks :

(i) Performing Activities

2 x 20 = 40 marks

#### Distribution of Marks for each activity : out of 20 marks

- correct identification/ selection of materials/ equipment 3 marks

- correct measurement and selection of ingredients/chemicals/procedure 2 marks

- actual procedure / performance 8 marks

- Presentation of work 4 marks

- Precautions taken 3 marks

(ii) Viva based on 2 activities

2 x 10 = 20 marks

#### List of Practicals:

1. Identify the given fiber content of the fabric, by

(i) Burning test (ii) Action of alkali

(iii) Action of acid (iv) Visual inspection

2. Remove stains from the given fabric, fabric can be

(i) White Cotton (ii) Colored Cotton

(iii) Silk and Wool (iv) Synthetic

3. Demonstrate different methods of washing (hints for teachers : can be hand friction, friction by brush, friction by scrubbing board etc. Dirty articles can be-small handkerchief, shirt, blouse, dupatta, child knicker, frock, kurta, salwar, etc.)

4. Demonstrate the method of preparation of blue.

5. Demonstrate different methods of preparation of starch i.e. different consistency for different types of garment.

6. Demonstrate different methods of drying.

7. Demonstrate different methods of ironing, pressing, steam pressing etc.

8. Demonstrate different method of folding.
9. Demonstrate appropriate methods of washing and finishing, drying etc.
  - Cottons (i) colored, (ii) white,
  - Woolens - georgette
  - silks - blends

**List of Material Required**

- |  |                        |
|--|------------------------|
| i) Cloth pieces stained with tea,<br>lipstick, blood, nail polish, coffee,<br>ink, ball point-ink, curry stains. | x) Match box           |
| ii) Dirty articles or garments   | xi) Alkali             |
| iii) Blue  | xii) Acid (mild)       |
| iv) Starch   | xiii) Soap / detergent |
| v) Iron  | xiv) Glycerine         |
| vi) Ironing board  | xv) Salt               |
| vii) Scarf, lace article, painted cotton garment,<br>small curtain, velvet garment.                              | xvi) Spirit            |
| viii) Small piece of different fabrics-(3" x 3")<br>Cotton, Terrywool, Wool, Synthetic, Silk                     | xvii) Javelle water    |
| ix) Candle / Spirit lamp   | xviii) Amyl acetate    |
|  | xix) Limejuice         |
|  | xx) Dilute ammonia     |

## HOUSE KEEPING (356)

Marking Scheme

Max. Marks : 60  
Time : 3 Hrs.

### Distribution of Marks :

(i) Performing Activities : any two 2 x 20 = 40 marks

### Distribution of Marks for each activity (out of 20 marks)

- correct selection color / flowers design/ cleaning agents/ chemicals	5 marks
- actual procedure / performance	8 marks
- presentation of work	4 marks
- precautions taken	3 marks
- Viva based on 2 activities	20 marks

### List of Activities

1. Make a color wheel.
2. Use monochromatic/ complementary colour scheme for lobby /bed room/ drawing room/ children's room etc.
3. make flower arrangements for living room lobby / small room / center table etc.
4. make a rangoli pattern for large varendha / door step / festive occasion etc.
5. Cleaning wood / floor / brass / aluminium / silver / plastic.
6. Stain can be of-lipstick, ink, stains, curry etc.
7. Make a bed

### List of Material Required

- i) Fresh flowers
- ii) Flower vase / flower pin
- iii) Colour-water
- iv) Silver articles
- v) Brass articles
- vi) Cotton
- vii) Brasso
- viii) Silvo
- ix) Cloth marked with stains (tea, ink, lipstick & curry
- x) Brushes of 0, 1, 2, 3, 4 No.
- xi) Soaps, mild acid, alkali, vinegar
- xii) Papers
- xiii) Bed sheets
- xiv) Mattress
- xv) Bed

## PLAY CENTRE MANAGEMENT (359)

### Marking Scheme

Max. Marks : 60

Time : 3 Hrs.

### Distribution of Marks

i) Performing activities: any two. 2 x 20 = 20 marks

#### Distribution of marks for each activity, (out of 20 marks)

- actual procedure/performance 12 marks
- Presentation of work 5 marks
- Precautions taken 3 marks

ii) Viva voca pertaining to the 2 activities 20 marks

Total : 60 marks

### List of activities

1. Plan a meal for 1-5 yrs old child/one year old/2 year old/3 year old/4 year old/5 year old.
2. Organize science experiences in a play center.
3. Plan a week's programme giving themes for each day Age 4-5 year old.
4. Formulate a checklist of 10 questions to assess the programmes of a play center.
5. Organize different session in a play center.
  - music & stories
  - science
  - regarding nature.
6. Suggest different parent involvement methods.
7. Identify and deal with problem behaviors (like)
  - a child who destroys things, sucks the thumb, refuses to eat, hurts other child.
8. maintain health record at a play center.
9. Plan an activity for a play center where children could be involved.
10. Prepare 5 questions that you will ask to ascertain the suitability of a person for working with young children.

### List of Consumables

- i) Paper (ii) Pencil / Pen

## CATERING MANAGEMENT (357)

### Making Scheme:

Max. Marks : 60

### Distribution of Marks

Time : 3 Hrs.

ii) Performing activities : any two

2 x 20 = 40 marks

#### Distribution of marks for each activity, (out of 20 marks)

Correct selection of ingredients/ equipment 5 marks

Actual performance / Procedure 8 marks

Presentation of work 4 marks

Precautions taken 3 marks

ii) Viva voce pertaining to 2 activities

2 x 20 = 20 marks

Total : 60 marks

1. Plan 2 menu for lunch using food groups, (selective/ cyclic menu for school canteen)
2. Cook various food stuffs where water / steam / air / fat / are used as a medium of cooking.
3. Make egg sandwiches/boiled eggs (for 5 min)/use of egg without shell/ eggs foams (etc.)
4. Evolve 2 new recipes out of paneer/khoa/ curd.
5. Observe changes that occur to green/yellow/orange/white/red vegetables on cooking and record your observations.
6. Determine raw amount required to prepare-lunch/ dinner/ anyone item for 5/10/15/20 people.
7. Prepare menu card/recipe card.
8. Set the table for lunch / dinner for 4/6/2/8 persons.
9. Maintain the records for-stock register / sales record / cash sales etc.

### List of Consumables / non consumables

#### Consumables

- i) Egg
- ii) Bread
- iii) Dalia
- iv) Pulses
- v) Cereals
- vi) Vegetables etc.

#### Non-Consumables

- i) Chart Paper
- ii) Table Cloth
- iii) Plates
- iv) Spoons-cutlery
- v) Glasses
- vi) Bowls-all sizes  
(serving/ desert/  
eating/finger bowls)
- vii) Napkins Cloth/paper
- viii) Recipe cards
- ix) Tray
- x) Flower  
Vase / Flowers / Pins
- xi) Dinner set
- xii) Tea set

## FOOD PROCESSING (358)

Max. Marks : 60

Time : 3 Hrs.

### Marking Scheme

#### Distribution of Marks

i) Performing Activities any two 2 x 20 = 40 marks

#### Distribution of marks for each activity out of 20 marks.

i) Correct identification/selection of material/equipment	3 marks
- Correct weighment/measurement of ingredients	2 marks
- Performance and product	8 marks
- Presentation of work	4 marks
- Precautions taken	3 marks

ii) Viva voce based on 2 activities 2 x 20 = 40

Total : 60 marks

#### List of Activities:

1. Demonstrate different methods of cooking in water/in steam/in oil/in dry heat / etc.
2. Test the adulterants present in the given foods. Black pepper/coffee powder /tea leaves/ pulses/ turmeric/milk/bajra.
3. From the given packets identify 2 products that have the quality assurance mark.
4. Evaluate the given packages for labeling in terms of Brand name/Trade name/Product name/ nutritional information/certification marks etc.  
Packet of any cornflakes.
  - Chocolates
  - Noodles packets
  - Masala packets
  - Baby foods
  - Sauces
  - Mango drink etc.
5. Evaluate these packets for accessories used in packaging.
6. Pack and seal chutney in plastic bag/jar/bottle.

7. With the help of a label, -identify the ingredients used in the preparation of products & also give the method of preservation used, (products can be Jams/Sauces/ Pickles/ etc.)

8. Make lemon / orange / apple - Squash

- Fruit jam

- Pickle, etc.

### List of Consumables/non Consumables

For lemon/ orange squash (amounts indicated for per student)

- |     |                           |                     |
|-----|---------------------------|---------------------|
| (1) | Orange                    | 100 ml per student  |
|     | Lemon                     | 100 ml per student  |
|     | Sugar                     | 125 gms per student |
|     | Citric acid               | (bottle)            |
|     | Essence                   | (bottle)            |
|     | Colour                    | (bottle)            |
|     | Potassium metabi sulphite | (bottle)            |

### For Fruit Jam

- |     |   |               |         |                |
|-----|---|---------------|---------|----------------|
| (2) | Fruit pulp  | 250 gms       |         |                |
|     | Sugar   | 250 gms       |         |                |
| (3) | Different types of packages                             |               |         |                |
|     | masala  | sugar         | coffee  | tea            |
|     | Cornflakes  | Health Drink  | Cerelac | Chocolate etc. |
| (4) | Adulterated black pepper,                               |               |         |                |
|     | Asafoetida (hing)                                       | coffee powder |         |                |
|     | tea   | pulses        |         |                |
| (5) | Small plastic bags/Polythene bags, bottles, paper bags. |               |         |                |
| (6) | Wax for sealing   |               |         |                |
| (7) | Pulses/ dalia/ egg/potatoes etc.                        |               |         |                |

## **TYPEWRITING (HINDI/ENGLISH/URDU)**

**(323/322/364)**

The candidates may use computers without internet for typewriting examination.

1. For answering the questions, the candidates should be supplied plain bond/photocopy white typing papers and not the ruled sheets or the blank ruled answer books meant for theory examinations of NIOS. Tags, stapler, alpins etc will be provided by the examination centre. However, the candidates will bring their own erasers, correcting fluid, pen/pencil.
2. Furniture of appropriate quality, size and design be provided to the students who take the typewriting examination at the centre.
3. For conducting the examinations, as per date sheet, local subject experts (serving or retired) in the field such as Instructor/Teachers/Lecturers in Typewriting should be appointed as examiner, by the centre superintendent. This will ensure that the examinations are conducted under the technical supervision and in accordance with the norms and instructions given in the question paper as are applicable to these areas.
4. The examiner appointed by the centre may be paid remuneration as per rates admissible to the invigilators.
5. The evaluation of typewriting answer books both for Secondary and Senior Secondary will be got done by the Regional Centres. Centre superintendent will ensure that all the properly sealed answer books are immediately sent directly to the concerned Regional Centres of NIOS.

### **Marking Scheme**

Max. Marks: 70

Time: 1 hr. 30 min.

#### **There are four jobs in the practical question paper.**

- First job is a speed test which is compulsory. This test will be taken @ 30 w.p.m. the time given is 10 minutes. Marks for the speed test is 30. Two marks will be deducted one per mistake. Any error occurring because of the defect in the typewriter may not be penalised. In case the candidate qualifies in the speed test, i.e. if he possess a speed of 30 w.p.m. then this will be reflected in the marksheet of the candidate. In case the candidate fails in the speed test, then no such indication of speed will be mentioned in the marksheet, but he will be declared pass if he/she gets an overall of 33%
- Second job is a letter of 20 marks, one mark to be deducted for wrong display & one mark for each error.
- Third job is a Manuscript. The marks for this job are 10 and one mark is to be deducted for each error.
- Fourth job is Tabulation work and one mark is to be deducted for wrong display & one mark for each error.

## STENOGRAPHY (HINDI/ENGLISH/URDU)

(324/424/329/429/325/425)

### General Instructions:

1. For Stenography tests, Teachers/Instructors/Lecturers who are experienced having clear pronunciation and are well, versed in giving dictation be appointed as examiners by the centre superintendent. A batch for a dictation should not exceed twenty candidates at a time in order to ensure proper listening and audition by the candidates. The examiner shall be paid remuneration as per rates admissible to the invigilators. The examiner will ensure that the tests are conducted according to the normal rules applicable to the stenography discipline (dictation, reading and transcription) and as per instructions given in the question paper.
2. Question paper in Stenography should be given to the examiner only and should not be distributed to the examinees.
3. It must be ensured that transcription of the shorthand dictation is done on the Typewriter and dictation is taken on the ruled shorthand note book brought by the candidates or provided by the centre superintendent and the dictation notes are attached to the transcription done on the typing sheets which are duly stamped and signed by the centre superintendent.
4. At the examination centre, the centre superintendent /invigilator/and examiner will keep the examinees at ease and before starting the tests would' give the appropriate instructions in regard to dictation, typewriting and transcription.
5. The evaluation of stenography answer books for Senior Secondary will be got done by the Regional centres. Centre superintendent will ensure that all the properly sealed answer books are immediately sent directly to the concerned Regional centre of NIOS.

### Marking Scheme

Max. Marks: 70

Time: 1 hr. 30 min.

### There are two jobs in the practical question paper.

- **First job** is a speed test @ 80 w.p.m. The marks for this first job is 40. A speed passage consisting of about 400 words will be dictated in 5 minutes @ 80 w.p.m. The transcription time is 40 minutes on a manual typewriter or computer. 10 minutes time should be given for adjustment of typewriter or computer desktop settings and reading. At the time of dictation, the examiner should-ensure that the matter given between two sentence is dictated within 15 seconds to avoid fluctuations. Under no circumstances, the dictation time should exceed the prescribed limit. For the candidate qualifying the exam, in their mark sheet qualifying speed will be mentioned i.e. 80 w:p.m. one mark, per error committed, will be deducted. Any error occurring because of the defect in the typewriter may not be penalised.
- **Second job** is a business/ official letter. The marks for this are 30. One mark is to be deducted for wrong display. In the letter, where address is to be dictated it should be dictated at a slightly slower speed.

## **SECRETARIAL PRACTICE (326/426)**

Note: Given below is a sample paper for the practical examinations. The practical examiner may set a similar paper for the candidates using the facilities available at the examination centre.

Max. Marks : 30

Time: 1½ Hrs.

1. How would you operate PCO installed at the corner of a street? Explain.

5

OR

Send an email to one of your friend inviting him/her on your birthday.

5

2. a) Which method would you use to send message to an outstation party promptly?  
b) Can you ring up from an intercom telephone to an office situated outside the building also having intercom facilities?  
c) State main advantages of a Accounting machine.

OR

How would you operate the fax machine if you have to send a message to an outside agency?

3. Answer any two of the following :

a) Which document is more authentic:

i) A copy typed from the documents.

ii) A copy made on a photocopier.

b) Which of the following process is costlier? State one main reason.

i) Taking out ten copies of a document on a typewriter with the help of carbon papers.

ii) Ten copies made of the documents on the photocopier.

c) Which of the method is quicker when you have to mail one hundred letters at a time:

i) Affixing postage stamps on the envelopes

ii) Printing designs of postage stamps using Franking machine

10

4. Explain two major points of differences between a computer and laptop.

5

5. Write a note on the functioning of a Computer.

5

## WORD PROCESSING (SR. SEC.) (ENGLISH) (327)

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### Word Processing (MS-Word) Practicals

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**Time : 2 hours (Including the time for viva-voce)**

**Max. Marks : 60**

**Distribution of Marks:**

1. Typing a passage of about 500 Words in English	15 Marks	10 Min.
2. Editing a document	10 Marks	10 Min.
3. Block operations in MS-Word	10 Marks	15 Min.
4. File Management & Printing	05 Marks	10 Min.
5. Use of Mail-merge facility in MS-Word	10 Marks	10 Min.
6. Viva-voce	10 Marks	15 Min.
<b>Total</b>	<b>60 Marks</b>	

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**Instructions to the candidates and invigilators**

- i) All the above mentioned five tasks are compulsory for the candidates.
- ii) All the tasks may be given to the candidate simultaneously.
- iii) Prior to the test the candidates should be told about the directory containing MS-Word software package.

**GUIDELINES FOR THE TEST**

1. Type a passage of about 500 words in single space with a given right margin, formatting options and multiple typefaces such as bold, italics and underline.

Marks: 15
2. Exercises for change spacing, left and right margins, and correct spelling mistakes using spell checker (not more than 10 mistakes).

Marks: 10
3. A given passage of 50 words to be printed. Give specified page breaks. After printing create a backup on another hard disk, or pen drive or folder.

Marks : 05
4. A letter having text of about 300 words is given with a list of addresses. Use mail-merge to produce the individualized copy of the letter for the list of addresses. Also take one print out of the given letter (without any address printed on it) as an office copy.

Marks: 10

## Sample Question Paper - I

### Task-I

**Marks : 15**

Using the MS-Word, enter the following passage in single space and save the document with the name may.

#### Passage

Basically cakes are made by creaming fat and sugar, then adding eggs and flour, or by whisking eggs and sugar and then folding flour into them. Wherever a cake is decorated after baking, the outer layer or paste which is used for decoration is known as icing. Based on the type of cakes which are iced and which are not they may be classified into two types. Cakes with icing are cakes with architecture i.e., they contain higher percentage of fat or butter & may contain dry fruits etc.

The other type of cakes do not require any icing. They may be eaten directly or may be decorated with other items like jam, icing sugar, desiccated coconut etc. such cakes are normally served during high tea or as independent shade item. They are generally not used as desserts. The following cakes will fall under this category. What is the first thing you think of when you hear or talk about a birthday party? Yes, it is the cake! The taste when you think of, makes our mouth water and the colour and decoration make, our eyes glitter.

However there are also plain simple cake, which are not decorated and not that colourful but they have their own importance. Think of a Christmas Cake with lots of dry fruits inside and a particular wine flavour. Such cakes also have a wonderful taste and have their own charm.

### Task - II

**Marks: 10**

- (i) Set the ruler line such that the left margin starts at position 6 and the right margin at 50 for first and third paragraph.
- (ii) For second paragraph change the left margin at 15 and right margin at 40.
- (iii) Align the whole text as per above settings.

### Task - III

**Marks: 10**

- (i) Using MS-Word, enter the following text and save it with the name pqr.doc.

A tape is wound on a spool and its other end is threaded manually on a take-up spool and it positions itself ready to write.”

- (ii) Combine the file abc.doc. at the end of the above document pqr.doc.

**Task - IV**

**Marks: 05**

- (i) Take a print out of the above document abc.doc with last paragraph as italics.
- (ii) Take a back up of abc.doc

**Task - V**

**Marks 10**

- (i) Suppose you want to send an invitation letter to your four of friends. The text of the invitation letter remains the same for all but only the address will change. Use mail merge facility of MS-Word software to do so. The content of the letter and the addresses are given below.
- (ii) Also take out a print of the individual letter using MS- Word.

To

Name

Add 1

Add 2

Pin

Dear (Name),

I am happy to inform you that I am celebrating the Silver Jubilee celebration of my marriage anniversary. You are requested to attend the party with all your family members to make it more joyful.

Your presence will oblige me.

Thanking you,

Yours affectionately,

Mihir Ranjan

<b>Name</b>	<b>Add 1</b>	<b>Add 2</b>	<b>Pin</b>
Ashok Kumar,	Sector-5, Rohini,	New Delhi	110 055.
Dilip Sen,	Ambedkar Nagar,	New Delhi	110019.
Kishore Kumar,	Dakshin Puri,	New Delhi	110 020.
Raj Rani,	Narela,	Delhi	110 040

## Sample Question Paper - II

### Task - I

**Marks: 15**

Enter the following passage in single space and save the document with the name abc.doc

#### Passage

Article 45 of Indian Constitution envisages, “The State shall endeavour to provide, within a period of ten years from the commencement of Constitution, for free and compulsory education for all children until they complete the age of fourteen years.” Under this Constitutional Directive, State Government were asked to provide free and compulsory education to all children directive between 6 to 14 years. But the battle in this direction had begun much before this Constitutional.

The history of primary school education; in India can be traced back., right from the very beginning of education i.e. from the ancient time, when it was generally confined to the very selected class. First, it was only for Priestly class which considered it as the most important source of self-realisation. Later on, it spread to the two other classes, i.e., Kshatriya and Vaishyas.

It was more or less compulsory for every boys and girls, which began with the Upnayana ceremony at about the, age of eight years and lasted till the age of sixteen years.

As in the worlds of V.P. Khanoklar, “The concept of universal education of providing a minimum standard of education to every boy and girl, is in India, as old as the first beginning of her civilization. As the education of every boy and girl began with the Upanayana ceremony by the eighth year and lasted till the age of sixteen years. In modern terms, this education system amounted to a period of at least eight years of compulsory schooling for every child.”

Primary education, too, has existed in some form as a part of institutional frame and modeled on indigenous system. It was well developed and widely spread, consisting of lower as well as higher education institutions. These educational institutions or centres were mostly residential and called Gurukul, Math, Pathasalas or Tols.

With the advent of Muslims in this country, education system received a little change, and like their counterpart Hindus, Muslim had also developed their own system of education in which they had two types of institutions; Maqtabas and Madtassaha. Maqtabas were for the elementary education and Madrassaha for higher education.

During the British period, Britishers occupied a very well developed network of pathsalas and maqtabas all over India. There was hardly any village which did not have such an indigenous school.

### Task - II

**Marks: 10**

- (i) Set the ruler line such that the left margin starts at the column position 6 and the right margin at 50. Align the whole text.
- (ii) Use spell check facility of MS-Word to correct the spelling mistakes from the text if any.
- (iii) The lines shown within quotes, must be bold.

**Task - III**

**Marks: 10**

- (i) Make a block of the second paragraph and move it to the beginning of the text,
- (ii) Make a block of 4<sup>th</sup> paragraph and save the block to a new file called abc4.doc.

**Task - IV**

**Marks : 05**

- (i) Take a print out of the above passage with last paragraph underlined.
- (ii) Copy the file abc.doc from hard-disk to new folder.

**Task - V**

**Marks : 10**

- (i) Type out the letter given below and use the mail-merge facility to merge and print the same letter with the addresses given at the end.
- (ii) Also take a print of the document (letter) after changing the font size between 9 to 12 points.

Mahesh Kumar,  
Anand Vihar,  
New Delhi

To  
Name  
Add 1  
Add 2  
Pin

Dear (Name)

It is very happy moment for me to inform you that I have been selected for National Scholarship for higher studies.

I am organizing a party, to celebrate the same. You are kindly requested to attend the party on 16.10.2018 to make the occasion more Colourful.

Thanking you,  
Yours affectionately,

---

Deepak Kumar, R.K. Puram, New Delhi - 110.041.

Nagendra Kishore. B-12, Laxmi Nagar, New Delhi - 110 092.

Satish Goyal, Pitampura, New Delhi - 110 052.

Shilpa Jindal, Narela, Delhi - 110 040

## WORD PROCESSING (MS-WORD) (219)

### Secondary

**Time: 2 hours (Including the time for viva-voce)**

**Distribution of Marks:**

**Max. Marks : 60**

**Part I** 1. Accuracy Test

a) Simple passage of 300 words in English 15 Marks 15 Min

b) Letter 10 Marks 20 Min

c) Tabular Statement 10 Marks 15 Min

**Part II** 2. Speed Test 15 Marks 10 Min  
30 words per minute

**Part III** 3. Viva-voce 10 Marks

**Total 60 Marks**

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#### **Instruction to the candidates and invigilators.**

- i) The question paper consists of two parts.
- ii) Both the parts are compulsory.
- iii) Part I contains three tasks which may be given to the candidates together. but Part II (Speed Test) must be given separately.
- iv) It must be ensured that the speed test (Part II) passage is typed in ten minutes only. Additional five minutes times may be allowed, to candidates to take their print out.
- v) Prior to the test the candidates should be told about the directory containing MS-Word software package.

## Sample Questions Paper -1

### Part - I

#### 1. (a) Accuracy Test

**Marks : 15**

Any one of the passages given below or any similar passage of about 300 words in English may be given for typing on computer for accuracy test.

#### Passage -1

National Institute of Open Schooling is the one of the national institution in the country set up by the Government of India for providing relevant continuing and developmental educational to the marginalized section of the society at the school level. In order to provide academic and administrative support to the learners, NIOS enters into partnership with the established institutions in the country. These institutions provide counselling to learners, arrange for personal contact programmes, practicals at laboratories, audio-video support, feed back on assignments & other service facilitations to prepare the learners for the examinations.

These institutions apply for accreditation with NIOS on the prescribed form after going through the booklet on Norms and procedure for accreditation. The applications are screened by an Expert Committee and suitable institution are identified for inspection. Inspection team constituted by the NIOS inspect the institution and see for themselves various documents, records, and facilities available there and discuss the motivational factors with the Principal and management of the submission and approval of the Report of the inspection team.

A need had been felt for long to develop guidelines for the inspection team for inspection of the institutions for accreditation with NIOS. This is very important as the inspection team has to ensure the suitability of the institution from all angles before recommending it to be the partner with NIOS to strength the distance education and Open Schooling System.

**OR**

#### Passage - 2

Then, it was Swadeshi Movement and the resultant political awakening which had drawn the attention of the country to an important issue i.e. education of the general masses. At that time, an average literacy in the country was only 6 per cent, a very low average indeed and out of all the children of school age only 23.8 per cent male and 2.7 per cent female children attended schools. Therefore, demand for education was increasing day by day.

Under these conditions, Gopal Krishan Gokhale, who was very upset by this tardy progress of primary education, made a firm and vocal demand of introduction of compulsory education through legislation on the 19<sup>th</sup> march 1910 by moving a resolution in the Imperial Legislative Council to provide a four year compulsory education for all children in the age group of 6 to 10. It said that, "this council recommends that beginning should be made in the direction of making elementary education free and compulsory throughout the country and that a mixed commission of officials and non-officials be appointed at an early date to frame definite proposal." One of the most important features of this bill was that it advocated the universal literacy through the simplified curriculum limited to the acquisition of three R's.

This resolution was again followed by another bill in which he made better provision for the extension of elementary education by suggesting that compulsion should be introduced in those area where a certain percentage (to be determined by the Educational Department) of boys and girls' of school age (6-10) was already receiving instruction, that it should be left to the discretion of local bodies whether to apply the act

to certain areas under their jurisdiction or not and that both for the fixing of the required percentage of attendance and for the introduction of compulsion that previous sanction of the Viceroy and the Governor respectively were necessary.

**OR**

**Passage - 3**

The age of compulsion for elementary education varies from province to province. In provinces with four years course, it was generally fixed at 6 to 10 except in Punjabi where the optional age period of 7 to 11 was also provided. On the other hand, in provinces with a five years course, the age of compulsion was generally fixed 6 to 11. In all provinces, the Government undertakes to assist the local authorities financially in order to enable them to introduce compulsory education.

In all the provinces, the local authorities are given the power to levy an educational cess in order to meet their own share of cost of providing primary education, whether on a compulsory or on a voluntary basis.

The Act make provisions for prosecuting parents for failure to send their children to schools, and all acts except that of Madras, penalize the employment of children within the age of compulsion in areas when compulsory education was enforced.

One ultimate outcome of these policies was the rapid expansion of primary education during this time.

Because of the wrong implementation strategies of the compulsory Primary Education Acts of this period which was left to the discretion and initiative of the Local Bodies. These Bodies were considerably handicapped on account of their small financial resources with which they were unable to expand by supplementing the fresh taxation. They, therefore, failed to solve problem of mass education.

**(b) Letter/Application**

**Marks: 10**

A business letter or an application for a job of about 300 words in English (Examples given below) may be given for typing it out on computer and then ask the candidate to take its print out.

**Letter - 1**

Prepare the following letter in double spacing using MS-Word and take its print out.

June 17, 2018

Mr. R. C. Kuthiala  
New Delhi,  
India

Dear Friend,

Your letter of may 27<sup>th</sup> and also the air-mail delivery of your magazine, have been received. I must congratulate you highly on this production. It took a lot of hard work and great ability to produce it and you should receive many compliments. Your printers did a splendid job and I found no typographical error, at least in my own little contribution. I haven't had time as yet to fully read everything in the magazine.

I regret your accident since you were confined for seven weeks, your injuries must have been very serious. You did not tell me the nature of your accident, and I would be interested to learn that.

I suppose that some time shorthand will be introduced in India, as it has been in the U.S. In fact, it seems that we, shorthand reporters, are people who belong to the past in this country. However, many Judges still prefer the pen reporters, as do many lawyers. Electronic recording companies are making every effort to take over court work. but so reporters use recorders as an aid.

Please do not forget me, and I will, from time to time, send you short letters.

Sincerely,

W.G. Haxtry

**OR**  
**Letter - 2**

Prepare the following letter in double spacing using MS-Word and take its print out.

2<sup>nd</sup> Feb. 2018

Shri P.B. Kaushal,  
Principal,  
Commercial College,  
Nagpur,  
Dear Sir,

Your letter addressed to Mr. A.E. Andrews, Director of Studies, has been passed on to me and, I think he has dealt with item Nos. 3,4 and 5.

I am arranging for you to be sent renewed copies of information that were originally intended for you agents overseas. Of these renewed articles one of them relates to English and this has a particular bearing upon the problem of teaching English, using Pitman's shorthand as a medium.

Perhaps this will serve the purpose.

Yours faithfully,  
For Institute of Commerce Manager

**OR**  
**Letter - 3**

Prepare the following letter in double spacing using MS-Word and take its print out.

3<sup>rd</sup> April 2018

From:  
D.P. Singh  
96, 1st Floor,  
M.G., Road, Bombay-4

My Dear Devgun,

The day before yesterday I received the specimen copy of your magazine, Advanced Typing. I am glad to know that you are publishing this magazine for the welfare of those who want to go in the profession Stenography/Typing.

I hope this magazine will go a long way in guiding the Shorthand/Typewriting enthusiasts in new technical advances made in the profession from time to time.

I wish the magazine a great success.

Yours Sincerely,  
(D.P. Singh)

Shri D.R. Devgun  
Editor  
Advance Typing Magazine  
New Delhi

**c. Tabulation**

Using MS-Word, prepare the following tabular statement having not more than three columns with tab setting at column 5,10 and 30 and take its print out.

**Table-I**

<b>No.</b>	<b>PARTICULARS</b>	<b>AMOUNT</b>
1.	Salaries	12,456.00
2.	Rent	24,232.78
3.	Conveyance	10,435.66
4.	Travelling	15,654.74
5.	Miscellaneous	5,234.24

**OR**

**Table-II**

Please keep the tab setting at column 10,15 and 40 for the following table.

<b>S. No.</b>	<b>Description</b>	<b>Expenditure</b>
1.	Household	700.00
2.	Tuition fee	400.00
3.	Petrol	300.00
4.	Furnitures	2700.00
5.	Miscellaneous	300.00

**OR**

**Table - III**

Please keep the tab setting at column 10,25 and 35 for the following table:

Year wise Student's Enrolment

<b>Year</b>	<b>Secondary</b>	<b>Sr. Secondary</b>
1990	20,000	12,000
1991	25,000	18,000
1992	30,000	25,000
1993	33,000	27,000

## Part - II

### 2. Speed Test (20 words per minute)

**Marks : 10**

Anyone of the passages given below or any similar passage of about 300 words in English may be given for typing on computer. The same passage may be repeated if finished before time. The figures indicated on right hand sides should not be typed by the student.

No. of Characters

This night as I was in my deep sleep I dreamed, and	
behold the heavens grew exceeding by black, also it	
thundered and lightened in a most fearful wise, that it	
put me into an awful agony. So I looked up in my dream	
and saw the clouds racks at a most unusual role; upon which I	
heard a great sound of a trumpet, and saw also a man sit upon	
a cloud, attended with the thousands of heaven; they were all in	
flaming fire, also the heavens were on a burning flame. I	
heard then a voice saying, arise ye dead and come to judgement	
and with that the rocks rent, the graves opened, and the dead	
that were therein come forth; and some of them were exceeding	
gland, and looked up words, then I saw the man that sat upon	
the cloud open the book and bid the world draw near. Yet	
there was by reason of a fierce flame that fished out	901
and came from before him, a convenient distance betwixt	957
him and them, as the judge and the prisoners at the bar.	1011

**OR**

### Passage - 2

By granting what in effect amounts to stay of the	50
implementation of the Government decision of the Mandai	106
report the constitution bench of the Supreme Court has	162

given the Prime Minister a relieve. Although the	213
Government through its xxx Minister had publically declared	272
that it would oppose the stay, in the heart of hears it	327
can not but have feel relieved and this was evident from	385
the ready agreement in the Lok Sabha between the treasury	445
benches and the opposition that debated on the Government's	506
handling of the report was not more necessary.	560
The unfortunate violence following the Government's	613
decision on the Mandal report should not be happened.	666
The supreme Court has done for the Government what it could	722
not have done without loss of free, to withhold the	781
implementation of the Government notification until the court	838
has decided the case.	860
However, it is difficult to be certain either about	913
the court's tone of high authority, which it has hardly	970
displayed in the past, or about the clarificatory order	1025
just issued.	1038

## HOTEL FRONT OFFICE OPERATIONS (360)

Max. Marks : 60

Time : 3 Hrs.

### Distribution of Marks

- |   |                   |
|---|-------------------|
| 1. Performing Activities (any two)  | 20 x 2 = 40 marks |
| Distribution of Marks for each activity (out of 20 marks)                               |                   |
| ● correct sequencing of activities  | 5 marks           |
| ● tone of voice in case of verbal communications/<br>general interaction with the guest | 5 marks           |
| ● presentability of the candidate   | 5 marks           |
| ● neatness of the written work  | 5 marks           |
| 2. Viva voice (for each performed activity)   | 20 marks          |

### List of activities (Centre can add more activities also)

- 1) Develop the format of the reservation slip and make reservation for 5 people for 2 nights.
- 2) Amend the reservation made for 5 people for 2 nights to 10 people for 5 nights.
- 3) Making a group reservation for 20 people for 5 nights and also make arrangements for local sightseeing
- 4) How will you give wake up calls at 4:00 AM in 3 rooms?
- 5) A guest has left luggage behind, how will it be handled?
- 6) What will you do when a guest damages mirror/window/T.V.?
- 7) What action will you take in case of fire?
- 8) How will you attend to a walk in arrival of a famous play back singer.?
- 9) A guest complains of heart attack/fall/fever/or any injury. How will you handle it?
- 10) Use phonetic codes to dictate 5 names.

## POULTRY FARMING (361)

<b>Distribution of Marks</b>	<b>:</b>	<b>MM 40</b>
<b>Spotting/Identification</b>	<b>:</b>	<b>10 Marks</b>
<b>Problem/Exercise</b>	<b>:</b>	<b>20 Marks</b>
<b>Practical Record/Viva Voce</b>	<b>:</b>	<b>10 Marks</b>

### Spotting

1. Femur
2. Feather
3. Spur
4. Tibia
5. Cervical Vertebra
6. Egg (Brown)
7. Egg (White)
8. Egg Shell
9. Comb
10. Potassium Permanganate
11. Cheese Cloth
12. Incubator
13. Groundnut Cake
14. Sesame
15. Tapioca Chips
16. Wire net
17. Tube Feeder
18. Hanging Feeder
19. Linear feeder
20. Earthen waterer
21. Bottle and Bowl Waterer
22. Water Trough
23. Bifuran
24. Embazin

25. Amprosol
26. Codrinal
27. Dicestal
28. Piperzine
29. Rice Bran
30. Wheat Bran
31. Fish meal
32. Mustard cake
33. Cotton seed cake
34. Egg white
35. Egg yolk
36. Disease sample
37. Slides of diseases
  - (i) Protozона disease
  - (ii) Fungal disease
  - (iii) Viral disease
38. Feed mixture
39. Malathion
40. Sevin
41. Bleaching powder
42. Lime
43. Lysol
44. Microscope
45. Preserved specimen
46. RDF
47. Lasota
48. Gumboro
49. Aldepol
50. Plumules

### **Problems/Exercise of poultry**

**Attempt any two problem/exercise of Ten marks each.**

1. Prepare a feed of good quality for a broiler.
2. Write the steps involved in de beaking.
3. Give details of the technique of killing, dressing and processing of chicken.
4. Candle and grade fifty eggs and report the results in a tabular form.
5. Prepare a financial chart of a broiler unit with an intake of 500 broiler chicks per week.
6. Identify the bones of a fowl.
7. Break and open an egg and study the various parts. Draw and Label.
8. Give the financial statement of housing of five hundred broilers.
9. Observe diseased and healthy birds in a poultry form and prepare the report.
10. Make a visit to a growers house and record the available floor space, feeder and water space.

## SOIL & FERTILIZER MANAGEMENT (362)

Max. Marks : 40

Time : 3 Hours

### Distribution of Marks:

<b>Spotting/Identification</b>	-	<b>10</b>
<b>Problems/Exercise</b>	-	<b>20</b>
<b>Practical Record</b>	-	<b>5</b>
<b>Viva Voce</b>	-	<b>5</b>

### Spotting

1. Texture
2. Rocks, Igneous, metamorphic, Sedimentary
3. Munsel colour chart
4. Deficiency Symptoms of Nitrogen
5. Superphosphate
6. Murate of potash
7. Compost
8. Green manure
9. Coated Fertilizer
10. Sewage sludge
11. Press mud
12. Spade
13. Khurpi
14. Augur
15. Soil Profile Black and Red soil
16. Soil Testing Kit
17. Biofertilizer
18. Vermi compost
19. Organic manure
20. Clay minerals
21. Cow dung
22. Gypsum
23. Kerosene
24. Coaltar
25. Whatman filter paper
26. Burette
27. Pipette
28. Measuring Cylinder
29. Conical Flask
30. Beaker
31. pH paper
32. Weighing Balance
33. Desiccator
34. Twin Ball
35. Electrical Conductivity meter (EC)

### **Problem/Exercise**

**Attempt any two problem/Exercise of 10 marks each.**

1. Determine the bulk density of a given soil cold (sample) by wax coating method.
2. Estimation of soil texture in a given sample.
3. Determine the particle density by cylinder method.
4. Characterization of soil colour by Munsel colour chart.
5. Determine the soil moisture by gravimetric method
6. Determine the pH of the soil by using pH meter.
7. Determine the available nitrogen in soil by using soil testing kit.
8. Determine the electrical conductivity in a given soil sample.
9. Determine the gypsum requirement of an alkali soil.
10. Prepare coaltar urea.
11. Prepare Neem coated urea.
12. Prepare gypsum coated urea.

## **ELECTRICAL TECHNICIAN (601 & 602)**

### **1. INTRODUCTION.**

The Vocational Course Electrical Technician started by NIOS is a skill oriented manpower training programme. So the main emphasis should be laid on practical aspect of training so as to ensure that product is well equipped as per the curricula and the objectives given in the booklet are fulfilled. This booklet of guideline for practical shall provide necessary information with regard to experiments, scheme of examination and distribution of marks, etc. to the students, teachers and to the concerned official associated in the network.

### **Important Note**

The Centre will provide a copy of the NIOS syllabus along with these Guidelines to the Examiner who will conduct the practical in an AVI at the time of External Examination.

### **2. LIST OF EXPERIMENTS**

#### **Module-I (A)**

1. Identify atleast 10 tools and equipment use by a electrical technician and list there function.
2. Practice in artificial respiration for treatment of Electric shock.
3. Identify the wires and measure . their size.
4. Prepare a straight joint of different sizes of wires.
5. Prepare a 'T' joint of different sizes of wires.
6. Study the series and parallel circuit.
7. Practice in fixing and connecting of different type of accessories on wooden board and Blocks,
8. Measure the power of a given load by Watmeter. Voltmeter and Ammeter.
9. Solder a given joint and also solder a lug.
10. Prepare series-parallel testing board.
11. Prepare a main switch board for a house having eight points of 500 Watts load and fix fuse with right type of wire.
12. Prepare a switch board on sheet by connecting different accessories.
13. Prepare a distribution board for five circuits install it and connect it.
14. Control on lamp, one plug point and one fan point with regulator in batten system of wiring.
15. Control one lamp with one switch in batten system of wiring.
16. Connect and fix an energy meter and D.P.I.C. switch on a wooden board and install it.
17. Control stair case wiring, casing and capping system.
18. To-wire a Domestic power Circuit of two points in conduit system.

19. To complete godown wiring circuit in P.v.c. conduit system.
20. Control Hostel wiring of four points in hatten system of wiring.
21. Control one bell-from three location with lamp indication in P.V.C. casing capping.
22. Control one bell from our location by using bell indicator in conduit system of wiring.
23. To test a choke and starter, make their connection for working of a fluorescent tube,
24. Install a double fluorescent tube set and complete its wiring.
25. Connect a M.V. lamp, measure its starting and working current.
26. To connect a Helogen tube lamp with its fittings.
27. Perform the different test with megger of new wiring installation for its proper performance.
28. Find the fault with megger or series test lamp and rectify it.

### **Module 1 (B)**

29. Prepare an Electromagnet with D.C. supply and vary it field strength.
30. Dismantle and assemble and thermostat and study its parts.
31. Test the earth electrode with earth tester and high wattage lamp.
32. Study the different type of Electrical and Electronic regulators.
33. To repair a rod type room heater and electric stove.
34. Dismantle and assemble ordinary and Automatic Iron (Press) and test & study its parts.
35. Study the parts and function of Electric kettle and Electric toaster.
36. Assemble a ceiling fan connect it and test it.
37. Study the parts and connection of hot plate for different temperatures.
38. Dismantling and reassembling a Geyser and study its working.
39. Locating and rectifying fault in Heat convector.
40. Assembling of washing machine, studying parts and its maintenance.
41. Dismantle and assemble mixer/juicer and find the cause of leakage current in it.
42. Assemble a vacuum-cleaner, study its function and parts.
43. To test and rectify the fault of voltage stabilizer. Practice in making connection of auto transform and rotary switch .
44. Measure the power, current and voltage of given appliance.

## Module II (A)

1. Identify the primary and secondary terminals of a single phase and three phase transformer and test them.
2. Dismantle and assemble a small single phase transformer and study its parts.
3. Load the single phase transformer and measure voltage current and power on both sides and find efficiency.
4. Find Iron and copper losses by performing open circuit and short circuit test.
5. Study the parts of power transformer and also study the function of Breather and conservator.
6. Connecting three phase transformer in star/Delta Star/star, Delta/star and Delta/ Delta connections. Study the different type of insulators and conductors used in winding.
7. Prepare a former for a small eleminator transformer as per the size of its lamination and Bobbins Wind it on winding machine arrange terminal connection, test and impregnate it.
8. Rewind a voltage stabilizer transformer and connect it with selector switch.
9. Rewind a voltage regulator of a fan.
10. Locate the various faults in a transformer and rectify them.
11. Dismantle and assemble a D.C, Generator connect it and build its voltage.
12. Connect an Alternator and build its voltage.
13. To connect a D.C. Motor with 3 point starter. Run it, change its D.O.R. Measure starting or running current.
14. Prepare a pharma and former for field coil. Prepare field coils. Tape them, fit them on pies and test their polarity.
15. Rewind a burnt armature for its proper functioning.
16. Identify the terminals of AC. Three phase, Sq. cage. Induction motor connect it with D.O.L. starter. Measure starting and running current.
17. Connect AC. Sq. cage induction motor with star Delta starter and change its D.O.R.
18. To dismantle a three phase Sq. cage burnt induction motor of 24 slots, study its parts. Note all Delta and connections. Strip out old winding.
19. Prepare pharma, prepare coils, line the slots, insert coils and wedge them.
20. Make group connections, phase connection and terminal connections. Tape the winding. Assembly and trial.
21. Varnish and impregnate the windings. Assemble it, test it and run it.
22. To rewind a three phase induction motor of 36 slots, 4 pole single layer unbalanced winding.
23. Identify the terminals of a single phase capacitor type motor, connect it, run it and change its D.o.R.
24. Connect, start and run the universal and repulsion motor and change their D.O.R.

25. Dismantle - a single phase capacitor motor study its parts strip out old windings.
26. To rewind a single phase capacitor motor of 4 pole and 36 slots.
27. Rewind on A.C. Ceiling fan of 16 slots by hand or machine winding.
28. Wind a shaded pole type table fan.
29. Wind a grinding and mincing machine universal motor (winding field and armature)
30. Detect the fault in motor and control gear with the help of test lamp or megger and rectify it.
31. Install the motor on cemented foundation. Arrange switch gear control pannel and conduct wiring.
32. Test and record insulation resistance, phase to phase insulation with megger. Also check current voltage and temperature rise at load.

### Module II (B)

Dismantle and assemble.

33. Centrifugal Pump and study its parts.
34. Study the main parts and working of reciprocating pump.
34. Dismantle and assemble a Jet pump and study its parts.
35. To install different type of valves, Elbow and bend and gauges.
36. Connecting A.C. 3 phase motor with D.O.L. and star/ Delta starter.
37. Connecting A.C. single phase capacitor type motor with starter.
38. Replace glad packing and ball bearing in pumps, and rectify float, foot valve flich and coupling.
39. To overhaul a pump and charge it with lubricant.

### 3. Scheme of Practical Examination (Module Wise)

1. Total marks = 90 (For all Practicals performed during external Examination)
2. Duration = 3 Hrs. (As per jobs / experiments given to the students.)
3. Pass Marks = 50% (Le. 45 marks out of 90.)

### Model of Practical Test Paper

#### (Module - I)

Max. Marks : 90

Time: 3 hrs

- |    |   |    |
|----|---|----|
| 1. | To control one lamp with two switches in batten wiring system (stair case wiring) | 50 |
| 2. | To test a given Iron (Press), Dismantle it and Name its parts.                    | 20 |
| 3. | Make a series parallel test board for testing.                                    | 20 |

**Total 90**

Max. Marks : 90

Time: 3 hrs

1. To wind a small eliminator transformer and test it. 20
  2. To wind two coils as per pitch and place them in three phase induction Motor starter. Draw complete diagram of the same motor. 50
  3. To dismantle and reassemble a given pump and name its parts. 20
- Total 90**

#### 4. Scheme of Evaluation (Module Wise)

Internal = 80

External = 120 marks (Theory - 30, Practical = 90)

Total Module / Course 200

#### Marking Scheme

Total marks = 90

Writing practical (including diagram) = 20

Performance of Practical = 70

#### Marking Scheme for Module I

*Note* : Experiment 1 to 3 for knowledge and practice and these are not to be examined.

#### 1. Marking Points

(Experiment No.4, 5 and 9)

Viva Voce = 2

Writing practical (including diagram). = 4

#### Performance of Practical as under:

(a) Cutting & size of wires = 2

(b) Skinning of wires = 3

(c) Twisting of joint = 3

(d) Size of joint = 3

(e) Finish of joint = 3

**Total 20 marks**

**2. Preparing Board** **20 marks**

(Experiment No. 7-10,11, 12,13,16)

Viva Voce = 2

Writing Practical (including Diagram) = 4

**Performance of Practical**

a) Arranging & marking of accessories = 3

b) Drilling and pocketing = 2

c) Fixing of accessories = 3

d) Connections = 3

e) Testing = 3

**Total** **20 marks**

**3. Wiring (Batten/P.V.C/Casing Capping wiring)** **50 marks**

(Experiment No. 14,15, 17, 20, 21)

Viva Voce = 5

Writing practical (including diagram) = 10

**Performance of practical as under:**

a) Layout & marking = 3

b) Cutting of batten = 3

c) Clipping of batten = 3

d) Graving of Blocks and boards = 3

e) Fixing of batten = 4

f) Running of wires = 4

g) Installing of Block and boards = 3

h) Fixing of accessories = 4

i) Connections = 4

j) Testing = 4

**Total** **50 marks**

**4. Wiring (Conduct/P.V.C. conduct)** **50 marks**

(Experiment No. 18,19.22)

Viva Voce = 5

Writing practical = 10

**Performance of Practical as under:**

a) Layout and Marking	=	3
b) Cutting of conduit	=	3
c) Threading of conduit	=	3
d) Saddling of conduit	=	3
e) Fixing junction box & board	=	3
f) Running of wires	=	4
g) Fixing of accessories	=	4
h) Connections	=	4
i) Testing	=	4
<b>Total</b>	<b>=</b>	<b>50 marks</b>

**5. Lamp Connections**

**20 marks**

(Experiment No. 23 to 26)

Viva Voce	=	2
Writing practical (including diagram).	=	4

**Performance of Practical as under :**

a) Testing of choke	=	3
b) Testing starter capacitor	=	2
c) Fixing accessories of Lamp	=	3
d) Connections	=	3
e) Working of Lamp	=	3
<b>Total</b>	<b>=</b>	<b>20 marks</b>

**6. Electrical Appliance**

**20 marks**

(Experiment No.39, 32 to 38 and 40 to 42)

Viva Voce	=	2
Writing practical (including diagram).	=	4

**Performance of Practical**

a) Testing of appliances	=	2
b) Dismantling	=	2
c) Naming Pans	=	2
d) Replacement of element	=	2

e) Assembling	=	3
f) Testing & working Total	=	3
<b>Total</b>	=	<b>20 marks</b>

**7. Measuring, Testing and Rectifying**

**20 marks**

Viva Voce	=	2
Writing practical (including diagram).	=	4

**Performance of practical**

a) Connections	=	3
b) Testing	=	2
c) Tracing fault	=	3
d) Rectifying fault	=	3
e) Checking working or observations	=	3
<b>Total</b>	=	<b>20 marks</b>

**Marking Scheme Module II**

*Note:* Experiment 5 and 7 are for knowledge and are not for testing

**1. Identification, Testing & Losses of Transformer**

**20 marks**

(Experiment No.1, 3 and 4)

Viva Voce	=	2
Practical Writing (including diagram)	=	4

**Performance of Practical as under :**

a) Continuity Testing	=	2
b) Observing lamp light and deciding primary & secondary terminals	=	3
c) Connecting Instrument	=	3
d) Observing Readings	=	2
e) Finding losses	=	2
f) Calculating efficiency Total	=	2

**2. Rewinding of Transformer**

**20 marks**

(Experiment No.8 to 10)

Viva Voce	=	2
Practical Writing (including diagram)	=	4

**Performance of Practical as under :**

a) Preparing Pharma & Bobin	=	2
b) Winding Transformer	=	3
c) Insulation & Varnishing of winding	=	2
d) Terminating of winding	=	2
e) Fixing of Lamination	=	2
f) Testing of transformer & its connections	=	3
<b>Total</b>	=	<b>20 marks</b>

**3. Testing & Rectification**

**20 marks**

(Experiment. No. 11, 31, 33)

Viva Voce	=	2
Practical Writing (including diagram)	=	4
a) Performing different test	=	4
b) Tracing of fault	=	3
c) Removing of fault	=	2
d) Reinsulation & Varnishing	=	3
e) Testing	=	2
<b>Total</b>	=	<b>20 marks</b>

**4. Connecting & Running of machines**

**20 marks**

(Experiment No.1, 13 to 14. 17 to 18, 24 to 25, 27 to 30, 38 & 39)

Viva Voce	=	2
Practical Writing (including diagram)	=	4

**Performance of Practical as under**

a) Identification of terminal	=	3
b) Connections	=	2
c) Connection with starter / Regular	=	3
d) Running of machine	=	3
e) Observations	=	3
<b>Total</b>	=	<b>20 marks</b>

**5. Dismantling & Assembling & study of machine & Rectification** **20 marks**

Viva Voce = 2

Practical Writing (including diagram) = 4

**Performance of Practical as under**

a) Dismantling = 3

b) Study of connections & Parts = 3

c) Assembly = 3

d) Testing = 3

e) Trial for working = 2

**Total = 20 marks**

**6. Rewinding of Single Phase/Three phase Motor/Fan** **50 marks**  
(Experiment No. 15,16,20,23)

Viva Voce = 5

Practical Writing (including diagram) = 10

**Performance of Practical as under :**

a) Noting Data / Preparing Table = 2

b) Striping out old winding and cleaning = 3

c) Linning slot insulation = 2

d) Preparing Pharma = 2

e) Winding coils = 3

f) Insertion of ends = 2

g) Sleeving of ends = 2

h) Preparing group connection = 3

i) Taping of windings = 2

j) Phase connections = 3

k) Assembling = 2

l) Testing and Trial = 2

m) Varnishing & Impregnating = 3

n) Assembling and Running = 3

**Total = 50 marks**

**7. Dismantling and Reassembling and Overhauling a Pump** **20 marks**  
(Experiment No. 34-35, 36, 40)

Viva Voce	=	2
Practical Writing (including diagram)	=	4

**Performance of Practical as under:**

a) Dismantling	=	3
b) Labeling of Parts	=	2
c) Replacement of worn parts & fitting	=	2
d) Assembling	=	3
e) Testing and working	=	2
f) Changing with Lubricant	=	2
<b>Total</b>	=	<b>20 marks</b>

**8. Replacing, Repairing and Installing** **20 marks**  
(Experiment No. 37-40)

Viva Voce	=	2
Practical Writing (including diagram)	=	4

**Performance of Practical as under :**

a) Removing of old ball bearing	=	3
b) Process of Replacing new ball bearing	=	3
c) Removing and cleaning old gland packing	=	2
d) Method placing new gland packing	=	3
e) Rectifying the damage part as Float / Foot valve, coupling/ flich/ Elbow, Bend & gauges	=	3
<b>Total</b>	=	<b>20 marks</b>

**5. Guidelines for Examiner**

1. As far as possible each examine should be given separate experiment
2. Main emphasis should be given in the evaluation of work done, professional competency workmanship and finish etc.
3. The object of Viva-voce should be to ascertain the depth of knowledge and understanding of the students. Questions asked should pertain to experiment performed by the student as well as other experiments.
4. Each Student may be asked to perform three experiments as per the model practical test paper and he/ she is to perform all.

5. The examiner will mark the experiments as per the Marking Scheme provided.
6. General Instructions to the Students/Candidates

### **6. General Instructions to the Students/Candidates**

**Note:** Before starting the practical, student should submit the connection diagram along with the list of equipment to the examiner.

1. Each student should check up the material/tools and equipments as per the requirement of the examination.
2. Each student should make himself/herself clear in understanding the question paper fully before its commencement.
3. Any student who finds any problem in handling the machine/ equipment should immediately contact his / her Invigilator / Examiner.
4. Each student must do all the required operations himself/herself without the help of other student.
5. Each student should bear in mind the time allotted to him/her so that he/ she may finish his/her within the stipulated time.

### **7. List of Tools and Equipment**

Please refer to the list provided in the syllabus of the Course in Electrical Technician.

### **8. Guidelines to the Centre Superintendent**

1. Centre superintendent shall send the internal assessment to NIOS before the final examination.
2. He would send the award list of the practicals as soon as possible duly signed by examiner and himself.

## **RADIO AND TV TECHNICIAN (603/604/703/704)**

### **INTRODUCTION**

Aim of adding Vocational Courses in the NIOS Scheme is to impart training to the youth and to enable them to earn a living for themselves. As the education background of the entrants in the scheme is class 8<sup>th</sup> pass and total duration of training one year, they will be given only bare necessary theoretical and the stress will be laid on the practical training so that the students understand the functioning, of basic electronic gadgets and their components assembling, testing and fault rectification of electronic gadgets like Transistor, Radio, Tape Recorder and Television.

The whole syllabus is divided into two modules.

### **Module I**

Part - 1 Covers Electricity and basic electronics, Test equipments like Multi meter and other meters.

Part - 2 Covers Transistor, Radio Receiver, Tape Recorder, Two-in-one, Decks etc. & associated test equipments.

### **Module II**

Part - 1 Covers Black and White T. V. and the associated test equipment.

Part - 2 Covers Colour Television and the associated test equipment.

- (a) Classification and checking of different components with Multimeter.
- (b) Verification of Ohm's Law
- (c) Construction of Half Wave Rectifier.
- (d) Construction of Full Wave Rectifier.
- (e) Construction of Bridge Rectifier.
- (f) Construction of Battery Eliminator,
- (g) Construction of Power Supply for Battery Charger and Stereo Deck,
- (h) Radio Receiver

Circuit Tracing, Voltage and current measurement, Fault Finding and rectification of various sections of a Transistor Receiver with the Multimeter, Alignment of a Single / multiband Radio

Receiver with a signal generator, Power output check of A.F. stage of a Radio Receiver/Two-in-one and audio Amplifier. To draw the components on PCB layout diagram of a Receiver, Stereo Deck and making interstage connection.

#### **(i) Tape Recorder/Two-in-one**

(i) Checking and rectification of Tape Transport Mechanism, (all mechanical parts), (ii) Checking and adjustment of biasing ;voltage and frequency; (iii) Overall alignment of Two-in-one including R.F. Section Azimuth Angel, (iv) Connection of change over switch between Radio-Tape Recorder section (v) Fault finding rectification of electronics circuit of a tape recorder, (vi) Assembling of a single IC, single Transistor

ckt of a Tape Recorder and its testing, (vii) Assembling of R.F. section of a Two-in-one and its resting, (viii) Two draw the components on the diagram of PCB layout giving the required connections of different stages.

### **Module II (Black and White Television)**

- (a) Location of different blocks/ sections of a Black and white TV Receiver.
- (b) Testing of different types of power supplies used in Black and White TV (Transformer type, SCR type, SMPS type).
- (c) Construction, Installation and faults in different type of TV Antenna.
- (d) Tracing of different section like Common IF section Sound IF section and output section, Video output. Vertical section, Horizontal oscillator and APC Horizontal output and EHT section.
- (e) Fault finding and rectification of different sections of a B&W TV receiver.
- (f) Adjustment of all the technician's controls (internal controls).
- (g) Questions on different types of test equipment used for servicing of B&W TV viz. CRO Pattern Generator etc.

### **Colour T.V. Receiver**

- (a) Use of different test equipments used with a colour TV; Receiver such as Colour pattern Generator, Digital multimeters Degaussing coil, Frequency counter, Oscilloscope etc.
- (b) Base pin connections of a colour picture tube checking and adjustment voltages on different pins.
- (c) Tracing of various sections of a colour T.V. Receiver,
- (d) Adjustment of three primary colours (Grey scale tracking) Adjustment. (e) Degaussing of Picture Tube with the external degaussing coil.
- (e) Tracing of circuit and voltage measurement at various points.
- (f) General fault finding and rectification.
- (g) Fault finding and rectification of different types of SMPS.

### **General Instructions to the Students/Candidates**

1. Students should observe all the safety precautions while handling the equipment.
2. They should bring to the notice of the examiner! observer if they are not familiar with an equipment.
3. All the students should be in possession of the Theory and Practical record to enable the examiner to asses their performance in maintenance of records.
4. All students should bring one project assembled by them during the course of their training and should be in a position to answer question relating to their project.
5. They should understand the practical task before doing it and clarify their doubts.
6. Each student should do his job independently.
7. Each student should finish his task within the stipulated time.
8. All the candidates should bring their tool kit and consumables like solder wire, solder flux, flexible wire tinned wire, sleeves etc.

### **Hints/Instructions/ Guidelines to the Examiner**

1. Time allotted to complete the practical examination for each capsule is 3 Hrs.
2. He may divide his group into small sub-groups and allot them the different tasks simultaneously.
3. He should assess the maintenance of record from the practical & theory me maintained by the examiner during the course of his training.
4. The workmanship of an examinee can be assessed from the project assembled during the course of his training and exhibited at the time of practical examination.
5. From Capsule I, one construction practical and other component testing, circuit tracing, alignment of rectification of a fault may be asked. From Capsule II the practicals can be about circuit tracing alignment and rectification of the faults.
6. In viva a candidate may be asked general questions on practical given to him.
7. For evaluating the performance in practical, emphasis should be laid on general approach workmanship and finish of the task.
8. In fault rectification practicals special attention is to be given to the approach of the candidate to that problem.
9. Minimum pass marks in the practical are 50%
10. Each student should finish his /her job within the stipulated time.
11. Guideline for assessing the performance of a trainee on the practical exam, areas follows:

#### **Module-I**

1. Max. Marks per Module	90
2. Viva	10
3. Maintenance of records	10
4. Project	10
5. Practical basic	30
6. Practical on Radio/Tape recorder	30

#### **Module-II**

1. Max. Marks	90
2. Maintenance of records	10
3. Viva	20
4. Black & White Television	30
5. Colour Television	30

### **Hints/Instructions/Guidelines to the Centre Superintendent**

1. Centre Superintendent is responsible for the fair conduction of practical examination of his centre.
2. He is responsible for providing the necessary test equipments for the practical examination.
3. He has to appoint a person to liase with the examiner to sort out the problems if any.
4. He has to dispatch the completed practical projects/ answer sheets to the place as directed by the NIOS Authorities.

### **List of Tools, Equipments and Material**

1. Screw driver set.
2. Combination pliers
3. Diagonal cutting pliers
4. Long nose plier
5. Hand drills
6. Hacksaw
7. Soldering Iron
8. Adjustable wrench set
9. Ball pen hammer
10. Allen keys set
11. Neon Tester
12. Double ended spanner sets.
13. Cutter
14. Tweezer

### **Instruments and Equipments**

1. AM Radio Receivers - 2 Band
2. Cassette tape recorder
3. Black and white television sets
4. Colour television sets
5. Multimeters
6. Digital multimeters
7. R.E Signal Generator
8. Oscilloscope 40 MHz

9. Pattern Generator
10. Colour bar generator
11. Frequency counter
12. Audio and RF Signal generator
13. High Voltage probe
14. TV Antenna
15. Voltage Stabilizer
16. Antenna Booster (Optional)
17. Extension Boards
18. Millivolts Meter
19. Power Meter

**Consumable Material (As per requirement)**

Solders, Flux, Flexible wire, Antenna wire, Old PCBs for tracing, Screws, Nails, Insulation tape, Resistance (Assorted), Capacitors, Diodes, ICs, Antenna Coils, 1FT coils etc.

## BASIC STITCHING SKILLS (461)

**Table – I**

Item	Distribution of Marks	Remarks
Spotting	20 (10 spots of 2 marks each)	10 Spots may be selected from the list enclosed
Activity I	10	1 activity may be selected from the list enclosed
Activity II	40 (2 activities of 20 marks each)	2 activities may be selected from the list of group A and B enclosed
Practical Record	15	Student has to produce practical record at the time of practical exams.
Viva Voce	5	Knowledge and understanding of the students should be evaluated by the examiner.

**Table – II**

### Weightage to type/forms of question

S. No.	Forms of questions	Marks for each question	Number of Questions	Total marks	%
1.	Spotting	2	10	20	22.2%
2.	Activity I	10	1	10	11.11%
3.	Activity II	20	2	40	44.44%
4.	Practical Records	15	—	15	16.6%
5.	Viva – voce	1	5	5	5.5%

### Spotting -

Q1 Identify the spots and write its one function –

- 1) Inch tape
- 2) L – Scale
- 3) Leg shaper
- 4) Tailor art curve
- 5) French Curve
- 6) Tracing Wheel
- 7) Scissors
- 8) Poker
- 9) Notch Marker
- 10) Machine needle
- 11) Pinking shears

- 12) Thimble
- 13) Needle Threader
- 14) Pressure bar
- 15) Pressure foot
- 16) Pressure foot bar lifter
- 17) Needle bar
- 18) Clamp
- 19) Thread
- 20) Tension device
- 21) Take up lever
- 22) Needle plate
- 23) Feed dog
- 24) Bobbin winder
- 25) Spool Pin
- 26) Stitch regulator
- 27) Handle
- 28) Flywheel
- 29) Stop motion screw
- 30) Bracket screw
- 31) Bobbin
- 32) Bobbin Case Shuttle
- 33) Shuttle driver

Samples of –

- 34) Curry stain
- 35) Tea Stain /Coffee stain
- 36) Pickle stain
- 37) Blood Stain
- 38) Rust stain
- 39) Lipstick Stain
- 40) Shoe polish stain
- 41) Grass/leaf stain
- 42) Ink stain
- 43) Ball pen stain

### ACTIVITY – I

10 Marks

**It is compulsory for every student to perform one activity from the list given below.**

List of activities –

1. Thread the sewing machine and prepare it for stitching step by step.
2. Remove the stains from the given cotton samples and write the procedure also. (any two)
  - a. Tea/coffee
  - b. Ghee/butter oil
  - c. Curry/pickle
3. Identify the given fibre through burning test and write its characteristics.

### ACTIVITY – II

**It is compulsory for every student to perform one activity from group A and one activity from group B.**

**A**

**20 x2 = 40 marks**

1. Prepare a sample of Hemming and blanket stitch.
2. Prepare a sample of backstitch and bullion stitch.
3. Prepare a sample of even basting and cross stitch
4. Prepare a sample of running stitch and shadow work
5. Prepare a sample of satin stitch and over casting.
6. Prepare a sample of lasy daisy and fish bone stitch.
7. Prepare a sample of French knot and uneven basting
8. Prepare a sample of buttonhole stitch and chain stitch

**B** Prepare a sample of –

1. Pressed open seam
2. French seam
3. Bound seam
4. Flat felled seam
5. Self bound seam
6. Top stitched plain seam
7. Prepare a sample of hook and eyelet.
8. Prepare a sample of tich or press button.
9. Prepare a sample of fixing a button and button hole.

## MARKS DISTRIBUTION –

<b>For activity - I</b>	<b>10 marks</b>
Identification/correct procedure	- 5
Presentation of work	- 3
Precautions taken	- 2
<b>For activity - II</b>	<b>40 marks</b>
Selection of material and equipments	- 2
Correct procedure step by step	- 10
Completion of work	- 3
Presentation of work	- 2
Precaution taken	- 3 <b>(20 x 2) = 40</b>

### Guidelines for trainer/ Instructor

1. All listed activities in the questions paper should be performed by the students.
2. Student should maintain practical record of each activity.
3. The student should be informed in advance about the material (tools and equipments) consumable item which may be required/ arranged by them.
4. The students should be asked to bring ½ to 1 mtr. of cloth for sample making.
5. The students should be asked to bring his/her complete sewing and embroidery kit alongwith.
6. The students should be asked to bring candle and match box for burning test.
7. The trainers should ensure that every students must perform all the three activities given in sample paper (Activity – I of 10 marks and 2 activity – II from group A and B of 20 marks each)
8. Before exam the trainer should ensure that all the tools and equipments are in working condition.
9. Equipments tools and samples for spotting and burning test should be checked and arranged in advance.
10. The trainer should label all the parts of sewing machine for spotting activity.
11. In spotting activity related to stains, students should be asked for identifying and categorize the stains.
12. The trainer should ensure that spotting items from all the three categories are included.
13. Every alternate student should be allotted different activities as per the given list of activities.

14. The trainer should inform the students in advance about the marks allotted for each activity so as to facilitate them to pay more attention on the important activities.
15. Allotted time should be indicated in the question paper for each activity.

**Guidelines for External examiner -**

1. The examiner should check that every students have performed all the three activities given in question paper.
2. Main emphasis should be given to the evaluation of work done, professional competency, workmanship, speed and finish.
3. Marks should be awarded on operation basis and total comprehensive basis keeping in view the list of skills to be tested.
4. The examiner should avoid summarily marking after completion of practical exams.

**Basic Stitching Skills (Module – 461)**

**Sample Question Paper**

**Time – 3hrs**

**Max. Marks – 90**

S. No.

Marks

Spotting

Q. I Identify spots and write its one function

1. French curve
2. Thimble
3. Pressure foot
4. Needle bar
5. Shuttle
6. Poker
7. L-scale
8. Fly wheel
9. Tea stain
10. Shoe polish stain

2 x 10 = 20

Q. 2 **Activity : I**

Identify the given fibre through burning test and write its characteristics.

10

Q. 3 **Activity : II**

Prepare a 6"x6" sample of satin stitch and overcasting stitch.

20

Q. 4 Prepare a 6"x6" sample of hook and eyelet

20

Q. 5 Practical Record

## Children's Wear (462)

Table – I

Item	Distribution of Marks	Remarks
Activity	70	1 activity may be selected from the list enclosed
Practical Record	15	Student has to produce practical record at the time of practical exams.
Viva voce	5	Knowledge and understanding of the student should be evaluated by the examiner.

Table – II  
Weightage to type/forms of question

S. No.	Forms of questions	Marks of for	Number of each question	Total Marks questions	Percentage
1.	Activity	70	1	70	77.7%
2.	Practical records	15	-	15	16.6%
3.	Viva-voce	1	5	5	5.5%

### List of skills to be tested-

1. Drafting ability and accuracy
2. Cutting out Paper Pattern
3. Laying and layout of paper pattern
4. Transferring the pattern on cloth
5. Cutting all components of cloth neatly
6. Making guiding marks for stitching
7. Systematic stitching of components
8. Accuracy in joining components together
9. Proper finishing
10. Comprehensive get up of the garments

### List of activities

70 marks

- i. Prepare paper pattern of a sleeveless 'A' line frock with peter pan collar as per given size and cut cloth with the help of the paper pattern, stitch and finish the frock.  
Length – 46 cm, Width – 51 cm.
- ii. Prepare paper pattern of a Jhabla and Bib as per given size, and cut cloth with the help of the paper pattern, stitch and finish the Jhabla and Bib.

Bib size – Round chest -51 cm.

Jhabla size –Length -35 cm., width-51 cm.

- iii. Prepare paper pattern of a ‘A’ line frock with puffed sleeves, round neck as per given size and cut cloth with the help of the paper pattern, stitch and finish the frock.

Length – 46 cm, Width -51 cm

- iv. Prepare paper pattern of a boy’s half sleeve shirt with collar as per given size and cut cloth with the help of the paper pattern, stitch and finish the shirt.

Length -25 cm, Round chest -56 cm, sleeve length -10 cm, Shoulder-21 cm.

- v. Prepare paper pattern of a boy’s shorts as per given size and cut cloth with the help of the paper pattern, stitch and finish the shorts.

Round hip- 61 cm, waist to hip- 10 cm, crotch length -50 cm, length -31 cm.

**Guidelines for Trainer/ Instructor-**

1. Before the practical exam the trainer should ensure that all tools and equipments are in working condition.
2. After setting the question paper students should be informed in advance about the material (tools and equipments)/ consumable items which may be required/ arranged by them.
3. The trainer should ensure that every student, performs each step of garment construction and get it signed by the trainer/examiner.
4. The marks should be allocated for each steps either or according to skills involved in various steps and student should be informed about this marks distribution.
5. Student should maintain practical record of each step of given activity.
6. The student should be asked to bring 1.5 to 2 meters of cloth for making garment in advance.
7. The student should be asked to bring his/her complete sewing kit and drafting tools.

## Children's Wear (462)

**Table – I**

Item	Distribution of Marks	Remarks
Activity	70	1 activity may be selected from the list enclosed
Practical Record the time	15	Student has to produce practical record at of practical exams.
Viva voce	5	Knowledge and understanding of the student should be evaluated by the examiner.

**Table – II**

**Weightage to type/forms of question**

Sl. No.	Forms of questions	Marks of for	Number of each question	Total marks questions	Percentage
1.	Activity	70	1	70	77.7%
2.	Practical records	15	-	15	16.6%
3.	Viva-voce	1	5	5	5.5%

### List of skills to be tested-

1. Drafting ability and accuracy
2. Cutting out Paper Pattern
3. Laying and layout of paper pattern
4. Transferring the pattern on cloth
5. Cutting all components of cloth neatly
6. Making guiding marks for stitching
7. Systematic stitching of components
8. Accuracy in joining components together
9. Proper finishing
10. Comprehensive get up of the garments

### List of activities

70 marks

- i. Prepare paper pattern of a sleeveless 'A' line frock with peter pan collar as per given size and cut cloth with the help of the paper pattern, stitch and finish the frock.  
Length – 46 cm, Width – 51 cm.
- ii. Prepare paper pattern of a Jhabla and Bib as per given size, and cut cloth with the help of the paper pattern, stitch and finish the Jhabla and Bib.

Bib size – Round chest -51 cm.

Jhabla size –Length -35 cm., width-51 cm.

- iii. Prepare paper pattern of a ‘A’ line frock with puffed sleeves, round neck as per given size and cut cloth with the help of the paper pattern, stitch and finish the frock.

Length – 46 cm, Width -51 cm

- iv. Prepare paper pattern of a boy’s half sleeve shirt with collar as per given size and cut cloth with the help of the paper pattern, stitch and finish the shirt.

Length -25 cm, Round chest -56 cm, sleeve length -10 cm, Shoulder-21 cm.

- v. Prepare paper pattern of a boy’s shorts as per given size and cut cloth with the help of the paper pattern, stitch and finish the shorts.

Round hip- 61 cm, waist to hip- 10 cm, crotch length -50 cm, length -31 cm.

#### **Guidelines for Trainer/ Instructor-**

1. Before the practical exam the trainer should ensure that all tools and equipments are in working condition.
2. After setting the question paper students should be informed in advance about the material (tools and equipments)/ consumable items which may be required/ arranged by them.
3. The trainer should ensure that every student, performs each step of garment construction and get it signed by the trainer/examiner.
4. The marks should be allocated for each steps either or according to skills involved in various steps and student should be informed about this marks distribution.
5. Student should maintain practical record of each step of given activity.
6. The student should be asked to bring 1.5 to 2 meters of cloth for making garment in advance.
7. The student should be asked to bring his/her complete sewing kit and drafting tools.
8. The trainer should ensure in advance that the sewing machines are functioning properly.
9. Every alternate student should be allotted different activities as per the given list of activity.
10. Students should be informed about allotted time for each step of given activity.

#### **Guidelines for External Examiner:**

1. The examiner should check that every student have performed all the steps included in the activity.
2. Main emphasis should be given to the evaluation of work done, professional competency, workmanship, speed and finish.
3. Marks should be awarded on operations basis and total comprehensive basis keeping in view the list of skills to be tested.
4. The examiner should avoid summarily marking after completion of practical exam.
5. The marks should be allocated for each step either or according to skills involved in various steps. Student should be informed about this marks distribution.

6. The trainer should ensure that every student performs each step of garment construction and get it signed by the examiner/trainer.

**Marks distribution for the activity**

<b>Steps</b>	<b>Marks</b>
Drafting	10
Paper pattern	10
Layout	10
Cutting	5
Stitching	25
Finishing and Neatness	10
<b>Total</b>	<b>70</b>

**Children's Wear (462)**

**Sample Question Paper**

Time -3 hrs.

Max. marks- 90

<b>Sl.No.</b>	<b>Activity</b>	<b>Mark</b>
Q. 1.	Prepare paper pattern of a sleeveless 'A' line frock with Peter pan collar as per given size and cut cloth with the help of the paper pattern, stitch and finish the frock. Length -46 cm, width- 51 cm.	70
Q.2.	Practical Record	15
Q.3.	Viva-voce	5

## Men's Wear (494)

Table – I

Item	Distribution of Marks	Remarks
Activity	70	1 activity may be selected from the list enclosed
Practical Record the time	15	Student has to produce practical record at of practical exams.
Viva voce	5	Knowledge and understanding of the student should be evaluated by the examiner.

Table – II  
Weightage to type/forms of question

S. No.	Forms of questions	Marks of for	Number of each question	Total marks questions	Percentage
1.	Activity	70	1	70	77.7%
2.	Practical records	15	-	15	16.6%
3.	Viva-voce	1	5	5	5.5%

### List of skills to be tested-

1. Drafting ability and accuracy
2. Cutting out Paper Pattern
3. Laying and layout of paper pattern
4. Transferring the pattern on cloth
5. Cutting all components of cloth neatly
6. Making guiding marks for stitching
7. Systematic stitching of components
8. Accuracy in joining components together
9. Proper finishing
10. Comprehensive get up of the garments

### List of activities

1. Prepare paper pattern of a full open shirt with close collar and full sleeves as per given size and cut cloth with the help of paper pattern, stitch and finish the shirt.

Size - Round chest - 89 cm  
Round neck - 37 cm

Shoulders	-	19 cm
Shirt Length	-	79 cm
Sleeve length	-	61 cm
Sleeve round bottom	-	33 cm
Wrist	-	19 cm

2. Prepare paper pattern of a manila shirt with open collar and half sleeves as per given size and cut cloth with help of paper pattern, stitch and finish the shirt

Size	-	Round chest	-	89 cm
		Round neck	-	37 cm
		Shoulders	-	19 cm
		Shirt length	-	74 cm
		Sleeve length	-	30 cm
		Sleeve round bottom	-	33 cm

3. Prepare a paper pattern of pleated pant as per given size and cut cloth with the help of paper pattern, stitch and finish the pant.

Size	-	Length	-	104 cm
		Round waist	-	79 cm
		Round hip	-	94 cm
		Crotch or seat length	-	29 cm
		Crotch length	-	75 cm
		Round bottom	-	40 cm

4. Prepare paper pattern of Nehru Kurta with sleeves as per given size and cut cloth with the help of paper pattern, stitch and finish the Kurta.

Size	-	Length	-	85 cm
		Round chest	-	89 cm
		Round neck	-	37 cm
		Round waist	-	41 cm
		Sleeve length	-	61 cm
		Sleeve round bottom	-	33 cm

5. Prepare paper pattern of Churidar Pyjama as per given size and cut cloth with the help of paper pattern, stitch and finish the Pyjama.

Size	-	Length	-	104 cm
		Round hip	-	94 cm
		Round knee	-	37 cm
		Round bottom	-	32 cm

#### **Guidelines for Trainer/ Instructor-**

1. Before the practical exam the trainer should ensure that all tools and equipments are in working condition.
2. After setting the question paper students should be informed in advance about the material (tools and equipments)/ consumable items which may be required/ arranged by them.
3. The trainer should ensure that every student, performs each step of garment construction and get it signed by the trainer/examiner.
4. The marks should be allocated for each steps either or according to skills involved in various steps and student should be informed about this marks distribution.
5. Student should maintain practical rec.ord of each step of given activity.
6. The student should be asked to bring 3 meters of cloth for making garment in advance.
7. The student should be asked to bring his/her complete sewing kit and drafting tools.
8. The trainer should ensure in advance that the sewing machines are functioning properly.
9. Every alternate student should be allotted different activities as per the given list of activity.
10. Students should be informed about allotted time for each step of given activity.

#### **Guidelines for External Examiner:**

1. The examiner should check that every student have performed all the steps included in the activity.
2. Main emphasis should be given to the evaluation of work done, professional competency, workmanship, speed and finish.
3. Marks should be awarded on operations basis and total comprehensive basis keeping in view the list of skills to be tested.
4. The examiner should avoid summarily marking after completion of practical exam.
5. The marks should be allocated for each step either or according to skills involved in various steps. Student should be informed about this marks distribution.
6. The trainer should ensure that every student performs each step of garment construction and get it signed by the examiner/trainer.

### **Distribution of Marks for different activities**

<b>Steps</b>	<b>Marks</b>	<b>Observation</b>
Drafting	10	Proper measurement, shape of armhole, Neck, shoulder, sides, position of darts.
Paper pattern	10	Actual size with ease or seam allowances.
Layout	10	Layout of pattern on cloth in proper position. Keeping in view the grainline. Neatness in transferring the pattern
Cutting	5	Cutting neatness of all parts. Making darts on both parts if necessary.
Stitching	25	Stitching darts, joining back and front, making placket, neck finishing, sleeve making and joining, Bottom turning and slit., Fly attachment, Belt attachment, Zipper attachment
Finishing and Neatness	10	Neatness Hemming Fasteners attachment pressing.

**Men's Wear (Module – 494)**

**Sample Question paper**

**Time – 3hrs**

**Max. Marks – 90**

S. No.	Activity	Marks
Q. 1	Prepare paper pattern of a full open shirt with close collar and full sleeves as per given size and cut cloth with the help of paper pattern, stitch and finish the shirt. Round chest – 89 cm, Round neck – 37 cm, shoulder – 19 cm, shirt length – 79 cm, sleeve length – 61 cm, sleeve round bottom – 33 cm, wrist – 19 cm.	70
Q. 2	Practical record	15
Q. 3	Viva – voce	5

## **CUTTING TAILORING & DRESS MAKING (705/706)**

### **PRACTICAL PAPER-1**

#### **CUTTING AND TAILORING (605)**

Max. marks: 90

Time: 3+3 Hrs.

#### **SYLABUS FOR PRACTICALS MODULE -1, PART - II,**

##### **List of Skills to be testing**

1. Drafting ability and accuracy
2. Cutting out Paper Pattern
3. Laying and Layout of Paper Pattern.
4. Transferring the Pattern on cloth.
5. Cutting cloth neatly.
6. Making guiding marks for stitching.
7. Systematic stitching of components
8. Accuracy in joining components together.
9. Finishing with fasteners etc.
10. Pressing
11. Comprehensive get up of the garment.

##### **Marking Scheme**

##### **Note :**

Marks for internal assessment will be awarded by the AVI concerned.

Max. marks: 80

##### **Distribution of Marks**

i. Trade Theory .....	30 Marks
ii. Practical .....	90 Marks
iii. Internal Assessment.....	80 Marks
<b>Total .....</b>	<b>200 Marks</b>

### Guidelines for the Instructor / Trainer

1. Internal Assessment	80 Marks
Marks Division	(70%+30%)
i) Practical	70% = 55 marks
ii) Theory and Drafting Book	30% = 10 + 15 = 25 Marks

The Instructor should note that :

- (1) All listed exercise in the course are performed by the students.
- (2) Proper maintenance of record books (by the students) is ensured.
- (3) Students should prepare all the jobs listed in the group opted by him/her i.e. (children garments or ladies garments or boys / gents garments) any group.

It may be noted that :

- i. All the three groups contain ten exercises approximately.
- ii. The marks be allocated for each job either or according to skills involved in various jobs exercises,
- iii. Student should maintain a daily work diary, recording hours of work each day for practical job.
- iv. The teacher will award marks in it immediately after completion of the *job* exercise putting his/her signatures and date.
- v. In the end of the session -the teacher will award sessional marks taking average of the marks scored by the student for all the exercise done and the marks obtained in three/six bi-monthly tests.
- vi. The same procedure should be followed for awarding marks for theory and practical work book (drafting).
- vii. Teacher should maintain his/her own marks register both the theory and practical.
- viii. For each bi-monthly test teacher should set question papers both theory and practical from within the units and exercise taught.
- ix. After setting the question paper students should be informed asked in advance about the consumable / raw materials which will be / required / arranged by them.
- x. Before the test, teacher should ensure that all tools and equipment are in working condition:

#### (4) Special instructions for the calculation of Internal Assessment marks

Total Jobs in Group & Test	Total Jobs Done	Total Marks Scored	Internal Marks to be Awarded
11 No.	10 No.	45	$45 / 55 \times 100 = 81.81$ say = 82%

- (ii) Break-up of syllabus should be made monthwise and weekwise both for theory and practical jobs in accordance with the prescribed duration of the course.

- (iii) Break-up of syllabus should be made in such a way keeping provision for revision of exercises / theory; lesson.
- (iv) Students should be kept informed in advance about next job/ exercise and required materials and accessories for them.

**II. Guidelines for External Examiners.**

- i. Examiner should check up atleast one complete job / exercise of each group of students opted the same group of exercises.
- ii. As far as, possible each group of students should be given the same job / exercise for the sake of comparative evaluation.
- iii. Main emphasis should be given in the evaluation of work done, professional competency; workmanship, speed and finish.
- iv. Examiner in his own wisdom can give two exercise to one group as option to individuals, student can perform anyone out of two.
- v. Marks should be awarded on operation basis and total comprehensive basis keeping in view the list of skills to be tested (given in prepage.)
- vi. Examiner should inform the students in advance the marks allotted for each operation of the job so as to facilitate them to pay more attention on the important operations.
- vii. Allotted time should be indicate in the question paper for each job (as indicated in the model test paper).
- viii. Should avoid summarily marking after completion of job.

**III. DISTRIBUTION OF MARKS ON PRACTICAL JOB:-  
JOB :- “PLAIN BLOUSE” (MEASUREMENT GIVEN)  
MODULE-I AND II, (PART-II) OF THE SYLLABUS :-**

S.NO.	OPERATION	MARKS
1.	Drafting on Paper	10
2.	Cutting Paper Pattern	10
3.	Laying Pattern on Cloth and Marking	10
4.	Cutting Cloth and Marking	10
5.	Stitching Darts	05
6.	Marking Pockets	05
7.	Joining Back and Front	05
8.	Neck. Finishing	10
9.	Sleeve making and joining	10

10.	Bottom Turning and Hemming	05
11.	Tacking Hooks and Making eye	05
12.	Pressing	05
	<b>Total</b>	<b>90</b>

Note: Marks should be distributed according to the degree of skills involved in each operation.

## **Module - II (Part-II) (Garment Making and Dress Designing)**

### **Guidelines for class teacher and External Examiner.**

As the subject matter in the above module involves high mental and physical skills, the internal and external examiner should ensure that :-

- i. Maximum emphasis is given to develop creative thinking among the students.
- ii. Task given should be from simple to complex to develop mental and physical skill ability of the students.
- iii. All work is adjudged with its compatibility of designing.
- iv. Marks are awarded according to the degree of accuracy, harmony of colour (colour Scheme) use of accessories and total getup of each job/ operation.
- v. Emphasis is given on sketching of the dress before marking a paper pattern.
- vi. Each student maintains a sketch book and the class teacher awards sessional marks on the basis of work done in it beside maintenance of drafting books and theory book.
- vii. External examiner tries to cover all the contents listed in the six units of the syllabus while framing questions/jobs.
- viii. Class teacher has taught the optional- “General awareness” are mentioned in syllabus.
- ix. The practical work of the students has been evaluated by the class teacher and a marks register maintained. For awarded internal marks in the module.
- x. External examiner follows the guidelines given in point No. III (Distribution of marks on Practical Job) keeping in view the operations involved in given practical job. Allotting marks according to importance of the operations and clearly indicate in the question paper for the benefit of the students.

Note: External Examiner should test both the parts of Module II.

## Model Test Paper (Module II)

### Tailoring skills

Max. Marks : 90

Time 3 Hrs.

Q.No. 1 Prepare paper pattern of a choli cut blouse as per given size and cut cloth with the help-of the paper pattern, stitch and finish the blouse.

Size:- Breast/Bust - 92cm, waist - 74cm, Shoulder - 38cm.

Front length of Blouse 39cm, Shoulder to Dart 27cm, Sleeve length-27cm, Sleeve Round Bottom 28cm.

OR

Prepare paper pattern of a ladies shirt as per given size and cut cloth with the help of the paper pattern. Stitch and finish the ladies shirt.

Size: Breast/Bust-92cm, Waist-74cm, Shoulder-38cm.

Shirt Length - 102cm, Sleeve Length - 46cm.

Side Slit Length 26cm, Sleeve Round Bottom- 25cm.

Note:- Puffed sleeves, Round Shaped-Neck, Standard ease/looseness for both garment waist and side darts for ladies shirt.

Allotment of marks for each operation.

<b>1. Pattern making</b>	<b>Marks</b>	<b>Observation</b>
	15	i) Actual size plus ease ii) Shapes of armhole neck, shoulder; side, position of dart
<b>2. Cutting Cloth</b>	15	i) Layout of pattern in proper position. ii) Transfer neatness. iii) Cutting neatness all components. iv) Making darts on both parts
<b>3. Stitching</b>	5	i) Stitching darts.
	5	ii) Making placket.
	5	iii) Joining back and front (Side and shoulder seam)
	10	iv) Neck finishing
	10	v) Sleeve making & joining (Fitting in armhole).
	10	Bottom turning/slit and hemming
	5	Tocking Hooks and Making Eye
	5	Heating and pressing
<b>Total</b>	<b>90</b>	

### Example - 2

Prepare a ladies blouse bodice block for size 12 (taking measurements from standard measurements chart) or as per the following measurement:

Bust	=	87 cm
Waist	=	70 cm
D.S.	=	21.5 cm
Xback	=	36.8 cm
Neck Point to shoulder	=	12.75 cm
Rise of neck point	=	2.5 cm
Round neck base	=	35 cm
Back neck $\frac{1}{6}$ th + 1 cm	=	6.8 cm
Front neck	=	6.5 cm
Bust level	=	23.25 cm
Neck to waist	=	43 cm
Bust dart depth	=	7 cm
Round armhole	=	41.5 cm
Sleeve Crown	=	13.8 cm

OR

Prepare a ladies trousers block taking measurement of medium size from standard measurements chart or as per the following measurement :-

Waist	=	78 cm
Small hip	=	92 cm
Big hip	=	100 cm
Body rise with waist band	=	27 cm
Side length	=	102 cm
Inside length	=	74 cm
Round button	=	38 cm

Allotment of marks for each operation.

<b>1. Size</b>	<b>Marks</b>	<b>Observation</b>
	25	i) Proper measurements applied ii) Standard ease/looseness added iii) Depth of SCYE, Round arm hole, neck chest, waist measurements are correct. iv) Shoulder darts (back and front) properly matched
2. Shapes	25	i) Arm hole, back & front neck, shoulder and side shaper are correct.
3. Marks	15	i) Position of darts, dart depth and length are correctly down. ii) Balance marks, pitch points for sleeves fitting marked in proper position.
4. Cutting	25	i) Back neck-front neck (gorge), shoulder, armhole, side shapes are cut neatly, (without any saw teeth cutting).
<b>Total</b>	<b>90</b>	

OR

<b>1. Size</b>	<b>Marks</b>	<b>Observation</b>
	25	i) Proper measurements applied ii) Standard ease/looseness added iii) Depth of crotch line calculated
2. Shapes	25	i) Fly line, side, inside, seat seam line shapes are correct
3. Marks	15	i) Dart fly, length, knee balance marks pocket position marks are marked.
4. Cutting	25	i) Front and back cut complete and neatly (without any saw teeth cutting)
<b>Total</b>	<b>90</b>	

### **General Instruction to the Students/Candidates**

**Note:** Before starting the practical students should submit a requirement list of material, tools and equipment to the examiner.

- i) Each student should check up the materials/tools and equipment/ consumable items as per requirement of the examination.
- ii) Each student should make himself/herself clear for understanding the question paper fully before its commencement.
- iii) Any student who finds any problem in the machine/ equipment should contact his/her invigilator / examiner.
- iv) Should bear in mind the time allotted so that he/she may finish the job within the stipulated time.

### **Hints/guidelines to the centre superintendent**

- i. Should give instructions to the class teacher for arranging raw materials/tools equipment/ machinery / consumable items required for the examinations.
- ii. He himself/herself will supervise and ensure all necessary written materials and informations are provided to the external examiner such as :- Syllabus, Guidelines for Practical Exam, Attendance Sheet, marking Proforma Marking Instruction Sheet etc.
- iii. Should check frequently the proceeding of the examination.
- iv. Will be responsible for handing over answer copies and jobs to the examiner, obtaining receipt and taking over of the same, sincerely.

## PLUMBING (611)

### INTRODUCTION

Due to high-rise multistory buildings technological changes and availability of variety of modern new sanitary fittings, there is a great demand of trained plumbers for fitting and repair works. This course is skill based and hence during training utmost attention is given to make the learners skilled plumbers. Therefore, the standard of evaluation and Practical testing is crucial for the credibility of the course and employability of the pass outs.

**I. PRACTICALS** (Performed during Training) (as per course contents in the syllabus)

**II. LIST OF EXPERIMENTS** (For conducting External Exam Practicals)

1. Pipe cutting experiment.
2. Thread cutting and making Nipple of different sizes.
3. Jointing of C.I. Pipes and trap.
4. Jointing of S.W Pipes.
5. Fixing of Indian Type W.C. with High level flushing cistern.
6. Fixing of European Type W.C. with low level cistern.
7. Connection of urinals.
8. Connection of wash basin/sink/bath tub.
9. Connection of bath room from Main ferrule line.
10. Connection of Main line to O.H. tank to entire connection.
11. Installation of Hand Pump.
12. Connection of Pump to Hand Pump.
13. Connection of Rain water Pipe including lead chaulking and Fixing of Traps.

Max. Marks: 90

Time: 3 Hrs.

### III. MARKING SCHEME

- |   |                              |
|---|------------------------------|
| a) Experiments/Jobs   | 70 marks                     |
| b) Viva Voce Total  | 20 marks (See details below) |
| <b>Total</b>  | <b>90 marks</b>              |
| a) Distribution/Break up of marks for each job given for performance during Exams (Out of 70 marks) |                              |
| (i) Object  | 4 marks                      |

(ii)	Tools	6 marks
(iii)	Method	15 marks
(iv)	Drawing	10 marks
(v)	Precautions	5 marks
(vi)	Practical work such as connection fixing of fittings pipes etc.	30 marks
	<b>Total</b>	<b>70 marks</b>

**B) VIVA-VOCE** **20 marks**

i)	Questions related to the experiment	10 marks
ii)	Questions related to the remaining experiment	5 marks
iii)	Questions based on related concepts	5 marks
	<b>Total</b>	<b>90 marks</b>

**IV. SCHEME OF EVALUATION**

**(a) INTERNAL**      40% 80 marks (These Marks are to be sent to NIOS at the end of the session by the AVI before the Final Exam.)

N.B. Internal Assessment to be arrived at on the following basis :

- i) Record Book                                      5%      = 10 marks
- ii) Performance in Periodical tests          35%      = 70 marks

Break up of theory and Practicals would be as under:-

<b>Test No.</b>	<b>Theory</b>	<b>Practical</b>	
I)	5 Marks	15 Marks	
II)	5 Marks	15 Marks	
III)	10 Marks	20 Marks	
	20 Marks	50 Marks	= 70 Marks
		<b>Total</b>	<b>80 Marks</b>

**b) EXTERNAL EXAMINATION**

(To be conducted by NIOS)

One or two jobs as the case may be given to students out of the list of experiments given earlier for 90 marks which may be completed/performed by the examinees within 3 Hrs.

**V. GUIDELINES FOR EXAMINERS**

- 1) Examiner should ensure that every job is performed by the candidate himself/ herself.
- 2) As far as possible each examinee should be given separate experiment.

- 3) Main emphasis should be given in the evaluation of work done, professional / competency, workmanship, finish etc.
- 4) The object of Viva Voce should be to ascertain the depth of knowledge and understanding of the students. Questions asked should pertain to experiment performed by the students as well as other experiments done during the training period.
- 5) Each student may be allotted two or three experiments from the list and he! she may perform anyone out the two or three. The examiner, has the discretion to allocate. If need be. Two practicals each containing 45 marks in case there is inadequacy of tools, space materials etc.
- 6) Examiner should maintain the punctuality about the time allotted and see that the jobs! experiments are finished in the allocated time.

#### **VI. GENERAL INSTRUCTION TO THE STUDENTS/CANDIDATES**

- 1) Before starting the practical, students show the record! practical book and list of tools to the examiner.
- 2) Each student should check up the material and tools as per the requirement given during of examination.
- 3) Each student should make himself/herself clear and must understand the question paper fully before its commencement.
- 4) A student who finds any problem in handling the tools etc. should immediately contact his Instructor! Examiner.
- 5) Each student must do all the required operations himself/herself without the help of other students.
- 6) Students should bear in Mind the time allotted so that they finish the job within the stipulated time.
- 7) Students should maintain proper discipline in the Lab/Practical Exams.
- 8) Students should observe safety precautions during their Practical Exams.
- 9) Each student should write object, Name of tools, Method and Precautions etc. of the job he actually performs in the Exams with diagram in his/her practical book which is provided by examiner in the examination hall/Lab/Practical Room.

#### **VII. LIST OF TOOLS (As per syllabus of the course)**

1. Vice
2. Die
3. Wrench
4. Hackshaw
5. Spirit level
6. Plumbob
7. Hammer
8. Chisel
9. Pan
10. Laddle
11. Packing and Chaulking tool
12. Stove
13. Chain Wrench

14. Trowel
15. Gutka
16. G.I. Pipes and all G.I. Fittings
17. C.I. Pipes and all C.I. Fittings
18. P.Vc. Pipes and all P.Vc. Fittings
19. A. C. Pipe and all A. C. Fittings
20. High Level cistern
21. Low level cistern
22. Indian Type We.
23. European Type We.
24. Urinal Basin
25. Sink
26. Wash Basin
27. Bath Tub
28. P. Trap
29. S.W Pipes

#### **VIII. CONSUMABLE MATERIALS**

1. G.I. Pipes
2. Hackshaw Blade
3. Cement
4. Saue!
5. Aggregate
6. Soot, Safeda
7. Lead
8. Rope
9. Mustered Oil
10. Kerosene Oil
11. Stone dust
12. Washer

**NOTE:** *These guidelines should be used by the examiner after consulting the concerned syllabus of the course. Where the educational level of the students is low, the external examiner may explain the practical/job to be performed in Hindi or in students own local language.*

## **BEAUTY CULTURE (612)**

### **INTRODUCTION**

Examinations are conducted all over India in various centres under NIOS Scheme. In vocational course, both skill and knowledge are imparted. Since skill forms core of any vocational training, emphasis needs to be given on the skill development. In a skill based subject like Beauty Culture, we are mainly concerned with manipulative skills and not merely with knowledge. The evaluation of ' a student's progress is to be a continuous process. However, in order to bring uniformity in the examination scheme, guidelines have been laid down, which will be used by the external Examiners who will conduct the Practicals on behalf of NIOS at the Training Centres i.e. AVIs.

### **I. SYLLABUS OF PRACTICALS**

(Also refer to syllabus of the course)

#### **PART-I: MAKE UP AND BODY PERFECTION**

1. Preparation of Bleaches.
2. Method of using Bleaches.
3. Practice in threading and using tweezers for eyebrow shaping.
4. Preparation of different types of face packs.
5. Practice of steaming and puffing.
6. Practice in doing different types of make up.
7. Nail filing, Nail Polish application and removing, Hands and fingers massage manipulation, steaming.
8. Nail filing, Nail Polish application and removing. Feet massage manipulation, Steaming.
9. Practice of Yogaasans:- Padmasan, Vadrasan, Pachimotanasna, Shavasan, Dhanurasan, Makrasan, Shalbhasan, Bhujangasan, Sarvangasan.
10. Preparation of charts of Balanced diet and food habits.

#### **PART - II: HAIR CARE AND SETTING**

1. Proper use of clay, soap, shampoo and conditioner,
2. Preparation of chart of diseases/ disorders - causes and remedies.
3. Practice in-preparing henna & cones. Application through different designs and methods.
4. Practice in Jura making.
5. Practice in different types of choti making.
6. Practice of hair making on switches and models through wet and dry method.
7. Practice in:- use of plain and thinning scissors, setting clips, tall comb, rollers Wooden, wire & electric, curlers: hand & Pedestal.
8. Demonstration on use of tools & equipment.

9. Proper maintenance of tools and equipment.
10. Practice in waxing :- Preparing wax. Application of wax. Removing hairs.
11. Practice in threading/plucking.
12. Use of cream and lotion.
13. Use of pumice stone, razor and abrasive paper.
14. Massage with cream and ice cubes.

**NOTE:** Since the educational level of the students may be low, therefore, the examiners may translate the practical paper in Hindi for the convenience of the students or if needed, in the concerned local language.

## **II. LIST OF PRACTICALS**

(For the purpose of Final Practical Exam by NIOS)

1. Prepare a bleach pack and apply over the face and elbow.
2. Prepare a client for eye brow shaping and arch .the eye brow with thread and also demonstrate use of plucker.
3. Demonstrate facial with face pack application. (For dry / oily / normal skin)
4. Prepare a bride with a make up and accessories in the summer morning / evening or winter morning/ evening.
5. (i) Demonstrate day make up.  
(ii) Demonstrate arm massage.
6. (i) Demonstrate evening make up.  
(ii) Demonstrate forehead decoration.
7. Demonstrate manicure, step by step.
8. (i) Demonstrate arm waxing  
(ii) Demonstrate hot wax procedure on upper lip.
9. Prepare a client for leg waxing. Show the full procedure.
10. Demonstrate pedicure.
11. Prepare a client and demonstrate oil massage and demonstrate shampooing procedure also.
12. Demonstrate application of henna.
13. Demonstrate Mehndi application for a bride with the help of cone.
14. Demonstrate Bridal style.
15. (i) Demonstrate any Inter lock on hair piece and fix it on the head,  
(ii) Demonstrate use of thinning scissors on a hair piece.



3. While evaluating examinees, the examiner should give stress on the competence, workmanship and finish.
4. The object of viva should be to judge the student's confidence and understanding. Viva questions may not necessarily be restricted to the particular job only.
5. Students should be given six jobs from the list and they may have the option to perform ANY FOUR jobs.

#### **V. GENERAL INSTRUCTIONS TO THE STUDENTS:**

1. Each student should bring her own model! client, two towels, spatulas cotton-strips and lab coats.
2. Each student should make himself/herself clear in understanding the question job fully before its commencement.
3. Each student should check-up the material! tools as per the requirement of the examination.
4. Students should perform their jobs independently and within the allotted time.
5. Each student should make preparation of client and arrange trolleys or trays before commencing the particular jobs.

#### **VI. LIST OF TOOLS, EQUIPMENTS AND MATERIAL**

(Also refer to the syllabus of the course)

##### **A. TOOLS AND EQUIPMENTS**

- |    |                             |    |                                 |
|----|-----------------------------|----|---------------------------------|
| 1  | Wire Rollers in all Size    | 18 | Curling rod                     |
| 2  | Wooden Rollers in all sizes | 19 | Tweezer                         |
| 3  | Setting clips.              | 20 | Sheets                          |
| 4  | Tail combs                  | 21 | Pedicure bowls                  |
| 5  | Full combs                  | 22 | Manicure bowls                  |
| 6  | Brush for blow drying       | 23 | Hair razor                      |
| 7  | Spray and water bottles     | 24 | Hair Cutting cape               |
| 8  | One set of the following    | 25 | Saucepan                        |
|    | i) Eye liner brushes        | 26 | Waxing knife                    |
|    | ii) Lip brushes             | 27 | Foot Scraper                    |
|    | iii) Blushon brushes        | 28 | Adjustable shampoo chairs       |
| 9  | Manicure sets               | 29 | Mirror 4' x 3'                  |
| 10 | Hair dye brushes            | 30 | Heater                          |
| 11 | Facial steamer              | 31 | Shampoo basin for hair dressing |
| 12 | Hairdryer                   | 32 | Geyser                          |
| 13 | Massage (Vibrator)          |    |                                 |
| 14 | Thinning scissors           |    |                                 |
| 15 | Facial bowls                |    |                                 |
| 16 | Medium size towels          |    |                                 |
| 17 | Full size towels.           |    |                                 |

## B. CONSUMABLES

### (i) Common Items

- |                                    |                               |
|------------------------------------|-------------------------------|
| 1. Thread 40 No. (Coats)           | 28. Cold wax                  |
| 2. Cotton Roil                     | 29. Hot wax                   |
| 3. Talcum Powder                   | 30. Moisturizer               |
| 4. Cold Cream /Lotion /Liquid      | 31. Lip gloss                 |
| 5. Astringent                      | 32. Mascara                   |
| 6. Skin Tonic                      | 33. Blush-on                  |
| 7. Shampoo                         | 34. Kajal pencil              |
| 8. Hydrogen peroxide               | 35. Bindi                     |
| 9. Nail Polish                     | 36. Eye brow pencil           |
| 10. Nail Polish remover            | 37. Compact powder            |
| 11. Base coat                      | 38. Eye shadow in powder form |
| 12. Top coat                       | 39. Rouge                     |
| 13. Coconut oil                    | 40. Eye liner                 |
| 14. Soda                           | 41. Loose powder              |
| 15. Dettol                         | 42. Foundation                |
| 16. Cleansing milk                 | 43. Lipstick                  |
| 17. Facial Cream                   | 44. Massage cream             |
| 18. Peal or mask                   | 45. Reetha                    |
| 19. Face pack for dry skin         | 46. Shikakai                  |
| 20. Rose water                     | 47. Gleamer                   |
| 21. Acetone                        | 48. Pancakes                  |
| 22. Ammonia                        | 49. Pumic stone               |
| 23. Bleaching powder               | 50. Hard stone                |
| 24. Bleaching cream (Insto-bleach) | 51. Tissue paper              |
| 25. Hand and body lotion           | 52. Gloves                    |
| 26. Sponge                         | 53. Hair bands                |
| 27. Mehndi                         | 54. Pillow                    |

**(ii) Items of Hair Dressing**

1. Rubber bands
2. Bob pins
3. Jura pins
4. Invisible pins
5. Shampoo
6. Hair conditioner
7. Hair dye
8. Setting lotion
9. Protective cream
10. Plain stuffing
11. Hair spray
12. Switches
13. Switch stand
14. Wigs

# REFRIGERATION & AIR CONDITIONING (709/710)

## INTRODUCTION

The Vocational Course Refrigeration and Air-conditioning started by NIOS is a skill oriented manpower training programme. So the main emphasis should be laid on practical aspects of the training so as to ensure that product is well equipped as per the curricula and the objectives given in the booklet are fulfilled. This booklet of guideline for practical shall provide necessary information with regard to experiments, scheme of the examination and distribution of the marks, etc. to the students, teachers and to the concerned official associated in the network.

## SECTION-I REFRIGERATION

### Contents

#### 1. Function of Reciprocating compressor

#### 2. Tools and Equipment

### Practical

1. Dismantling and assembling of Reciprocating type compressor starting from the Compressor Head.
2. Checking the construction and working of each part of a Reciprocating type compressor.
3. Cut open a sealed compressor and check the construction and working of each part.
4. Remove the stator of a sealed compressor and replace the same with the help of feeler gauge.
1. Display all the tools and equipment used in Refrigeration and Air conditioning workshop their use.
2. Cutting of copper tube of different diameters with the help of tube after size of the tube-1/4", 3/4", 1/2"
3. Flaring of copper tube with the help of flaring tool size of the Tube - 1/4", 3/8", 1/2"
4. Swaging of copper tube with the help of swaging tool set. Size of the tube: - 1/4", 3/8", 1/2"
5. Bending of copper tube in the shape of letter U.S.L. with the help of Tube Bender. Spring types/ Mechanical size of the tube 1/4", 3/8", 1/2"
6. Brazing of copper to copper joints with the help of Blow lamp/Gas Burner/ Gaswelding set and Easy flow Rod. Size of the tube 1/4", 3/8", 1/2"

7. Brazing of capillary tube with 11 4" copper tube size of the capillary tube 1/64", 1/32", 1/16" (.031, .040, .055, .060).

8. Opening of Brazed joint copper to copper joints with the help of Blow lamp/gas burner / gas welding set.

9 Flare fitting :- connect a T' connector straight connector, Hand shut off value, compound or pressure gauge, Rubber charging line to a gas charging cylinder.

10. Replacing of filter/Driver of a Refrigerator.

11. Replacing of capillary tube of a Refrigerator.

Transfer F-12/F-22 gas from a filled cylinder to an empty cylinder.

Making of gaskets required for the different parts of the compressor with the help of gasket sheet and hollow punch set. Size of the gasket sheet 1/64", 1/32"

### **3. Refrigerants**

### **4. Gasket Making**

### **5. AC Electric Motor**

1. Testing of AC motors for open circuit, short circuit and grounded.

2. Dismantling and assembling of capacitor start/ capacitor Run Motor and checking the working of each part.

3. Detecting common, starting and Running terminals of a sealed compressor Motor. With the help of a 200 Watt Lamp Multimeter.

4. Removing and Refixing of the slator of a sealed unit and testing its working by starting the compressor motor directly

### **6. Starting Relay**

1. Checking the construction and working of Voltage/ current type relay and their use.

2. Testing of Voltage type/ current type relay with the help of test lamp.

### **7. Temperature control Switch**

1. Testing the construction ana working of a Temperature Control Switch. By using ice and common salt.

2. Removing and Re-fixing of thermostatic switch of a Refrigerator.

## **8. Capacitor**

1. Testing of starting and Running Capacitor with the help of test lamp.
2. Starting a sealed compressor with starting capacitor and relay.
3. Starting a sealed compressor with Running Capacitor.

## **9. Safety Devices**

1. Testing and checking the working of Two point/ Three point over load protector.

## **10. Efficiency of Compressor**

1. Check the efficiency of a sealed Compressor. It must build 300 PSIG Pressure and should taken restart at the same pressure.
2. Method of Grinding, Capping and polishing of value plate (both sides) Section and Discharge read with the help of grinding compound.

## **11. Compressor Oil**

1. Checking the quality of compressor oil by Physically Inspecting a sample of compressor oil
2. Method of charging compressor oil in sealed compressor.

## **12. Wiring of Refrigerator**

1. Locating/fitting of all the electrical components of a Refrigerator like sealed compressor Relay, overload, Thermostat, Door Switch and cabinet light and checking the wiring circuit by starting the Refrigerator compressor.

## **13. Gascharging**

1. Method of gas charging when working in a workshop/in field.
2. Checking a possible leakage in the system by giving pressure of Dry Nitrogen or Air.
3. Creating Vacuum in the system with the help of a Vacuum Pump.
4. Charging gas in the system by checking section pressure, current drawn by the compressor and cooling effect in the cooling cost.

## **14. Faults and Remedies**

1. Check the each component of a Refrigerator and remove the fault.

## **15. Door Gasket**

1. Replacing the door gasket of a Refrigerator, Magnetic Type/Non Magnetic Type.

2. Removing and Refixing of door panel of a Refrigerator.
3. Removing and replacing the door lock of a Refrigerator.

## **SECTION-II AIR CONDITIONING**

### **Contents**

#### **1. Air conditioning System**

#### **2. Water Cooler**

#### **3. Selector Switch**

#### **4. Blower Motor**

#### **5. Wiring of Air Conditioner**

#### **6. Installation of Air Conditioner**

#### **Installation of Water Cooler**

#### **7. Fault and Remedies**

### **Practical**

1. Identification of each part of a window type Air conditioner.
2. Checking the working of each part of window Type / split Air Conditioner.
1. Identification of each part of a water cooler.
2. Checking the working of each part of a water cooler.
1. Testing of selector switch piano type / Rotary type.
1. Removing and re-fixing of Blower Motor of an Air Conditioner.
2. Removing and re-fixing of conditioner fan Motor of a Water cooler.
3. Removing and re-fixing of a thermostat in Water Cooler/ Air Conditioner.
1. Locating/fitting of all the electrical components of an Air Conditioner like compressor overload Protector (Two point/Three Point) Blower Motor, Starting /Running-capacitor, Relay. Selector Switch and checking the wiring connection by starting the Air Conditioner.
2. Locating/ fitting of all the electrical components of a water cooler like compressor, overload protector, relay, starting / running capacitor. Thermostat and condenser fan motor. Checking the wiring circuit by starting the water cooler.
1. Actual demonstration installation of Air condition.
2. Actual demonstration of Installation of Water Cooler
1. Checking each component of an Air Conditioner and detecting and rectifying the fault.

### III. LIST OF CLASS PRACTICALS

#### SECTION - 1 REFRIGERATION

1. Dismantling and assembling of Reciprocating type compressor.
2. Checking the working and construction of each part of a Reciprocating type compressor,
3. Checking the construction and working of each part of a sealed compressor.
4. Removing and re-fixing the stator of a sealed compressor with the help of a feeler gauge
5. Identification and use of each tool and equipment used in Refrigeration and Air Conditioning workshop.
6. Cutting of copper tube size 1/4 “, 3/8”, 1/2 “ with the help of tube cutter.
7. Flaring, Swaging and Brazing of copper tube. Size of tube 1/4 “, 3/8”, 1/2“
8. Bending of copper tube in the shape of letter D, S, L with the help of tube bender. Spring/Mechanical type size of the tube 1/4 “, 3/8”, 1/2 “
9. Brazing of capillary tube with 1/4" size copper tube size of the capillary tube 1/64", 1/32", 1/16" (.031, .040, .055, .060mm.)
10. Opening and re-fixing of copper to copper joints with the help of Blow lamp/ gas burner / gag welding wet.
11. Flare fittings-connecting a ‘T’ connector straight connector, Hand shut off values, compound / pressure gauge, Rubber charging line to a gas charging cylinder.
12. Replacing of filter / driver of a Refrigerator.
13. Replacing of capillary tube of a Refrigerator.
14. Transfer F-12/F-22 gas from a filled cylinder to an empty cylinder.
15. Making of gaskets required for the different parts of the compressor with the help of gasket sheet and hallow punch set size of gasket sheet 1/64", 1/32".
16. Testing of AC motor for open circuit and grounded i.e. Motor showing earth.
17. Dismantling and assembling of capacitor start / capacitor run motor and checking the working of each part.
18. Detecting/Identifying the common, starting and running terminal of a sealed compressor Motor with the help of 200 watt test lamp/ multimeter.
19. Removing and re-fixing the startor of a sealed unit and testing its working by starting the Motor directly.
20. Testing of voltage/current type relay with the help of test lamp.
21. Testing the working of a Thermostatic switch.
22. Removing and re-fixing of a thermostatic switch of a Refrigerator.

23. Testing of Starting/Running capacitors with the help of a test lamp.
24. Starting a sealed compressor with the help of a starting capacitor and a relay
25. Starting a settled compressor with the help of a running capacitor.
26. Check the efficiency of a sealed compressor it must build 300 psig pressure and should take re-start at the same pressure.
27. Grinding Lapping and polishing the valve plates (Both Sides) section and discharging with the help of grinding compound and water proof emery paper silicon carbide 400 and 600 W s.
28. Charging accurate quality of compressor oil in a sealed unit/ compressor.
29. Locate detective filling of all the electrical components of a Refrigerator like sealed compressor. Relay, overload thermostat, Door Switch, Cabinet light and checking the wiring circuit by starting the Refrigerator compressor.
30. Gas charging in a Refrigerator by using a vacuum pump.
31. Gas charging in a Refrigerator by self vacuum method.
32. Checking a possible leakage in the system by giving Air Pressure/Dry Nitrogen pressure of about 100-150 psig. In the system.
33. Detecting and removing of a fault in a Refrigerator.
34. Replacing the Door gasket of a Refrigerator.

## **SECTION-II AIR CONDITIONING**

1. Identification of each part of a window type Air Conditioner / Split Air conditioner and checking the working of each part.
2. Identification of each part of a water cooler and checking the working of each part.
3. Testing and fixing of Selector Switch. Push Button/Rotary types
4. Removing and re-fixing of Blower Motor of an Air conditioner and checking it by starting the Blower Motor.
5. Removing and re-fixing of condenser fan motor of a water cooler and checking it by starting the fan motor.
6. Locating/fitting of all the electrical component of an Air conditioner like compressor, over load Protector (Two point/Three point) Blower Motor, Starting/Running capacitor. Relay thermostat, selector switch and checking the wiring circuit by starting the Air conditioner.
7. Locating/fitting of all the electrical components of a water cooler, like compressor, over load protector, thermostatic switch, Starting/Running capacitor, condenser fan motor and checking the wiring; circuit by starting the water cooler.
8. Detecting and removing the fault in an Air conditioner/Water cooler.
9. Gas charging in an Air conditioner.

10. Gas charging in a water cooler.
11. Locating/Removing and re-fixing of thermostatic switch of a water cooler.
12. Locating/Detecting and removing the fault of an Air conditioner.
13. Locating/Detecting and removing the fault of a water cooler.
14. Demonstrate the installation of window type Air conditioner.
15. Demonstrate the installation of a water cooler.
16. Removing and refixing of float valve/water taps of a water cooler and check the working of the same.

#### **IV: GROUPING OF PRACTICALS**

##### **Section-I Refrigeration**

Group I	Practical from	SI. No.1 to 4
Group II	Practical from	SI. No.5 to 8
Group III	Practical from	SI. No.9 to 12
Group IV	Practical from	SI. No. 13 to 16

##### **Section-II Air Conditioning**

Group I	Practical from	SI. No.1 to 4
Group II	Practical from	SI. No.5 to 8
Group III	Practical from	SI. No, 9 to 12
Group IV	Practical from	SI. No. 13 to 16

#### **Expected Outcomes of Examination Practicals**

1. Understanding of the Practical/Job given.
2. Skill concerning fault locating/ assembling/ dismantling.
3. Knowledge of tools required for the practical/job.
4. Knowledge of material to be used for practical/job.
5. Workmanship in doing the practical/job.
6. Completion of the job/practical and extent to which completed.

#### **V. Scheme of examination:**

Every student may be allotted two Practicals from the list of selected Practicals to be completed in given time.

## DISTRIBUTION OF MARKS

Practicals	=	70 Marks (35 marks each Practical/Job)
Viva-voce	=	10 Marks
Sessional Work	=	10 Marks
<b>Total</b>	=	<b>90 Marks</b>

### Break up for each Practical:

1. Relevant correct diagram/list of tools required for the practical	=	5 Marks
2. Handling of tools & equipments	=	10 Marks
3. Fault removed & job Practical completion time	=	15 Marks
4. workmanship/precautions observed	=	5 Marks
<b>Total</b>	=	<b>35 Marks</b>

Total Practical Time 3 Hrs.

Viva-Voce

1. Question related to practical! Remaining practical	=	5 Marks
2. Questions related to material used/required for the practicals	=	5 Marks
<b>Total</b>	=	<b>10 Marks</b>

### Marks for work done during the Session:

All listed practicals performed

- Maintenance of Theory / Practical Record Note Book	=	5 Marks
- Record Note Book	=	5 Marks
<b>Total</b>	=	<b>10 Marks</b>

## V. PRACTICAL APPROACH TOWARDS RECORD MAINTENANCE

Each student must write the following in his/her practical/Theory Note Book in his own words:-

1. The right method of performing Job/practical.
2. Tools and material required for the job/practical.
3. Precautions to be taken while performing job/practical.

## VI. HINTS/GUIDELINES TO THE EXAMINERS

1. Examiner should check that the list of tools and material required for the practical given to the individual student, is correct.

2. Examiner should check the precautions and method of handling the tools and equipment by the individual student.
3. Main emphasis should be given in the evaluation of job / practical completed, professional competency and workmanship of individual student.
4. The object of Viva-Voce should be to ascertain the depth of knowledge and understanding of the individual.
5. Questions asked should pertain to practical/job performed by the student.

#### **VII. HINTS/INSTRUCTION/GUIDELINES TO THE STUDENTS/CANDIDATES**

1. Before starting Practical/job the student should submit a relevant wiring diagram/ list of tools and equipment/ material required for the practical/job.
2. Any student who finds any problem in handling the tool/ equipment/machine should immediately contact his Examiner / Invigilator.
3. Each student must finish the job / practical in the given time.

#### **VIII. HINTS/INSTRUCTIONS/GUIDELINES TO THE CENTRE SUPERINTENDENT**

1. Centre Supdt. is to check that the tools and Equipment/ machine and material required for the practicals is in good working condition and in sufficient quantity.
2. Centre Supdt. must detail one person to give and receive back the tool and equipment/ machine to be given to the students.
3. Center Supdt. must provide a First Aid Box at each Examination Centre for cut and Burn injury.

#### **IX. REFERENCE TO TOOLS AND EQUIPMENTS AND CONSUMABLES**

1. Plier 8" insulated
2. Nose plier 8" Insulated
3. Screw Driver 6", 8", 12"
4. Adjustable Wrench 6", 12"
5. Hacksaw with Blade
6. Hammer 11 b-21 b
7. Pipewrench-10"
8. Chisel 6"
9. Flat file 6", 10", 12"
10. Round file 6", 10", 12"
11. Half round file 8", 10"
12. Bench Vice No. 3 7
13. Electric Hand Drill with bits

14. Spanner D.E. Set
15. Ring Spanner Set
16. Box Spanner Set
17. Somet Spanner Set
18. Tubular Spanner Set
19. EllankeySet
20. Phillips screw driver set
21. Screw 12"
22. Scissors
23. Feeler gauge
24. Ellankey with T.Handle

#### **SPECIAL TOOLS**

1. Flaring tools set
2. Tube cutter
3. Swaging tool set
4. Gasket punch set (Hollow punch set)
5. Tube Benders
  - i) Spring type
  - li) Mechanical Type
6. Cylinder valve key
7. Spring key
8. Pinch off tool, Pinch off plier (Both)
9. Ampere meter - 0.5
10. Ampere meter - 0.30
11. Blow lamp
12. Gas welding set/gas burner
13. Charging line
14. Pressure gauge
15. Compound gauge
16. Gas cylinder 1. F-12 2. F-22
17. Hand shut off valve
18. Air Blower

19. Dry Nitrogen Cylinder
20. Vacuum Pump
21. Voltage stabilizer 5 KVA
22. Soldering iron with wire- and fluid 50 watt
23. Open type compressor reciprocating type
24. Refrigerator
25. Water cooler
26. Air conditioner

### **CONSUMABLE MATERIAL**

1. Soldering iron wire & flux
2. Copper tube 1/4", 3/8", 1/2"
3. Capillary tube 1/64", 1/32", 1/16"
4. Silver Brazing Rod (For Brazing copper to iron joints)
5. Easy-flow rod (Ruption rod)
6. Flare Nut 1/4", 3/8"
7. T-connector 1/4"
8. Gauge adopter 1/4"
9. Hand shut off valve adopter 1/4"
10. Dead Nut
11. Compressor Oil (capila D')
12. Emery Paper 400 No. and 600 No. (Water proof) silicon carbide
13. Value grinding paste (compound)
14. Glass plate 12" x 12" x 2" soot 30 cm x 30 cm x 4 mm
15. Kerosene oil
16. Match Box
17. Stove Pin
18. Brazing flux
19. Waste Cloth / Cotton waste
20. Soap (Rin/Nirma/Lifebuoy)
21. Gas Freon 12
22. Gas Freon 22
23. Thimbles for A/C
24. Insulation tape
25. Wire Three Core

## **DIPLOMA IN RADIOGRAPHY (DRX) (430 TO 435)**

**Guidelines for conducting Practical Examination for Diploma in Radiography (X-ray Technician) Module 2 (Basic and Radiation Physics) of Diploma in Radiography (X-ray Technician Course).**

**Time : 6 Hrs.**

**Max. Marks : 100**

**Pass Marks : 50**

### **Distribution of Marks**

Practical Record	20
Viva/Voce	20
Activities (experiments)*	60

\* Each candidate will be given three activities (experiments) on random basis from the list given below. The candidate will have to perform two activities of his/her choice. Each activity carries 30 marks.

### **List of Activities (30×2)**

1. To check the consistency of mA loading station.
2. To check the consistency of radiation output by pocket dosimeter.
3. To check congruence between radiation field and optical field using optical and radiation field alignment test tool.
4. To check alignment of radiation beam using beam alignment test tool.
5. To check the perpendicularity of x-ray beam to the image receptor.
6. To check the accuracy of exposure timer x-ray unit using digital k-V meter time meter.
7. To check KVp accuracy using digital KVp meter.
8. To evaluate total filtration of an X-ray tube using HVL method.
9. To measure the effective focal spot size of the X-ray tube using bar pattern.
10. To survey the operation of an X-ray unit for deficiency in radiation safety.
11. To check radiation protection level of diagnostic fluoroscopic installation.
12. To check the integrity of lead apron using survey meter.

**Guidelines for conducting Practical Examination of Module-4 (Dark Room Procedures) of Diploma in Radiography (X-ray Technician Course).**

**Time 6 Hours**

**Maximum Marks - 100**

**Pass Marks - 50**

**Distribution of Marks**

Practical Record	20
Viva-Voce	20
Activities (experiments)*	60

\* Each candidate will be given three activities (experiments) on random basis from the list given below. The candidate will have to perform two activities of his/her choice. Each activity carries 30 marks.

**List of Activities**

**(30×2)**

1. Test the safeness of safe light.
2. Clean the given cassette.
3. Test the given cassette for proper film-screen contact.
4. Check development time and temperature in manual processing.
5. Test the activity of a developer and fixer.
6. Evaluate the image quality on exposed film.
7. Test the protection of unexposed X-ray film.
8. Evaluate the day light for dark room.
9. Load and unload a cassette in the dark room.
10. Evaluate the speed and contrast of film.

**Guidelines for conducting Practical Examination of Module-5 (Regional Radiography & Contract Media) of Diploma in Radiography (X-ray Technician Course).**

**Time: 6 hrs.**

**Max. Marks : 100**

**Pass Marks : 50**

**Distribution of Marks**

Practical Record	20
Viva-Voce	20
Activities (experiments)*	60

\* Each candidate will be given three activities (experiments) on random basis from the list given below. The candidate will have to perform two activities of his/her choice. Each activity carries 30 marks.

**List of Activities**

**(30×2)**

Taking Radiographs of the following :

1. Chest-PA, Lateral Decubitus, Pictogram, Lordotic view.
2. Abdomen-AP (Erect); AP (Supine) Lat.
3. Shoulder-AP, Axial view
4. Skull-AP, Lat, Base of Skull, Caldwell's
5. Paranasal sinuses - Water's view
6. Nasal bones - Lat.
7. View for optic formation
8. Mastoids-Lateral oblique, Town's view, stenger's view schuller projection.
9. Temporomandibular joint - Lat.
10. Mandible-Oblique view
11. Cervical spine-AP, Lat, open mouth projection.
12. Lumbosacral spine - AP/Lat.  
AP  
In nInar flexion
13. Wrist                      Carpal tunnel projection of wrist  
PA oblique, AP oblique
14. Hips-AP, Frog's view
15. Sternoclavicular joints - PA, Oblique
16. Sternum - Lat, Rt Lat Oblique
17. Patellaa-Skyline view
18. Calcaneum-axial view.
19. Inerodylar space of knee joint.

**Guidelines for conducting Practical Examination of Module-6 (Recent Imaging and Diagnostic Procedures) of Diploma in Radiography (X-ray Technician Course).**

**Time: 6 hrs.**

**Max. Marks : 100**

**Pass Marks : 50**

**Distribution of Marks**

Practical Record	20
Viva-Voce	20
Activities (experiments)*	60

\* Each candidate will be given three activities (experiments) on random basis from the list given below. The candidate will have to perform two activities of his/her choice. Each activity carries 30 marks.

**List of Activities (40+20)**

**1. Demonstration**

- (i) Ultrasound demonstration of gall stones, renal stones.
- (ii) Mammography technique demonstration.
- (iii) Demonstration of Barium studies-Ba swallow, Ba meal upper GI study, B enema, (single and Double contrast).
- (iv) Fluoroscopy for ileocaecal junction.
- (v) Demonstration of IVU series.
- (vi) Demonstration of Angiography.
- (vii) Demonstration HSG, RGU, MCU, T-tube Cholangiography
- (viii) Demonstration of Myelography.
- (ix) Demonstration of cranial CT, CT Thorax, Abdominal CT.

**2. Spotting**

10 x 2 = 20

- (i) Various Investigation/Procedure
- (ii) Various Normal radiographic anatomy of organ system.

## **DIPLOMA IN MEDICAL LABORATORY TECHNOLOGY (DMLT) (475-477)**

### **Practical Guidelines**

**Subject : Hematology, Blood Banking, Histology and Cytology (474 & 475)**

**Max Marks: 40**

**Time: 3.00 hrs**

#### **Distribution of Marks**

**Spotting** – 5 spotters of 2 Marks each – 10 Marks

**Exercise/ Activities** – 2 exercises of 15 Marks each – 30 Marks

**Spotting** **5 X 2 Marks – 10 Marks**

Each candidate will be given any of the five spotters randomly from the list given below

1. Identification of Reagents like Leishmen's stain, H & E Stain
2. Identification of pipettes – automatic and Glass
3. Identification of Peripheral smears – Malaria, Anaemia, Leukemia
4. Identification of equipments – Salyles , Neubox chamber, ESR tubes
5. Identification of blood groups
6. Identification of parts of Microscope
7. Identification of Vaccutainers
8. Identification of Malaria Parasite positive slide
9. List of order of drawing of blood collection for the following
  - a. Blood for Culture & Sensitivity
  - b. CBC
  - c. Blood sugar
  - d. LFT

#### **Exercises / Activities**

**2 X 15 Marks – 30 Marks**

Each candidate will be given any of the two exercises randomly from the list given below

1. Do a peripheral smear and perform DLC
2. Do a peripheral smear and perform TLC
3. Identify Blood group
4. Hb estimation
5. H & E Stain

**Subject : Microbiology (476)**

**Max Marks: 40**

**Distribution of Marks**

**Spotting** – 5 spotters of 2 Marks each - 10 Marks

**Exercise/ Activities** - 3 exercises of 10 Marks each - 30 Marks

**Spotting** **5 X 2 Marks – 10 Marks**

Each candidate will be given any of the five spotters randomly from the list given below

1. Identification of Different Media – Blood agar, Nutrient Agar, Chocolate Agar
2. Identification of Biochemical reactions – Indol, TSI, Ureas
3. Identification of AFB positive slide
4. Identification of Gram Strain Slide - Gram positive & Gram Negative
5. Identification of wire loop
6. Identification of pH meter
7. Identification of water bath
8. Identification of different growth on media – NLF / LF
9. Identification of hemolysis
10. Identification of Methods of sensitivity
11. Identification of reagents – Gram stain, AFB reagent, Agar
12. Equipments - Depression slide, VDRL slide pipettes – automatic and Glass

**Exercises / Activities** **2 X 15 Marks – 30 Marks**

Each candidate will be given three exercises from the list given below. Exercise No. 1 is compulsory and any two exercises from S.No.2 – 6. Each activity carries 15 marks.

1. Infection control practices including hand washing
  - a. Use of PPE
  - b. Use of disinfectants
  - c. Hand washing
2. Make a smear and identify AFB / AFB staining
3. Gram stain
4. Motility testing

5. Stool examination for ova & cyst
6. Urine examination for routine

**Subject: Biochemistry (477)**

**Max Marks: 40**

**Time: 3.00 hrs.**

**Distribution of Marks**

**Spotting** – 5 spotters of 1 Marks each – 5 Marks

Exercise/Activities – 2 exercises of 15 Marks each and one activity of 5 marks - 35 Marks

**Spotting** **5 X 1 Marks – 5 Marks**

Each candidate will be given any of the five spotters randomly from the list given below

1. Identification of Pipettes
2. Name the test for LFT, KFT, CBC, Lipid profile etc
3. Identification of calorimeter / spectrophotometer
4. Electrophoresis instrument

**Exercises / Activities**

**35 Marks**

Each candidate will be given three exercises from the list given below. S. No. 1 & 2 will be of 15 marks each and S. No. will be of 5 marks

1. Any one kinetic test -
2. Any one end point test - blood sugar/ urea/ creatinine
3. Quality indicators in the laboratory (Quality controls)

## EARLY CHILDHOOD CARE AND EDUCATION (ECCE) (439 TO 441)

### Instructions for conducting the practical examinations

- (i) Low cost materials and no cost (waste) materials for developing material and undertaking some activities, which are not likely to be available at the identified school, are to be arranged by the students.
- (ii) Students have to be attached to particular identified schools so that at the time of examinations they are acquainted with the children and the conditions in the school.
- (iii) Students are to be divided in the groups of 10-12 each for the practical examinations and two activities may be taken by each student individually.
- (iv) A few suggested activities have been listed. Similar activities may be evolved for students for the practical examinations. It may however be ensured that the chosen activities are not identical.
- (v) Viva voce may range from 5-7 minutes. It should be based upon the course content and the practical work,
- (vi) Learning material should be provided to the examiner with these guidelines beforehand.

### Suggested Activities for Practical Examinations in the Subject

#### Understanding the Child (439)

Max.Marks : 30

Time: 2 hours

#### Distribution of Marks :

Activities Practical Record	: 20 marks
Practical Record	: 5 marks
Viva Voce	: 5 marks

1. *Physical and motor development normally takes place alongside language, social, emotional or intellectual development. Physical development is in terms of increase in height, weight, body proportion, muscles, brain and bones of arms and legs. Motor development involves increase in strength, speed and coordination to handle tool and materials. Cognitive development includes pre-number skills, pre-reading skills, pre-writing skills and basic concept formation such as colour and shape concepts. Language development includes listening skills and oral expressions. You can make observations on the physical, motor, social, emotional, language and cognitive aspects through an observation schedule.*

1. (a) Prepare an observation schedule indicating :-

- (i) Physical and motor development with respect to children aged 3 and 5 years respectively.
- (ii) Social and emotional aspects.

(iii) Language and cognitive development.

1. (b) Using observation schedule, observe a child's any one of the following dimensions of the development:

i) Physical and motor development

ii) Social development

iii) Emotional development iv) Language development v) Cognitive development

2. *You are aware that "the child develops as a unified whole" is one of the principles of development. Any problem in one aspect of development is likely to affect the others. So it is essential that the developmental disorders in pre-school children are diagnosed at the earliest. This can be done through conducting observations of these children.*

### **Observe a pre-school child**

a) Identify developmental problems like fear, aggression, shyness, thumb sucking restlessness or any other you find.

b) Suggest any two activities to parents and teachers to overcome the above stated problem.

3. *It is necessary to take utmost care of the health and nutritional needs of a child of pre-school age. Since the pre-schoolers are very active, their nutritional requirements are much higher than those for adults. Lack of one or more nutrients inside the body is nutritional deficiency, which if continues, produces disorders.*

a) Plan a mid-day meal for 3 to 6 year old children keeping in view their nutritional needs.

b) Specify the reasons for selecting the food items.

4. *Health awareness through educational programmes is an essential step. which should include the participation of children, teachers, parents, family and community members. You can create health awareness among the children through a variety of interesting activities for instance through games.*

Develop any two games for children to promote any one of the following :

a) Personal hygiene

b) Keeping the environment clean

c) Balanced food.

5. *Delayed development in children may be noticed in any aspect(s) of development. These children lag behind with respect to the range specified in the developmental milestones. We should use these observations and information as signposts or access devices to plan and execute proper educational programme for these children. Identification of delayed development in children should be made at the earliest so that timely corrective measures could be taken and the faulty attitude of the parents' and society could be corrected. Some of these we can observe directly such as a limping leg, blindness etc., But others*

*such as weak eyesight, poor health would need multiple observations, often under controlled conditions.*

Identify any two children. List the areas and activities where they have shown delayed development.

- 6. In case of children with delayed development your role becomes even more important in sensitizing the parents thereby helping such children to come out as an independent and productive members of the family rather than a liability. Whenever such deficiencies are observed which call for timely curative and corrective measures to which the attention of parents can be drawn to referral services being provided at leading hospitals/institutions. Presently a number of institutions are providing various types of referral services with respect to delayed development in our country You can make the parents aware about the available referral services through a chart.*

Prepare a chart indicate to the parents the different referral services available.

## EARLY CHILDHOOD CARE AND EDUCATION: PRINCIPLES AND PROCESSES (440)

Max. Marks : 30

Time : 2 Hours

### Distribution of Marks :

Activities	:	20 Marks
Practical Record	:	5 Marks
Viva Voce	:	5 Marks

1. *To provide first hand experience of people, events, processes, living things etc., it is necessary to take children for a field visit/nature walk. On return to the Centre, providing opportunity and thereby encouraging children to express what they saw, felt and understood helps the children in assimilating or concertizing their experiences.*

Organize a short field visit/nature walk and plan the activities to be performed on return of the children to the ECCE centre.

2. *The programme at an ECCE centre can be given a specific focus or direction by selecting a theme (a wild topic) which would form the base or context of each activity. For example if flowers are selected as a theme, their colours, shapes, where they appear etc. are to be talked about; Songs, stories, rhymes, games, dramatigation, displays would need to be related to flowers as far as possible.*

Keeping these in mind, plan one-day's theme-based programme for an ECCE centre and implement it for half an hour.

3. *Creative drama provides children an opportunity to represent or express their ideas or experiences. Creative drama enables one to find out what and how children observe and think. No physical preparation like clothes, accessories, decorations are needed. More than one, infect several can take a part. Not just persons but even objects and phenomena like trees, wind can be enacted.*

Organize a creative drama on any one-theme (i) market place (ii) any aspect of weather (iii) a song they know already.

4. *You must be aware of the fact that at ECCE Centre opportunities to children for creative expression, language development and well eye hand coordination are to be provided. Creative expression provides on opportunity for children's creativity to develop. Creative expression can be through drama, rhythmic movements, developing rhymes; drawing, painting, printing, collage, paper folding and the like. Language development requires a series of experiences for the development of four language skills namely listening,*

*speaking, reading and writing. Fine motor co-ordination, which is the ability to use hand and fingers effectively, is necessary for the child to learn how to grasp, move and handle different objects.*

Plan and organize for 3 activities (each for 15-20 minutes) that enable creative expression, language development and finer eye-hand coordination.

5. *Each day programme for any centre, whether ECCE or ECE, must cater to physical, motor, personal, social, language, emotional, cognitive development. The activities may be designed to cater to children of a particular age group or to children of mixed age group at the ECCE or ECE centre.*

Plan day's programme for an ECCE centre for any one of the following:

- a) A mixed age group
- b) 3 years olds
- c) 5 years olds

Implement any two activities from it for 15-20 minutes.

6. *Almost every activity can be used for providing a variety of learning experiences. Even splashing around water in a large bucket, though or drum does not only provide joyous feeling but also enables learning of basic scientific concepts. If materials are available to play with the water the learning experience can be widened.*

Plan for water play for learning science concepts among 5 years olds. Give details of materials, venue, activities and follow-up activities. Organize it for 20 minutes.

7. *Dramatization of a story provides the experience, which gives children an opportunity of creative expressions. If the children already know what they are to dramatize, the objective is to assess the understanding of children and not the citation of exact words, in particular.*

Dramatize a story, with which children are familiar.

8. *For some time during each day, children should play outside, as they desire. This outdoor freeplay is conducted in the open space available outside. Some examples of outdoor freeplay activities are hide and seek, sand pit play, swings jungle gym etc. By placing selected equipments, specific experiences can be provided.*

Organize outdoor free play for 30 minutes. Ensure that different types of individual needs are covered by atleast 3 children.

9. *Songs are interesting for children and can be used to informally introduce children to a phenomenal concept without any formal telling.*

Introduce a new song that either fosters anyone theme like animals birds, flowers or any other theme which children find interesting.

## **ORGANIZING AND MANAGING EARLY CHILDHOOD CARE AND EDUCATION CENTRE (441)**

**Max. Marks : 30**

**Time : 2 Hours**

### **Distribution of Marks :**

<b>Activities</b>	<b>:</b>	<b>20 Marks</b>
<b>Practical Record</b>	<b>:</b>	<b>5 Marks</b>
<b>Viva Voce</b>	<b>:</b>	<b>5 Marks</b>

- 1. An ECCE centre should be arranged in such a manner that there is maximum utilization of the available space, both indoors and outdoors. A layout plan would show how things are arranged inside the Centre.*

Draw a layout plan for effective use of indoor space of ECCE Centre:

- 2. Two types of activities are conducted with children in an ECCE centre. Indoor activities are those, which are conducted inside and similarly outdoor activities such as hide and seek, sand pit play, swings, jungle gym etc. are conducted in the open space available outside.*

Plan and organize anyone outdoor activity for 4-6 years old children. The plan should include material required (if any), method of conducting the activity, time required etc.

- 3. As we know participation of community is very important in the functioning of an ECCE centre. Parents involvement improves the overall functioning of ECCE centre. It also enhances their own child's development. Parents meet is the most common forum through which an ECCE centre can involve parents in a meaningful way.*

Conduct a mock session of parents teacher meeting on any common problem relating to young children of your area.

- 4. To involve parents effectively in ECCE programme, you need to make the parents aware regarding the importance of ECCE. You can develop a handout in order to do so. A handout gives information on a particular topic in a very precise manner.*

Prepare a handout to state/explain the importance of ECCE, for parents.

- 5. For an ECCE centre to be effective, it should have the minimum required facilities. In order to see whether an ECCE Centre has these basic facilities, a checklist can be prepared which lists down the essential items.*

***A sample checklist:***

***Tick (./) The correct response:***

***Yes                      No***

- i) The ECCE centre has adequate outdoor space, which can be used for playing.***
- ii) The room are well lighted.***

Prepare a check list for evaluating the present ECCE Centre.

- 6. While planning to open a new ECCE Centre, one has to keep in mind all the areas in which money would be spent. A budget should include all the items i.e. consumable and non-consumable on which expenditure is to be incurred.***

Make a budget for opening a new ECCE Centre in your area.

- 7. The home is the primary caretaking and leaning institution for the child as every child spends his maximum time at home and at home usually the main caretakers are parents. They are also the first teachers of their child as child learns so much from them. Thus it is very important to seek the involvement of parents in ECCE by making them aware through various strategies. One of the strategies could be poster making. A poster is made on a chart paper.***

Make a poster for parents on any topic :

- i) Safe drinking water***
- ii) Balanced diet for children***
- iii) Education of girl child***
- iv) Any common problem of your area.***

## **COURSE CONTENT**

### **SUBJECT I : UNDERSTANDING THE CHILD (439)**

#### **Theory**

- Lesson 1. Growth and Development.
- Lesson 2. Understanding Development of Children below Three
- Lesson 3. Understanding Development of Children in Pre-School years.
- Lesson 4. Nutrition and Health of a 3-6 Year Old.
- Lesson 5. Delayed Development and Means to Improve it.

#### **Practical Work**

- Prepare an Observation schedule for observing the physical and motor development of three-years-old child.
- Prepare a checklist of development norms for observation of children.
- Find out about local toys/play materials.
- Make educational play materials.
- Visit an ECCE Centre and prepare a report.
- Hold discussion/interview with parents of children in ECCE Centre.
- Visit an ECCE Centre and prepare report about health care facilities.
- Make educational play materials, on Health Education.
- Visit any referral services available in the area and write a report covering the relevant points from the list below :-
  - a) Types of referral services available
  - b) Organizational structure.
  - c) Government/private funded.
  - d) Accessibility.
- Prepare a list of institutions providing referral services available in your state.
- Observe a child having delayed physical development in a pre-school for two weeks.
- Write a report highlighting symptoms of the characteristics of delayed development.

#### **Field Placement**

- During your placement with pre-school-, -develop an observation schedule. Record the observation of different development. Observation period : 4-5 days continuously or alternate days over one to two weeks.
- Carry out activities with children (2-3 years).
- Organise group activities and observation of the various aspects of development among children.
- Play health games with children.
- Observe eating problems among children.

## **SUBJECT II: EARLY CHILDHOOD CARE AND EDUCATION: PRINCIPLES AND PROCESS (440 )**

### **Theory**

- Lesson 6. Early Childhood Care and Education
- Lesson 7. Approaches to Early Childhood Care and Education
- Lesson 8. Bases of an Effective Programme
- Lesson 9. The programme
- Lesson 10. Evolving a Developmental Profile of a Child

### **Practical Work**

- Visit one nearby nursery school and one anganwadi. Make your own checklist and analyse the extent of it. follows the objectives of the ECCE.
- Visit a creche and describe the objective as they appear from the programme.
- Visit and observe the functioning of an anganwadi, a pre-school and nursery school. Note the differences with regard to :
  - a) relationship of the adult worker and children
  - b) types of activities
  - c) procedure in which the activities were conducted and their success.
- Plan six activities for (a) group (upto age of 4) (b) small group of 4+ children and list the major and other development experiences intended for children.
- Observe children in an anganwadi/nursery school or day care centre. Develop a plan of action to improve the health condition of 2 children with poor health.
- Plan the celebration of a festival of a particular group/ community, involving members of that group/ community.
- Plan a monthwise schedule of activities along with the methods you would use in there activities.
- Observe a child and identify at which stage of language, motor, mental and socio-emotional development the child is.

### **Field Placement**

- During a one week visit to an anganwadi, observe to comment on its functioning and list the activities.
- Write the programme planning for different aspects of development on your visit to balwadi / pre-school.
- For a group of 3-6 years carry out a plan, using playway method, to develop number concept.
- Select a sample story and narrate it interestingly. Encourage the children to dramatise it (as) they desire. Evaluate the success of your story telling.

- Organise a programme by the children involving the community.
- Select a theme related to the child's home. Plan and carry out 5 day programme involving:
  - a) Story on daily life activities.
  - b) Painting and printing.
  - c) Puppet play developed by children.
  - d) 2 activities for pre-number concepts.
  - e) 2 activities for developing fine muscular co-ordination.
- Develop a plan on a theme from nature, having atleast 5 different activities using a variety of materials.
- During your placement in the pre-school, evolve the developmental profile of two children.

## **SUBJECT III: ORGANISING AND MANAGING AN ECCE CENTRE (441)**

### **Theory**

- |            |   |
|------------|---|
| Lesson 11. | Physical Facilities and Learning Material                 |
| Lesson 12. | Staff in ECCE Centre.                                     |
| Lesson 13. | Mobilising Community Support                              |
| Lesson 14. | ECCE Centre and Linkage with Home                         |
| Lesson 15. | Administration, Supervision and Financing in ECCE Centre. |

### **Practical Work**

- Make a list of points that you will keep in mind to assess the use of indoor space in the ECCE Centre.
- Prepare a teaching - learning aid for 3-4 years old children for the concept of colour.
- Prepare an observation schedule to observe the interaction of ECCE worker and helper with children.
- On the basis of these observations, develop a checklist of desirable and undesirable qualities of ECCE worker and helper.
- Assess training needs of ECCE staff.
- Visit nearby ECCE centre and make an assessment of the extent of community participation.
- Make a list of other possible areas for community participation and contribution.
- Organise a short drama and explain about the need of Early Childhood Education through it.
- Design and prepare posters and banners to show about the different beneficial aspects of ECCE.
- Prepare a checklist to identify strength of parents.
- Prepare a list of the basic requirements to establish/ open an ECCE Centre.
- Develop a programme (with aids) for inculcating value of ECCE centre.
- Develop a performa for supervision of daily activities.
- Prepare a budget of an ECCF centre.

### **Field Placement**

- Comment on the use of indoor space in the ECCE centre and give your suggestions for improvement.
- List other facilities that you think should be provided in the ECCE centre to improve the attendance of children.
- Tryout the observation schedule prepared by you to observe the interaction of ECCE worker with children.
- Demonstrate through role-play the desirable interaction between ECCE worker and children.
- Comment on the type of interaction existing between ECCE worker and parents.
- Use the checklist developed by you (for identifying the strengths of parents) on 10 parents.
- Suggest the ways to involve these 10 parents according to the results of the checklist.
- Try out the performa developed by you for supervision of the activities at the ECCE Centre.
- Visit an ECCE centre to observe the basic facilities provided.

## DESK TOP PUBLISHING (DTP) (613)

**Note:-** Given below are distribution of marks, lists of practicals and a sample question paper for practical examination. The examiner should set a similar paper for the candidates prior to the examination. The examiner may ensure that the following software must be available in the computer: PageMaker (version 6.5 and above) Photoshop (Version 5.5 and above) CorelDraw (Version 9.0 and above) and Operating System (Windows 2007). Students are required to submit the project work similar to the list of suggested project work is given at **Annexure - 1**, before the commencement of practical examination.

### Scheme of Examination

Practical	40 marks
Project work	10 marks
Viva Voce	10 marks
<b>Total marks</b>	<b>60 marks</b>

### Distribution of Marks for Practical

1. PageMaker	20 marks
2. CorelDraw	10 marks
3. Photoshop	10 marks

### List of suggested practicals

1. Insert any image and apply different background colour to it.
2. Creating a news item in multiple columns and insert relevant pictures in it.
3. Searching a file/folder on your computer.
4. Importing a file from MS Word and use the various print options.
5. Entering of a given text and apply the following options on it like rotation, tab setting, tracking and kerning.
6. Constructing a block for given text and applying various options on it such as separating and threading.
7. Creating frames and typing text inside the frame.
8. Importing graphics from a clip art or any other picture file.
9. Creating a style sheet for a document.
10. Applying exporting and importing operations on a table.
11. Drawing an ellipse, fill colour in it, transform it to an arc and a pie.
12. Drawing a rectangle, change its outline width to 16 point.
13. Selecting a rectangle and an ellipse, combine them and break them apart.
14. Making a circle, fill with any colour using uniform fill option and set its outline to green.

15. Drawing an open curve and closed curve with free hand tool.
16. Drawing an object of your choice using preset mode, brush mode, object sprayer calligraphic mode and pressure sensitive mode.
17. Importing one image from clipart or any other program to CorelDraw using import option and copy/paste option.
18. Applying the following effects on a piece of text 'National Institute of Open Schooling, (i) change the shape (ii) change the size (iii) Rotate it horizontally/vertically (iv) fill the text with a colour.
19. Drawing two pictures of different shapes, fill them with different colours and apply various blending modes on them.
20. Create a visiting card.
21. Extracting background object from foreground object in the picture.
22. Making use of Paintbrushes, Airbrushes and Eraser on any object.
23. Trying various colour modes and seeing the combination of colors under each mode.
24. Selecting any picture or image and increase/ decrease its size. Note down its width and height in both the cases.
25. Opening image and increase the size of the canvas. Place the image first in the middle of the canvas and then at any place of your choice.
26. Selecting any image or part of the image and try to skew it, rotate it, distort it and apply perspective to it.
27. Making new colours and adding them in the colour table, using eye drop tools.
28. Opening an image and try smudge, blur and sharpen options on it.
29. Using layers palette create 3 layers along with background.
30. Applying Blur filter on the same image and try various Blur effects like radial, smart, motion and notice the difference in each case.

## Sample Question Paper

**Max. Marks : 40**

**Time : 2 Hrs.**

Answer all the questions, Each question carries 10 marks.

1. (a) Type the following text (The examiner is expected to provide printed text materials of 10 lines) in any Word Processor or Story Editor containing minimum 3 paragraphs in Triple spacing to spread across 2 pages and import in a Publication in PageMaker.  
(b) Import a picture, from Clip art in a space created on top-right corner of the page with heading, as 'DTP Examination'.  
(c) Apply Bold Heading, Font Size - 14, Colour - Blue and first paragraph as Italic. Justify text with left Margin 1" and Right Margin 1".  
(d) Create two text blocks. Select the above text and put it in the first Text Block.  
(e) Now connect the two text blocks so that the text flows in continuation to the next block.

OR

- (a) Type the following text (The examiner is expected to provide printed text materials of 10 lines) in any Word Processor or Story Editor containing minimum 3 paragraphs in Triple spacing so as to spread across 2 pages and import in a Publication in a PageMaker.  
(b) Import a picture from Clipart in a space created on top-right corner of the page with heading as -NIOS Examination.  
(c) Include Superscript and Subscript to any word in the text and set. Indent as 1" above the second paragraphs and 1.5" after second paragraph.  
(d) Set font type of paragraph as Italic and add Footer as 'Contd ... on next page.' Import any existing template and replace its text and graphics with your own text and graphics respectively.
2. (a) Create a new publication in PageMaker and import the above text (text materials of question no. 1) created in Word Processor or Story Editor into two columns.  
(b) Import a Rectangular picture from clipart in the centre of the page. Enlarge one of its corners to modify image so that text is wrapped around the modified picture.  
(c) Create a Master Page to paste small picture or logo in the middle of every page.  
(d) Display "NIOS" on left of every page with font size as 8 and display page number to the right corner of every page. Show Footer as 'Contd ... on next page' on every page.  
(e) Create a Rectangular Frame and attach the above text to this frame.

OR

- (a) Create a new publication in PageMaker.  
(b) Import the above text created in Word Processor /Story Editor in three columns with 0.25" gap between all the columns. Make sure that paragraph is not broken.

- (c) Copy first paragraph to the last of the next page and colour it Red.
  - (d) Import a picture from clipart or create a picture in MS-Paint and import it in the publication in bottom left corner of 2<sup>nd</sup> column.
  - (e) Reduce the graphic to fit. In 1" x 1" size. Move the graphic to two lines above and wrap text around it.
3. (a) Type the following paragraph.
- “Oracle is integrating its solutions with the alternative operating systems, Linux more closely. Oracle has released its source code for a new file cluster system on Linux, and developers can download the release on line”.
- (b) Select the text and change its font to some other font, change its style to Italics and Bold and font size to 12.
  - (c) Select the paragraph, make its size bigger and move it to some other place on the screen.
  - (d) Select the text and rotate it at an angle of 45 degree anti clock wise.
  - (e) Assign ‘Red’ as fill colour and green as out line colour to the text.

OR

- (a) Draw a rectangle of 10cm x 20cm and increase its size to 20cmx30cm.
  - (b) Fill yellow colour in it, out lines black.
  - (c) Rotate it 45 degree upwards.
  - (d) Type a text “National Institute of Open Schooling” at the centre of the rectangle.
  - (e) Make the corner of the rectangle round.
- 4 (a) Import a picture from the clipart in PhotoShop.
- (b) Select a part of picture.
  - (c) Colour in it and increase its size, type ‘STAR’ at the centre of it.
  - (d) Apply shadow effect and sharpen effect on it.

OR

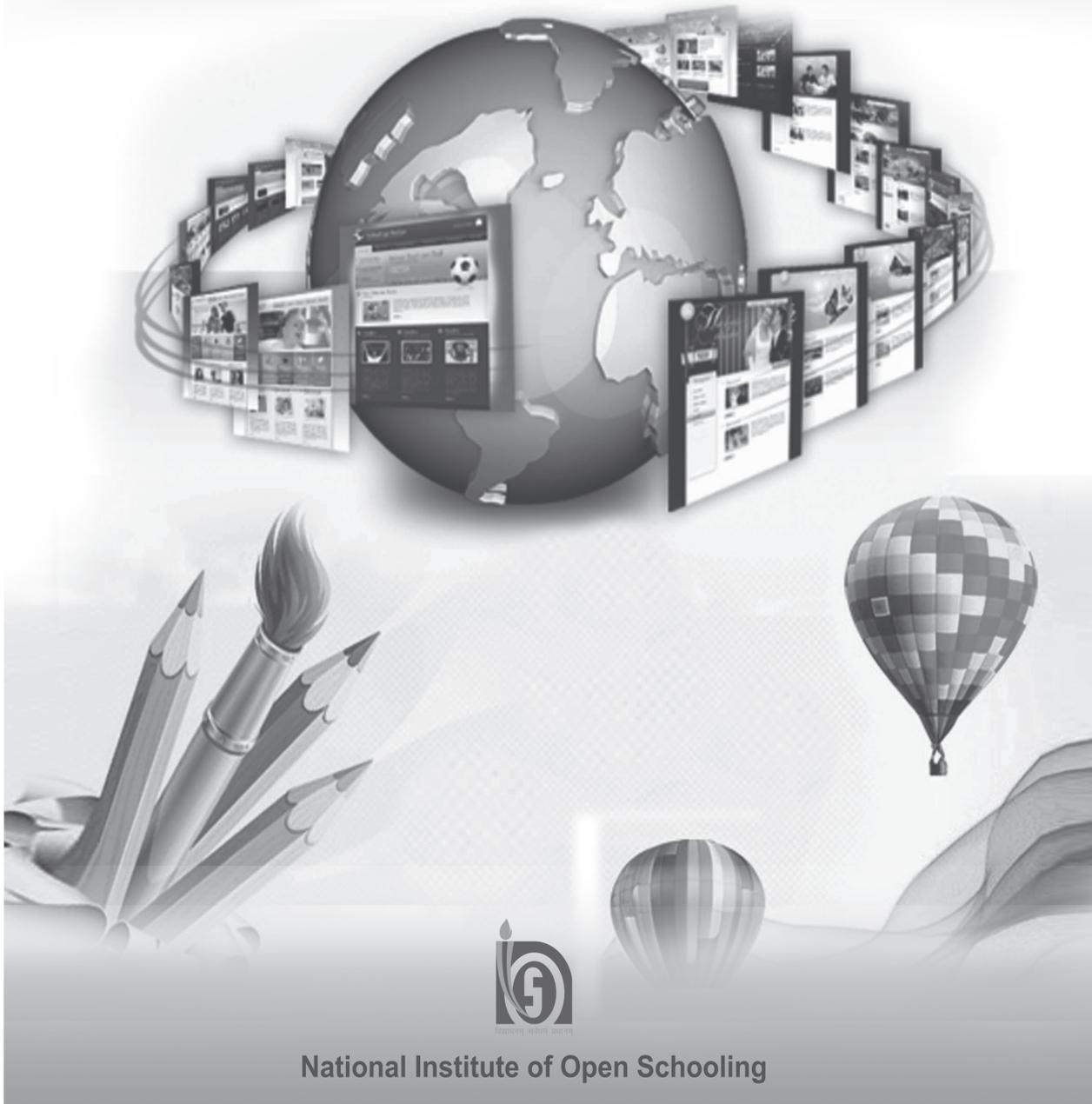
- (a) Import a picture from the clipart.
- (b) Select a part of it and change its colour.
- (c) Flip it. Rotate it to 90 degree clockwise and 90 degree anti-clockwise.
- (d) Write ‘I am happy’ inside the picture.
- (e) Try smudge and blur effect on it.

Annexure - 1

660

# WEB DEVELOPMENT

NSQF Level - 3



**CERTIFICATE IN COMPUTER APPLICATIONS (CCA) (OLD SYLLABUS) (711/712)**

**Basic Computing Skills (711)**

**(Paper - I) (Book - 1 to Book - 4)**

**Scheme of Examination**

Practical	40 marks
Viva	10 marks
Assignment	10 marks
<b>Total Marks</b>	<b>60 marks</b>

**Distribution of Marks**

1. Operating System	5 marks
2. Word Processing	20 marks
3. Spreadsheet	15 marks

**Computer Applications (712)**

**(Paper - II) Book-5 to Book-8)**

Practical	40 marks
Viva	10 marks
Assignment	10 marks
<b>Total Marks</b>	<b>60 marks</b>

1. Database Management
2. Basic Language

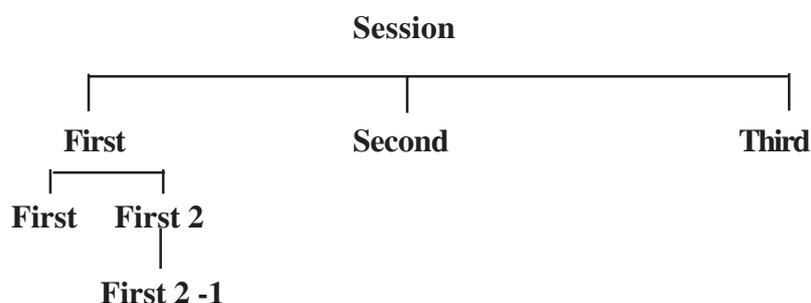
**SAMPLE QUESTION PAPER**  
**BASIC COMPUTING SKILLS CODE - 711**  
**(PAPER - I)**

**Max. Marks : 40**

**Time : 2 Hrs.**

**1. Operating System**

- Create the following directories on the hard disk



- Create a text file under the Second sub-directory named “Try.txt”. Enter the following text in the file:

I am working on Windows 2007

This is a try to create a file on Notepad.

- Save the file.
- Copy the file Try txt to First 2\_1 sub-directory.
- Rename the file ‘Try txt’ as “First.txt” in the First 2\_1 sub-directory.
- Move the file “First.txt” to the third directory.
- Delete the file “First.txt”.
- Remove the file “First.txt” from the hard disk permanently.

5 marks

**2. Microsoft Word**

- (a) Create a new blank document file. Type the following :

1/45, Old Rajinder Nagar,

New Delhi.

Dear Anu,

How are you? I hope you must be enjoying your holidays. Remember that we had made a plan to go to Dum Dum Lake. You told me that you are free on the 30<sup>th</sup> June 2019, and so am I. So that would be the most suitable day for a picnic. Ruchi, Meena and Sonia are also coming along. I will get the Camera. All the friends are again going to meet almost after a year, and would definitely enjoy as we used to do it earlier, in the college days.

Bye.

Sunila

- Save the file with the name “Letter.doc”.
- Insert these lines before the first line of the document.  
We are working on Windows 2007  
I am writing a letter on Microsoft Word.
- Change the font size of the complete text to 14.
- Change, the font of the text to- “Bookman Old style.”
- Make the date right aligned.
- Justify the content in the letter.
- Bold your name and your friends name. Italicised your address.
- Underline the work Dum Dum Lake.
- Select the complete text and change the line spacing to 1.5 lines. Print Preview your file.
- Delete the lines :  
We are working on Windows 2007  
I am writing a letter on Microsoft Word.
- Print your letter.

(b) ● Create a data source of five records with the following field names :

Name, address, city, pincode

- Create a document and enter the following :

<name> <address>

Date : 30/08/2012

<city> <pincode>

dear <name>

We are starting a course on Web-design on 4<sup>th</sup> October, 2019 in the Computer Resource Centre, NIOS. We would like you to depute one of your faculty members for the course. Please send the name and designation of the person latest by 24<sup>th</sup> September, 2019.

Thanking you,

Yours faithfully,

XYZ

- Using a mail merge facility add all fields in the above document.
- Save the file with the name “Data.doc”.
- Take the print out of the letter and send this letter to your 5 friends.
- Close the file.
- Exit MS WORD.

20 Marks

### 3. Spreadsheet

- Open a-new worksheet.
- Insert the following.

	A	B	C	D	E	F	G
1.							
2.	YEAR	IX	X	XI	XII		
3.	1990	30	22	38	22		
4.	1991	32	34	36	23		
5.	1992	28	21	33	44		
6.	1993	35	32	32	42		
7.	1994	40	12	31	41		
8.	1995	38	21	29	32		
9.	1996	37	33	30	22		
10.	1997	41	39	34	44		
11.	1998	36	31	44	50		
12.	1999	45	42	45	55		

- Insert the heading :  
“First Division in Classes”.
  - Make the heading Centre aligned.
  - Add a label at F2 cell “Total”.
- Sum the cells in B3 to E3 and the total should appear at F3 using a formula.
- Sum the cells in B4 to ,E4 and the total should appear at F4 using a formula.
- Sum the cells in B5 to E5 and the total should appear at F5 using a formula.
- Sum the cells in B6 to E6 and the total should appear at F6 using a formula.
- Sum the cells in B7 to E7 and the total should appear at F7 using a formula.

- Sum the cells in B8 to E8 and the total should appear at F8 using a formula.
- Sum the cells in B9 to E9 and the total should appear at F9 using a formula.
- Sum the cells in B10 to E10 and the total should appear at F10 using a formula.
- Sum the cells in B11 to E11 and the total should appear at F11 using a formula.
- Sum the cells in B12 to E12 and the total should appear at F12 using a formula.
- Save the file with the name “distinction wks.”
- Save the file with a password.
- Take the print out of the file.
- Protect the cells range from F2 to F12.
- Draw a bar graph, graph should have data labels, legends, titles.
- Give a name to the graph “Distinctions in Schools”.
- Print the graph.

15 marks

**Sample Question Paper  
Computer Applications (712)**

**Paper - II**

Answer any two questions

**Database Management  
FOXPRO**

**Max. marks : 40  
Time: 2 hrs.**

1. (a) Create a database structure having the following fields and save it as Emp1 table.

Field Name	Type	Width	Decimal	Description
EMP-No	N	5		Employee Number
EMP-Name	C	20		Employee Name
DESIGN	C	7		Designation: Can be "Exec" "Manager", "Asst", or "Clerk"
DEPT	C	8		Department: can be "Accts" "Pers", "Stores" or "Sales"
DOB	D	8		Date of Birth
BASIC	N	7		Basic Salary

- (b) Enter 10 records in your database.
- (c) List all the records without record number.
- (d) List only EMP - Name, DESIG, and DEPT for all the records.
- (e) Enter two more records in your database.
- (f) Sort this database on EMP-Name and list the sorted file.
- (g) Index this database on EMP-No and list the index file.

2. Create a database structure having the following fields and save it as Emp2 table.

Field Name	Type	Width	Decimal	Description
EMP - No	N	4		Employee Number
NAME	C	40		Employee Name
JDT	D	8		Joining date
DESIG	C	5		Designation
DEPT	C	15		Department
BASIC	N	4		Basic Salary
HRA	N	6	2	House Rent
TA	N	6	2	Allowance

**Description of records**

- 1. Arrange the record in ascending order of Employee number.
- 2. Arrange the record in descending order of Employee number.

3. Arrange the record, designation wise within a department.
4. Arrange the record, designation wise within a department in descending order of TA.
5. Arrange the record in ascending or descending order of total salary (BASIC+HRA+TA) within a department.
6. Use INDEX command to arrange the file as follows:
  - (i) By name.
  - (ii) By name and department.
  - (iii) In ascending order of joining date (JOT).
  - (iv) In descending order of joining date (If possible).
  - (v) By HRA within basic salary.
  - (vi) By HRA with designation within department.

OR

### MSACCESS

1. (a) Create a database structure of your own name having the following fields and save it as Employee1 table.

Field Name	Data Type	Field Size	Decimal places	Description
EMP - No	Number	5		Employee Number
EMP - Name	Text	20		Employee Name
DESIG	Text	7		
Date of Birth		8		
Basic Salary		7		

- (b) Enter 10 records in your database.
- (c) List all the records without EMP-No field.
- (d) List only EMP - Name, DESIG, and DEPT for all the records.
- (e) Enter two more records in your database.
- (f) Sort this database on EMP-Name and list the sorted file.
- (g) Set the EMP-No field as the primary key field.

2. Create the database structure having following fields and save it as employee 2 table.

Field Name	Data Type	Field Size	Decimal Places	Description
EMP-No	Number	4		Employee Number
NAME	Text	40		Employee Name
JDT	Date/Time	8		Joining date
DESIGN	Text	5		Designation
DEPT	Text	15		Department
BASIC	Number	4	2	Basic Salary
HRA	Number	6	2	House Rent
TA	Number	6	2	Allowance

### Description of records

1. Display the records in ascending order of Employee number.
2. Display the records in descending order of Employee number.
3. Display the records designation wise within a department.
4. Display the records designation wise within a department in descending order of TA.
5. Display the records in ascending order of total salary (BASIC+HRA+TA).
6. Apply the following sort orders on the above table to get the result in the required form.
  - (i) According to descending order of the field **Name** (All fields will be displayed).
  - (ii) According to ascending order of the field **Name** (First 3- fields will be displayed).
  - (iii) According to ascending order of the field **JDT** (All fields will be displayed).
  - (iv) According to descending order of the field **JDT** (All fields will be displayed).
  - (v) According to ascending order of the field **BASIC** (Fields to be displayed- EMP-No, NAME, BASIC in the same order).
  - (vi) According to descending order of the field **BASIC** (Fields to be displayed- EMP-No, NAME, DESIG, DEPT, BASIC in the same order).

### BASIC LANGUAGE

3. (a) Find the syntax error in the following statements:

10 OPEN 'FILES' AS # FOR OUTPUT

20 PRINT #6, A;"B\$"; ,PAY

30 INPUT #2, A:B:C:

40 OPEN #2, LEN=128

50 FIELD # 1, A\$ AS 10

10 Marks

- (b) The following program segment is supposed to create and display a file of number. Correct the errors in it.

```
10 OEPN "NUMEL" FOR INPUT AS # 1 20 FOR I = 1 TO 10
30 READ N
40 PRINT # 3, N 50 NEXT K
60 FOR K = 1 TO 10 70 WRITE # 1,N
80 PRINT N
90 NEXT I
100 CLOSE # 1
110 DATA 5,7,9,10,12,15,17,19,20,22
120 END
```

10 Marks

4. (a) What is displayed when the following program segment is executed?

```
10 DIM A (2,3)
20 FOR I = 1 TO 2
30 FOR J = I TO 30
40 LET A (I, J) = I + J + I
50 NEXT J
60 NEXT I
70 PRINT A (1,2); A(2,1); A(2,2)
80 END
```

10 Marks

- (b) Write a BASIC program to arrange the following numbers in an ascending order  
71, -20, 14,0,5,

10 Marks

# CERTIFICATE IN COMPUTER APPLICATIONS (REVISED)

## Basic Computing Skills (711)

### Scheme of Examination:

#### Paper 1

Practical	40 Marks
Practical Record	10 Marks
Viva	10 Marks
<b>Total</b>	<b>60 Marks</b>

#### Distribution of Marks:

1. Operating Systems	5 Marks
2. MS Word	10 Marks
3. MS Excel	15 Marks
4. Power Point	5 Marks
5. Internet	5 Marks

#### List of Practicals for Paper -I

1. Restoring a file/folder from the Recyclebin.
2. Creating, saving and printing a document in MS word.
3. Protecting a document from accessing by others.
4. Inserting, deleting, replacing and formatting text.
5. Searching a file / folder in your computer.
6. Formatting paragraph and drawing borders and shading on specified text.
7. Copying and moving text/paragraph.
8. Constructing a block for given text and inserting a table.
9. Creating mailing labels by merging an address list.
10. Selecting, adding and renaming worksheet.
11. Moving cells, copying cells and formatting cells.
12. Creating and copying formulas (sum, average etc.)
13. Drawing different types of charts (pie, column etc.)
14. Designing template and viewing slides
15. Sending an e-mail and browsing different sites.

## Computer Applications (712)

### Scheme of Examination: Paper II

Practical	40 Marks
Practical Record	10 Marks
Viva	10 Marks
<b>Total</b>	<b>60 Marks</b>

### Distribution of Marks:

1. Visual FoxPro/MS Access	20 Marks
2. C Language	20 Marks

### List of Practicals for Paper-II

1. Work with various menu items such as Database menu, Form menu, Query menu, Report menu and Table menu of Visual FoxPro.
2. Create a table with Table wizard and Table Designer.
3. Move and find specific record and text string.
4. Create a query with Query Wizard and Query Designer.
5. Create a Form with Form Wizard and Form Designer.
6. Create a report with Report Wizard and Report Designer.
7. Print and modify an existing report.
8. Find errors in a given C program.
9. Write programs in C language using Nested Loops, IF .... ELSE Statements and Switch Statement
10. Write a program to create a one dimensional character array, and convert it to uppercase and then print it.
11. Write a program in C language for passing array to a function.
12. Write a program in C to enter strings from user and then sort them in alphabetical order.
13. Write a program to join two strings e.g. Vocational, Education.
14. Create and process data file using C language.
15. Write a program in C to copy a string using pointers.

## **CERTIFICATE IN LIBRARY SCIENCE (CLS) (436/437/438)**

No practical examination has been prescribed for these courses, however, 40 marks for assignments have been earmarked in all the three subjects (modules). Assignments are given to the students with the set of study material.

; ksx ea i zek.k i = %14½

0; kogkfjd ijh{k dsfy, fn'kk-funz k

vf/kdre vad% 60  
I e; %2 ?k/s

Øekad	0; ogkfjd ijh{k ds fy, izkkyh	vad
01.	आन्तरिक मूल्यांकन (Internal Assessment)*	अंक 20
02.	<b>fØ; k; a (Activities)**</b>	अंक 30
	(i) प्राणायाम-2	अंक 10 5 अंक प्रत्येक के लिए (2 × 5 = 10 अंक)
	(ii) शुद्धि क्रिया-1	अंक 5 जल नेति या कुंजल क्रिया
	(iii) आसन- 5	अंक 15 प्रत्येक 5 अंक (5 × 3 = 15 अंक)
03.	मौखिक (Viva)***	अंक-10

dy vad & 60

Note: 20 शिक्षार्थियों के एक बैच की व्यावहारिक परीक्षा कम से कम 2 शिक्षकों द्वारा ली जायेगी।

\*आंतरिक मूल्यांकन के अंक शिक्षार्थी के सम्पूर्ण सत्र के क्रियाकलापों के आधार पर दिये जायें।

\*\*fØ; k; a

1. अनुलोम विलोम, कपालभाति शीतली, भ्रामरी, भास्त्रिका, शीतकारी अथवा तीव्र श्वास प्रश्वास में से कोई दो प्राणायाम परीक्षार्थी से करवायें।
2. शुद्धि क्रिया में जल नेति अथवा कुंजल करायें।
3. आसन:- निम्न आसनों में से प्रत्येक परीक्षार्थी को पांच अलग-अलग आसन करायें।  
शवासन, पद्मासन, सुखासन, सिंहासन, ब्रजासन, ताड़ासन, भुजंगासन, घुटनों की विभिन्न क्रियायें, गर्दन की विभिन्न क्रियायें।

\*\*\*मौखिक परीक्षा में सामान्य प्रश्नों द्वारा शिक्षार्थी का योग के प्रति रुझान व लगन जानने की चेष्टा करें।

## WELDING TECHNOLOGY (257)

Max. Marks : 70

Time : 3 Hours

Practical Activities	50 Marks
Practical Record (file)	10 Marks
Viva-Voce	10 Marks
<b>Total</b>	<b>70 Marks</b>

### Practical Break up

#### Practical Activities

Section A (Gas Welding)	25 Marks
Section B (Electric Welding)	25 Marks
(Break up of Activity)	
Use of tool and equipment	10 Marks
Method of working	10 Marks
Precautions and finishing	5 Marks

#### Practical Activities (experiments)

Four Practical Activities (experiments) will be given to the candidate on random basis from the list given below (two from each section). The candidates have to perform one activity of his/ her choice from each section.

#### List of Activities

##### *Section A (Gas Welding)*

**Note:** A drawing of the practical jobs to be done in practical exam will be given to the candidate.

<b>Material used</b>	:	Mild steel
Size of the job	:	150 x 50 x 2 mm or 150 x 50 x 2.5 mm or 150 x 50 x 3 mm

#### 1. Kind of joints

- (a) Butt joint
- (b) T joint
- (c) Lap joint

- (d) Corner joint
  - (i) Inside joint
  - (ii) Outside joint

## **2. Welding positions**

- (a) Flat Position or down head position
- (b) Vertical position
- (c) Over head position
- (d) Inclined position

## **3. Welding of Non-ferrous material**

Such as:

- (a) Brass
- (b) Aluminium
- (c) Copper

**Positions:** down head or flat

**Size:** 150 mm x 50 mm x 3 mm

**Joints:**

- (a) Butt joint
- (b) Corner joint

### **Section B (Electric Welding)**

**Material:** Mild steel flat (MS-flat/low carbon steel)

**Size:** 150 mm x 50 mm x 6 mm or  
150 x 50 x 12 mm or  
150 x 50 x 10 mm

#### **1. Joints:**

- (a) Butt joint
- (b) Lap joint
- (c) T joint
- (d) Corner joint

#### **2. Edge preparation:**

- (a) Single V or
- (b) Double V
- (c) depending upon the thickness of job.

#### **3. Welding positions:**

- (a) Flat positioning
- (b) Vertical positioning
- (c) Overhead positioning
- (d) Inclined positioning

## PRESERVATION OF FRUITS AND VEGETABLES (363)

**Max. Marks : 60**

**Time : 3 Hours**

### **Distribution of marks**

- |    |   |              |
|----|---|--------------|
| 1. | Performing Activities any two                             | 2 x 15 marks |
|    | ● correct sequencing of activities<br>(manner of working) | 5 marks      |
|    | ● neatness in doing the work                              | 2 marks      |
|    | ● method principle of product made                        | 3 marks      |
|    | ● presentability of the product made                      | 3 marks      |
|    | ● neatness of the written work                            | 2 marks      |
| 2. | Viva voce ( for each activities)                          | 2 x 5 marks  |
| 3. | Spotting  | 10 marks     |
| 4. | Internal assessment                                       | 5 marks      |
| 5. | File  | 5 marks      |

### **List of activities (Centre can add more activities also)**

- i) Spotting
  - evaluate the given product  
(rotten fruit/fresh fruit/old preserved products etc)
  - doneness test/ pectin content/ph etc
  - evaluate fresh preserved products
  - identify the equipment used
- ii) make jam / jelly / marmalade / pickle / juice / squash/ nectar
- iii) prepare the fruits and vegetables for dehydration or making of jam or pickle etc.
- iv) Blanch the given product and evaluate

## **DIPLOMA IN MODERN SECRETARIAL PRACTICE (412 TO 415)**

Diploma in Modern Secretarial Practice is a one-year course and has four subjects namely:

- I. Secretarial Procedures - code - 412**
- II. Computer Applications in Office - code - 413**
- III. Business Communication - code - 414**
- IV. Shorthand Writing - code -415**

### **1. Secretarial Procedures (412)**

The subject has been divided into the following two parts:

Part A - Theory 70 marks Examination Time - 3 hours

Part B - Practical 30 marks Examination Time - 2 hours

The break-up of marks for practical is given below:

#### **Practical File/Workbook - 5 marks**

The student has to maintain one practical file / workbook, which carries 5 marks. The list of practical in the practical workbook should be strictly in accordance with the details given in the end of the 'Secretarial Procedures' book published by NIOS. The student's practical workbook can have detailed description along with pictorial illustrations of the relevant forms/ equipment and procedures. These could be collected from various sources like post office, offices, banks, travel agencies, hotels, magazines, journals etc. the practical workbook/ file will be checked and assessed at the time of practical examination by the practical examiner and send the marks to the head quarters, examination department, NIOS.

#### **Viva- 10 marks**

The viva marks should also be given by the external examiner on the spot and award list should be sent to the NIOS after the practical exams.

#### **Practical Activities - 15 marks**

This practical exam. should be conducted in the examination center. The practical examiner will prepare a question paper on the basis of the Model question paper given in the guidelines before the examination. Total number of questions in the practical is three each carrying equal marks. The practicals should be conducted in one hour. The award list along with the question paper should be sent to the NIOS after the exam is over.

### **2. Computer Applications in office (413)**

The subject has been divided into the following two parts:

Part A - Theory 30 marks Time - 2 hours

Part B - Practical 70 marks Time - 2 hours 30 minutes

The break-up of marks for practical is given below: Practical File/Workbook - 20 marks

The student has to maintain one file workbook that carries 20 marks. The practical activities in the file should be strictly in accordance with the details of practical activity given at the end-of the book 'Computer

Applications in Office' published by NIOS. This file will be checked and assessed by the practical examiner and the marks will be sent to the examination department, NIOS along with other marks of the practical examination.

### **Viva - 10 marks**

Viva will be taken, at the time of the examination by the practical examiner. The viva questions will be based on the syllabus 'covered in the subject. 20 minutes has been set aside for the purpose of viva.

### **Practical Activities - 40 marks**

This practical exam should be conducted in the' examination center. Total number of questions in the practical is three. The practicals should be conducted in two hour. The answer sheets will be evaluated by the examiner and the award list should be sent to the examination department, NIOS.

For the conduct of practical exam in this subject, MS-office software should be installed in all the machines. Facility for taking print outs should be made available. Alternative power supply should be ensured at the time of practical examination. The exam center should ensure adequate supply of stationery like cartridges, A4 paper etc.

### **3. Business Communication (414)**

This paper is of 100 marks, which is allotted for Theory paper, there is no practical in this paper. The duration of the theory paper is 3 hours.

### **4. Shorthand Writing (415)**

This subject has two parts:

Part A - Shorthand Theory 30 marks 1 hr. 30 minutes

Part B - Shorthand Practical 70 marks 1 hr. 30 minutes

The practical examination would consist of the following two jobs: Job I - speed test @ 80 w.p.m. - 40 marks Job II - a business letter / application - 30 marks

These two questions will be dictated to the examinees at the speed of 80 w.p.m. and 60 w.p.m, respectively by giving a gap of 5 minutes between these two dictations. These two questions are to be transcribed on computer. The name and address in the business letter are to be dictated slightly at a slower speed or can be written on the black board. The examinees will have to take out the prints of both these questions. The print outs along with the shorthand outlines are to be sent to NIOS for evaluation immediately after the practical exam is over.

The dictation should be given by an experienced lecturer/teacher/instructor having clear pronunciation and is well versed with the method of counting slashes per 15 seconds in accordance with the stopwatch/wrist watch having seconds. The dictation is to be given loudly only once and at no cost should be repeated. Question paper in Shorthand Writing should be given to the examiner only and **should not be given to the examinees**. For the purpose of evaluation, the answer sheets should be sent to NIOS immediately after the exam is over.

## Sample Practical Question Paper for Secretarial Procedures (412)

Max. Marks: 15

Time: 2 hr.

### General instructions for the examiner:

1) *Out of the 07 questions given, the student has to attempt any three. Each question carries 05 marks.*

### General instruction for the student

- 1) Attempt any three questions
- 2) All the questions carry equal marks.
- 3) Answer to all the questions should be to the point.

Ques 1. You work in the mailing section of *M/S R. Agnihotri & Co.* what action would you take in each of the following circumstances:

- a) A letter marked 'urgent and confidential' for Mr S K Sharma.
- b) A remittance for Rs. 4,000/-
- c) Name any two equipments used for dealing with incoming mail.
- d) Letters marked UPC, Registered Recorded Delivery or VPP to be sent.
- e) Letter concerning the attention of more than one department.

Ques 2. Draft a telegram to Taj Hotel, Agra stating booking of your employer's two-days trip to Agra to attend a conference, assume details of pick-up and reservation of room,

Ques 3. The Annual General Meeting (AGM) of your company is to take place next month. What action would you take?

- a) Conveying information to all the members regarding the meeting.
- b) Checking the arrangements of the meeting room. Give any two.
- c) Any two secretarial duties during the meeting.
- d) Any two secretarial duties after the meeting.
- e) Enlist two methods of voting during the meeting.

Ques 4. You are working as a Private Secretary to Mr. Romesh Chandra who is the senior Vice President of the company. He has a busy schedule of attending meetings in various parts of the city. Keeping his traveling time in mind, and his appointments at different places, prepare a page of his appointment diary, giving at least five imaginary entries from 9 a.m. to 5 p.m.

Ques 5. You are working for Mr. P K Gupta, Senior Sales Manager, Anand Garment Export, who is a regular traveller. He has 'to travel to Mumbai for a two-day business meeting from 25<sup>th</sup> February. Prepare an itinerary for the same giving special mention to his flight and hotel reservation. (Mr. P K Gupta would like to visit the Hanging Gardens in Mumbai)

Ques 6. State which of the reprographic process would you use for each of the following jobs:

- a) 10,000 copies of a two page sales catalogue.
- b) An incoming letter to be circulated to three departments.
- c) Six copies of a letter to be sent.
- d) 500 copies of an application form for the personnel department (special emphasis on quality).
- e) Ten copies of the pages of a book.

Ques 7. Name the appropriate means of communication in the following cases:

- a) To transmit drawings and sketches from one place to another.
- b) To ensure safe and prompt delivery of a costly book.
- c) To convey notice of a meeting.
- d) To report a theft in the office.
- e) To keep a record of the information sent.

### Marking Scheme

Question No.	Value Point	Marks
1.	<ul style="list-style-type: none"> <li>a. Deliver to the person concerned</li> <li>b. To be entered in remittance book</li> <li>c. Letter opening machine - Date stamping machine</li> <li>d. Not to be put in the letter box or to be delivered by hand to the post office counter</li> <li>e. Circulating the letter by taking copies of it</li> </ul>	1 x 5 = 5
2.	All the instructions for drafting a telegram is to be followed	5
3.	<ul style="list-style-type: none"> <li>a. Write an agenda notice and send to all the members</li> </ul>	1 x 5 = 5
	<ul style="list-style-type: none"> <li>b. To check Public addressing system, seating arrangements, refreshments, <i>AIC</i>, stationery, necessary files etc. (any two)</li> <li>c. Taking attendance and noting down minutes</li> <li>d. Finalising the minutes, to see the meeting room is left in proper order and to have unused stationery picked up (any two) .</li> <li>e. To show off hands, voice vote, ballot paper and poll (any two)</li> </ul>	
4.	<p>Appointment diary format should be made -and the entries being made should have proper time gap in between. Five entries should be made.</p>	1 x 5 = 5
5.	<p>Correct format of itinerary. At least 5 entries. One entry of visit to Hanging Garden compulsory.</p>	1 x 5 = 5

6.	a. Stencil duplication b. Photocopy c. Carbon Manifolding/ computer / photocopier d. Offset litho e. Photocopy	1 x 5 = 5
7.	a. Fax b. Courier c. Letter/agenda/notice d. Phone e. Office copy	1 x 5 = 5

## Sample Practical Question Paper for Computer Application in Office (413)

Max. Marks : 40

Time : 2 Hrs. 30 Min.

General instructions for the examiner:

1) Three questions are to be given for the practical examination. The first question will be from MS Word and in the second question there will be a choice from power point or excel. Third question will be a Typing speed passage of about 800 words. No repetition of the speed passage is permitted. At the end of the typed matter note down the number of words typed and the number of mistakes made. *The speed passage is to be given at the last.*

The mark for MS word question is 15 and for MS excel or PowerPoint is 15 marks. The duration of typing speed is 10 minutes and the mark is 10.

Name of the Activity	Duration	Marks
MS Word	60 minutes	15
MS Excel or Power Point	60 minutes	15
Typing Speed	10 minutes	10

### Exercise in MS Word

#### Question 1

A) Prepare the following document in the given format and save it with the file name “PandP”

#### Poverty and Profit

It is wrong to say that we are talking about poverty. At least, I am not. I don't use the *term poverty*. I use the word bottom of the pyramid (*BOP*) consumer or market. I believe four billion poor people (living under \$2 a day) around the world in *BOP* represents a new market. This market needs to be accessed and approached somewhat differently than the traditional market. Once you consider them as consumers, we have an obligation to treat them with respect. If you look at what is happening in India, the *BOP* consumers are significant portion of the business whether it is *FMCG*, two-wheelers, bicycles, *TV* or cell phones. For example, 97% of shampoo units sold in India are in sachets, 65% value is realized from sachets. Without them there is no market. The future profitability of *MNCs* and Indian private sector ventures entirely depends on this market. This is not an option but a necessity. Many companies look at *BOPs* as problem, but they have keys that can open new opportunities.

The real efforts to create markets at the *BOP* are coming out of India. HLL, Jaipur Foot, Arvind Hospital, Escorts, Annapurna Salt are touching millions of people in their social-cum-business initiatives setting new benchmarks for corporate social responsibility. It is bringing in social transformation. Rapid deployment of

new technology is happening across India. Five years from now, no one would be talking about BOP market, as it would have become a normal market. We have proved to the world that if you build a market for the rich, the poor would not participate. If you build a market for the poor; the rich would participate extensively.

It is time that we start celebrating wealth creation. Should we worry about Narayana Murthy and Azim Premji being rich? They have created more respect for India than anybody else for last 50 years. Why can't we celebrate that? They have also taught the country that you can get rich by being honest. I hope there would be more Narayana Murthys and Azim Premjis. Because for every software engineer that they employ there are six new jobs created. Somebody has to clean your clothes, cook food; take care of your motorcycle or car.

*Some full forms for your reference:*

**BOP Bottom of Pyramid**

**MNC Multi National Company**

**TV Tele Vision**

**FMCG Fast Moving Consumer Goods**

**B) Type a letter as given below and perform the spell check on it.**

To,

<firstname> <lastname>

<city>

Dear Sir/Madam,

Kindly note that our Annual Day Celebrations scheduled for 6<sup>th</sup> Jan. 05 has been cancelled due to Tsunami Disaster.

Ms. Anukampa Banerjee Headmistress

<b>First Name</b>	<b>Last Name</b>	<b>City</b>
Mona	Saha	Mumbai
Vinay	Kaul	Chennai
Abhimanyu	Singh	Jaipur

Merge the database with the letter document using mail merge feature and take three copies of the letter addressed to these three people.

Print the labels of the data in the database.

**Viva questions may include:**

**Opening and closing documents. Find & Replace. Header & Footer. Page numbers. Tables.  
Selecting Text using, mouse / keyboard. Cut, Copy, Paste and Move. Page Set Up. Auto  
Correct & AutoText Mail Merge etc.**

**Excel - Exercise**

**Question 2**

**Max. Marks: 15**

Create the following worksheet in Excel with the sample data given here. You may choose any other but relevant data. Perform the operations mentioned below:

A	B	C	D	E	F	G	H	I	J
<b>Roll No</b>	<b>Name</b>	<b>English</b>	<b>Hindi</b>	<b>Maths</b>	<b>Science</b>	<b>SST</b>	<b>Total</b>	<b>Average</b>	<b>Status</b>
101	Meghna	89	67	79	77	80			
102	Ravi	92	80	69	73	82			
103	Saurabh	99	89	91	89	72			
104	Anamika	97	42	84	83	65			
105	Bhargav	74	61	69	59	74			
106	Usha	85	86	95	75	85			
107	Priya	74	47	57	54	65			
108	Suman	64	75	48	56	56			
109	Sikander	54	78	84	87	74			
	Subject Total								
	Subject Minimum								
	Subject Maximum								

- a) Give a proper heading or title to the worksheet. [1]
- b) Make the column headings bold in the point size 14 of the font Century. [1]
- c) Adjust the width of each column such that all the headings are fully visible. [1]
- d) Calculate the Total H2 as sum of C2, D2, E2, F2, and G2. Copy the formula to all relevant cells below. [1]
- e) Calculate Average 12 as H2 divided by 5. Copy the formula to all relevant cells below. [1]
- f) The subject total under each column C, D, E, F and G has to be calculated as sum of

- all the rows from 2 to 10. [1]
- g) Calculate the minimum marks obtained under their columns. [1]
- h) Calculate the maximum marks obtained under their columns. [1]
- i) The column Status has 'to store 'Pass' if the Average  $\geq 4.0$  else it should store 'Fails'. [1]
- j) Draw an appropriate Chart using this worksheet with appropriate data labels and formatting [5]
- k) Print the chart along with 'the spreadsheet and attach it with your answer sheet. [1]

**Viva questions may include topics like**

Insert/Delete cells. Naming Sheets. Cell Referencing, Various functions of Excel. Page Setup. Print commands etc.

## Power Point Exercise

Make a Power Point Presentation introducing your organization that makes and sells toys.

**Slide 1:** To contain the name of the company written in headline across the slide and the address, phone number and e-mail of the company on the bottom right side.

**Slide 2:** To contain some picture's (4 or 5) showing the toys and their names with the title as "Some of Our Products". You may include any clip art pictures if pictures-of toys are not available in the computer.

**Slide 3, 4, 5 and 6:** Each will contain one toy and some description about it, for example, the age group for which it is meant, how many people can play it together etc.

**Slide 7:** Information about' some new toys expected to be launched by the 'company in next few months.

One mark for each slide [7]

- Give a background to all these slides in different styles.
- Using the custom animation feature, make the objects appear in different styles during the slide show. [2]
- View all the slides in the slide sorter and change the order there. [2]
- Submit a printout with at least 8 slides on one page. [2]

### Viva questions may include topics from

Auto Content Wizard. Design Template. Different Slide Views. Slide Layout. Applying transition, animation and linking. Inserting objects. Inserting tables from MS Word etc.

## Speed Passage

### Question 3.

**Max. Marks : 10**

**Time : 10 mins.**

#### Note:

1. Type the following passage accurately. Do not repeat the passage. Start typing when “Start” signal is given and stop typing immediately on getting the “Stop” signal.
2. Do not type the strokes given on the right hand margin of the question paper.
3. This question paper should be given 15 minutes before the completion of the examination time so as to ensure that the candidate has no time for erasing or cut and paste application. 10 minutes are for typing the passage and five minutes for reading the passage before typing.

#### (Speed Passage)

while the government of India braces itself to face the diplo-	79
matic and other consequences of the abduction of Romanian charged’	159
Affairs, Mr. Radu, on Wednesday the thought is inescapable that the	242
incident-in all its ramifications reflects poorly on Delhi Police. One	330
has no difficulty in conceding that Delhi Police has been seriously	405
handicapped by the fact that it learnt of the crime as many as’ 100 minu-	486
tes after its commission. But the fact that Mr. Radu’s car and the white	572
Maruti Van involved in the abduction were found in Sunder Nagar in the	660
heart of the Capital on Thursday Morning, makes one wonder. Considering	740
that the descriptions of both must have been flashed to every check-point	822
and police control room van, the vehicles, which were last seen turning	902
into Aurobindo Marg from Lodhi Road, and moving in the direction of Saf-	982
darjung should certainly have been intercepted on the to Sunder Nagar.	1067
This is all more so because policemen should have been especially alert	1146
given the seriousness of the case and the wide media attention it received	1188
This is not the first occasion when Delhi Police has been found	1276
not to be alert enough. The abducted merchants, whose case made headlines,	1349
were kept in the basement of a house in Delhi from September 15 to Octo-	1431
ber 3 without the police knowing anything about it. Alertness is the ess-	1508
ence of effective surveillance, on criminals and suspected militants,	1590
which is needed to cope with the rising incidence of militant activities	1673

and crimes in the capital. To yield maximum results, however, surveill-	1746
ance has to be supplemented by intelligence about the movements to crim-	1823
inals and militants, the intentions of the existing militant organisation.	1907
This is where the Intelligence Bureau has a serious responsibility.	1980
The easiest thing in the world for some of us to do, I suppose, is just	2051
to sit back and with the other fellow at work. The next easiest thing for	3026
some of us to do is to proceed then to make various and sundry comments	3097
about busy person and his work or, should we not have had chance to	3064
catch the fellow in the act of doing his work., comments about the fellow	3143
and whatever it might be that he did. More than anything else I can think	3216
of it is these two things - sitting back and criticizing - combined, that	3291
account for some of us spending so much of our time doing nothing	3357
at all or else doing noting that would make any Significant difference in	3430
the life of anyone hut ourselves.	3463
To me, it makes but very little difference whether our comments are	3530
complimentary to the man and his work or whether our comments are at	3599
the other end of the scale that we use to measure approval and	3662
disapproval; sitting back and criticizing are not very strong posts to	3734
which we can attach serious and strong hopes for pulling ourselves or	3804
our work up to the level of the person or the 'York we criticize.	3868
Whether the person succeeds to his complete satisfaction, whether he	3936
succeeds to the full satisfaction of the rest of us, or whether he fails	4008
partly or completely to satisfy himself or anyone else, the fact remains	4080
that he is the only person who put forth the amount of effort needed to	4151
get the task underway; for this, it seems, he deserves acknowledgment.	4221
Whether it is interpreted literally or figuratively, sitting back and watching	4299
the other fellow in the performance of some task can, of course, means	4369
many things. As it applies to quite a few of us, though, it seems likely	4441
to mean that we are afraid to undertake some task for fear that what-	4510
ever might do would fall short of what those around us expect and	4576
that we therefore would be subject to the ridicule and the scorn of	4643
the onlookers.	4657

## Marking Scheme

### Computer Applications in Office (413)

#### Ques 1. A) MS-Word Exercise:

File name:	1/2 mark
Heading of the Document:	1/2 mark
Insert Table and its formatting:	1 mark
Font and Point Size:	1/2 mark
Drop Cap:	1 mark
Bold, Underline & Italics:	1 mark
Paragraph Alignment:	1/2 mark
Overall Look of the Document:	1 mark
Printout attached with the answer sheet:	1 mark

#### B) Mail Merge:

Spell Check:	1 mark
Letter Typing:	1 mark
Letter Formatting:	1 mark
Creating database:	2 mark
Merging the Document with Database:	2 mark
Labels:	1 mark

Ques. 3 At the end of the typed matter note down the number of words typed and the number of mistakes made and on that basis marks are to be given.

#### Formula for calculation of speed

Time allowed	10 minutes
No. of strokes typed	2000
No. of words	$2000/5=400$ words
Running speed	$400/10=40$ w.p.m.
No. of mistakes	4
Penalty for 4 mistakes @one word	
Per mistake	4 words
Accurate speed	$40 - 4 = 36$ w.p.m.

The speed can also be calculated as per the formula given below:

**OR**

The speed can also be calculated as per the formula given below:

Total number of strokes typed divided by 5 = gross words

Minus penalty @ 10 words or 50 strokes per error per minute = net words

Net words divided by 10 (number of minutes) = net speed per minute

**Marks to be awarded**

A candidate obtaining the prescribed speed i.e. 40 w.p.m. should be awarded 100% marks i.e. 10 marks. In case the speed obtained is less than 40 w.p.m. there should be deduction of 1/2 mark for decrease of each word speed. If the net speed is 40 w.p.m. and above, 10 marks should be given. The marks should be awarded as per the details given below:

<b>Speed (w.p.m.)</b>	<b>Marks to be awarded</b>
40 and above	10
39	9.5
38	9
37	8.5
36	8
35	7.5
34	7
33	6.5
32	6
31	5.5
30	5
29	4.5
28	4
27	3.5
26	3
25	2.5
24	2
23	1.5
22	1
21	.5
20	0

### **Counting of mistakes**

- Every word inserted, misprint, or in any way changed from the original text
- If punctuation marks are changed in any way from the original copy or incorrectly spaced, the preceding word is marked as an error. If proper spaces are not left before and after dash, inverted commas and brackets, an error is marked .
- Words divided wrongly
- Omission of a line due to oversight is marked as one error only, but the strokes not typed must be deducted from the total strokes at the time of calculation of speed

## Sample question paper for Shorthand Writing (415)

**Max. Marks: 70**

**Time : 1 hr. 30 min.**

Instruction to the examiner

The question paper consists of following two jobs -

1. A dictation passage of 400 words to be dictated in 5 minutes @ 80 w.p.m. The mark for this question is 40.
2. A business letter of about 180 words to be dictated in 3 minutes at the speed of 60 w.p.m.  
The name and address can be dictated at slightly lower speed or can be written on the blackboard. This job is of 30 marks.
3. Transcription time for the speed passage is 40 minutes and for the letter is 20 minutes.
4. These two questions should be dictated simultaneously by giving a gap of 5 minutes (reading time) between two dictations.
5. In no case the question paper should be handed over to the examinees.
6. The transcription time for the first job is 40 minutes and for the second job is 30 minutes.
7. One or two trial passages of one minute each is to be dictated for making the students familiar with the pronunciation and voice of the examiner.
8. These two questions are to be transcribed on computer and printouts along with shorthand notes are to be sent to NIOS for evaluation immediately after the paper is over.

## Job-I

### Speed Test

It is a great pleasure for me to inaugurate the new campus of the Institute of Social and Economic Change. / This beautiful campus is most certainly a worthy and fine addition to this beautiful city.

Prof. Rao has been a // builder of institutions. The Delhi School of Economics, the Institute of Economic Growth in Delhi and now this institution all /// bear the stamp of his dynamic personality. He not only builds institutions but breathes a new life into them and (1) galvanizes them into purposive action / This institute full-fledged and well equipped within a short span of four years and / wherein scholars belonging to different disciplines work zeal and devotion, amply demonstrates the fact. It is not an easy // task to integrate the work of scholars belonging to different branches of social science, combine teaching and research and make /// an impact on the country's economic policy Dr. Rao has accomplished these tasks successfully and I congratulate Wm and his (2) colleagues on their achievements.

Your institute has a vital role in interpreting the amazing pace of change brought about by / the scientific and technological revolution of the present age. Knowledge has grown with such a tremendous speed that adjustments and // innovations which were previously achieved through the efforts of many generations have now to be coalesced into the strivings of /// one generation only or even less.

It is gratifying to know that the main thrust of your of your activities is towards (3) evolving policies and programmes for increasing the welfare of our masses and their quality of life, particularly in rural areas. / Naturally; the research projects you have undertaken have direct or indirect relevance to policy and implementation. Practical and peaceful solutions // have to be found to the questions posed by phenomenal advances in science and technology and by the rising tide, of /// expectations of our common people. I hope it is in this context and in this perspective that your institute will (4) study and analyse the economic and social problems that confront the nation and evolve techniques and methods, innovate strategies and / skills that suit our conditions and help hasten the process of economic and social transformation of our society.

Among the miseries // of people, economic misery that comes through inflation and shortages is quite prominent. By 1972, 1973 /// and 1974, the scourge of inflation had begun to take a heavy toll and annual price rise of the dimension of 20 per cent. (5)

## **Job-II**

### **Letter**

Parliament Street,  
New Delhi,  
December 18, 2004

Messrs. Mohan Bros.,  
Nizamuddin East,  
New Delhi.

Dear Sirs,

It is indeed surprising that you have not placed any order with us for the last three years. From our books we find that four years ago, you purchased goods from us for more than Rs. 60,000/- but after that you have not placed any order with us.

We fail to understand the cause for (1) change in your relations with us. It is quite possible that we have displeased you by some mistake or you have some complaint against us which you did not bring to our notice and stopped dealing with us. We have always treated you as one of our good customers and have taken pains to supply the goods needed by you in time. Kindly place your valued order.

Yours faithfully,

G. Kumar  
Deputy Manager. (2)

## Marking Scheme

### Shorthand Writing (415)

**Max. Marks: 70 (Speed-40 marks, Business letter-30 marks)**

**Time: 1 hr. 30 min.**

#### Job-1

The speed passage consisting of 400 words is to be dictated in 5 minutes @ 80 w.p.m. Transcription time is 40 minutes to be done on the computer. Before the start of the transcription 10 minutes should be given for reading back of the shorthand passage.

Counting of mistakes and deduction of marks: Deduct one mark for each error committed. Types of mistakes:

1. Words omitted
2. Spelling mistake (repetition of spelling mistake of the same word in the whole passage is counted as one error)
3. Non-capitalization of proper nouns/words
4. Wrong use of full stop and question mark
5. Wrong word used
6. Repetition of word(s) is to be counted as one error
7. Over typing and <xing'
8. Wrong syllabification of words
9. Any insertion with pen or pencil
10. Incorrect punctuation resulting in a change of sense

#### Job-II letter

In addition to the above, the following may be counted as errors for this job One mark to be deducted for wrong display of-

1. Heading
2. <From' address
3. <To' address
4. Salutation
5. Subject
6. Body of the letter
7. Complimentary close
8. Name and designation

## **CERTIFICATE COURSE IN TOY MAKING AND JOYFUL LEARNING (416 to 418)**

Instructions for conducting the practical examinations of Certificate Course in Toy Making and Joyful Learning

1. The practical examination should be based on specific content of the subject area.
2. Selection of activities should be made keeping in view the envisaged objectives of the course.
3. Practical activity will be in the form of:-
  - i) Preparing some tools like observation schedule, check list Performa, identification of locally available resources, preparation of budgets, development of schedule for studying specific case - studies, preparation of interview schedule performa for conducting case study, check-list (e.g. on criteria for making educational toys of good quality, identification of locally available resources).
  - ii) Demonstration of an activity using toy as an educational tool, demonstration of packing of a particular toy, decorating and beautifying a particular toy, making it more attractive, recording observations pertaining to a toy.
  - iii) Duration of viva-voce for each learner will be 15 minutes. During the viva-voce the practical records prepared by the learner will also be discussed and evaluated.
  - iv) During the practical work two activities may be assigned to each learner. The duration of each activity will be 45 minutes.
  - v) Viva-voce can be conducting during the practical activities of learners by calling the learners one by one.
  - vi) The students can be decided into batches if sufficient space is not available.
  - vii) Alternative activities may be provided to the learners for their open choice.

## Suggested Activities for Practical Examinations in the Subjects

### Learning Through Toys (416)

**Max. Marks: 40**

**Time : 2 hrs.**

#### Distribution of Marks

**Practical activities: 20 marks**

**Practical record: 10 marks**

**Viva voce: 10 marks**

1. Demonstrate teaching of numbers in a joyful manner to children aged five years and above.
2. Narrate a story using one or two toys available in the centre to create a joyful learning environment.
3. Mention five games that children can play using ball.
4. Name two toys that you would like to choose for the children of following age group.

<b>S.No.</b>	<b>Age group</b>	<b>Name of the toys</b>
1.	Newly born to 2 yrs	
2.	2 yrs to 4 yrs	
3.	4 yrs to 6 yrs	

5. Demonstrate use of a toy for helping the emotional development of a child of 3 yrs to 4 yrs. of age.
6. Mention five toys you will use for developing listening skills. Demonstrate the use of one such toy.
7. Demonstrate inculcation of the values such as love and care, compassion and protectiveness using a doll.
8. Prepare a plan for the production of a set of toys for developing concept of shapes among pre-school children.
9. Demonstrate use of balloon, pipe and water and Bansuri (flute) to develop the concept of air among pre school children.
10. Use a game for reinforcing the concept of festivals.
11. Demonstrate the use of appropriate toys for developing concepts of big & small, under and above, far and near, fat and thin, thin and short.

## ART OF TOY MAKING (417)

**Max. Marks: 40**

**Time: 2 hrs.**

### **Distribution of Marks**

**Practical activities: 20 marks**

**Practical record: 10 marks**

**Viva voce: 10 marks**

1. Prepare a toy with the material available at the centre that can be used to facilitate learning of visually impaired children
2. From study of development of toys in different periods of history, what suggestion would you like to give to a toy maker of today?

Hints: Toys based on the life style and economic engagements of different people in the community

3. Draw a sketch of any one of the following toys:
  - Harrapan Toys
  - Indian Valley civilization toys
  - Mohan-jo-daro toys
  - Traditional toys
  - Medieval toys
4. From the toys available at the centre demonstrate the use of a given toy to facilitate the learning of a child with speech problems.
5. Prepare any one of the following puzzles.
  - a) Three piece picture puzzles
  - b) Make a puzzle using any type of shapes to facilitate a learning of a mentally challenged group of children for example -butterfly puzzle, elephant puzzle, star - moon puzzle. You can also make a puzzle of your own choice.
6. Prepare a three-dimensional toy using locally available no cost material.
7. Make a musical instrument with some waste material.
8. On the basis of your expenses / observation of a place where toys are being made prepare a list of materials used for making no cost toys and classify them according to the table given below:

(Some examples are given for you)

**Early available material**

Leaves

Seeds

Pebbles

**No/Low cost material**

Cork

Match box

—

9. Make an attractive advertisement to advocate the use of certain toys for removing gender bias among parents in selection of toys.

10. Prepare an interview schedule for find out the common practices of parents regarding selection of toys.

A few sample items for the questionnaire are given below:

How many children do you have?

What is the age group of your children? Do you buy any toys for your children?

What factors do you keep in your mind while selecting toys for your children?

11. There are two pictures showing the storing arrangements in a house. Which arrangement would you advise the parents to have? Give reasons to support your answer.

12. Plan preparation of any local specific toy indicating materials, tools, labour time etc. involved and work out sale price of the toys.

## Toy Making as an Industry (418)

Max. Marks: 40

Time: 2 hrs.

### Distribution of Marks

**Practical activities: 20 marks**

**Practical record: 10 marks**

**Viva voce: 10 marks**

1. Prepare a performa for identification of market demands
2. Prepare a performa for identification of the area where the demand exists for specific kind of toys.
3. Preparation of criteria for quality control of toy
4. Enlist some criteria for making toys for income generation. A few are listed for you
  - Durability
  - Cost effectiveness
  - Easy to maintain
  - Replicability

Prepare an interview schedule for exploring community resources

6. What kind of local artisans are available, whose services can be utilized for toy making. Describe in detail how this can be done:
  - ☞ Potter
  - ☞ Carpenter
  - ☞ Puppet Makers
  - ☞ Mask Makers
  - ☞ Any other
7. Prepare a plan for procuring various types of community resources. Your plan may include activities such as:
  - ☞ Observation of children at play site ./ Visit to school (play school)
  - ☞ Discussion with experienced people
  - ☞ Observation and analysis of socio-culture life ./ Festival
  - ☞ Meeting the parents

8. Estimation of cost for setting up a small toy-making unit. A brief outline for estimation has been prepared for you.
  - Cost of space
  - Cost of raw material
  - Costing of product
  - Salary of staff
  - Seed money (Money available)
  - Tools required
  - Seasonal Salability & Availability
  - Cultural social pattern
9. Draw a sketch for storing raw material and finished goods for a small-scale toy-making unit in addition to production unit of anyone of the following:
  - Soft toys - raw material pertaining to soft toys
  - Clay toys - raw material pertaining to clay toys
  - Cardboard toys - raw material pertaining to cardboard toys
10. Prepare a performa for conducting interviews of the local artisan in the area of toy making
11. Demonstrate attractive packing of a given product for increasing its salability, attracting the customers.
12. Demonstrate the use of a given toy for educational purpose.
13. Make a list of toys that are always in demand under Column A and those toys linked with specific event and season under Column B. A few examples are given for you. You may add on to this list:

Column A	Column B
Ball	Bow and arrow
Doll	Idols of deities

## **CERTIFICATE IN BASIC COMPUTING (608)**

**Time : 2 Hours**

**Note:** Given below are distribution of marks and lists of practicals for practical examination. The examiner should set a question paper (practical) for the candidates prior to the exam. The examiner may ensure that the following software must be available in the computer: MS-Office 2000 and Windows 98

### **Scheme of Examination**

Practical activities:	40 marks
Practical record:	10 marks
Viva voce:	10 marks
<b>Total</b>	<b>60 Marks</b>

### **Distribution of Marks**

1.	Operating System	5 marks
2.	Basics of MS Word	10 marks
3.	Basic of MS Excel	10 marks
4.	Power Point	8 marks
5.	Internet and E-mail	7 marks

### **List of Suggested Practical**

1. Creating, deleting and renaming files/folders.
2. Moving and copying files/folders.
3. Creating, saving and printing a document in MS word.
4. Protecting, a document from accessing by others using password.
5. Inserting, deleting, replacing and formatting text.
6. Formatting paragraph and drawing borders and shading on specified text.
7. Copying and moving text/paragraph.
8. Constructing a block for given text and inserting a table.
9. Selecting, adding and renaming the worksheet.
10. Moving cells, copying cells and formatting cells.
11. Creating and copying formulas (sum).
12. Designing template and viewing slides.
13. Drawing charts and graphs.
14. Sending e-mail and browsing different sites.

## **CERTIFICATE IN COMPUTER HARDWARE ASSEMBLY AND MAINTENANCE (616)**

**Time : 3 hrs**

**Note:** Given below are distribution of marks and lists of practicals for practical examination. The examiner should set a question paper (practical) for the candidates prior to the examination.

### **Scheme of Examination**

Practical activities:	40 marks
Practical record:	10 marks
Viva voce:	10 marks
<b>Total</b>	<b>60 Marks</b>

### **Distribution of Marks**

- |  |          |
|--|----------|
| 1. Computer and its Component                | 5 marks  |
| 2. Computer Assembly and System Installation | 15 marks |
| 3. Maintenance and Troubleshooting           | 15 marks |

### **List of Suggested Practical**

1. Identifying basic parts of computer like Keyboard, Monitor, Mouse, Modem, Printer and system box.
2. Installing any operating system.
3. Installing Motherboard into cabinet.
4. Installing Floppy disk drive, Hard disk drive and CD drive or optical drive.
5. Selecting various add on cards like display card, sound card and network card.
6. Opening and identifying different parts of Mother board, (like memory slot, power connector, keyboard boot, MIDI port, parallel port etc.)
7. Classifying different assembly kit like screwdriver set, brass wire, Motherboard mounting hardware etc.
8. Identifying different assembly kit like screwdriver set, brass wire, motherboard mounting hardware etc.
9. Connecting different types of ports (like serial port, parallel port).
10. Identifying different slots in motherboard (like ISA, PCI and AGP) and assemble PC step by step.

## **CERTIFICATE IN CARE OF ELDERLY (445 TO 448)**

### **Guidelines for conducting practical Examination for Certificate course in Care of Elderly,**

The AVI should arrange for 10 elderly people for conducting the practical examination.

#### **Paper I**

**Max. Marks - 50**  
**Time: 3 hrs.**

#### **Distribution of Marks**

<b>Practical record:</b>	<b>10 marks</b>
<b>Viva voce:</b>	<b>10 marks</b>
<b>Activities</b>	<b>30 Marks</b>

The students will be given any 2 of the following activities and each activity carries 15 marks.

- i. Draw the diagram of human skeleton showing the bones of the human body.
- ii. Draw and explain the 9 quadrants of the abdomen.
- iii. Define brain. Draw its diagram and explain it.
- iv. Explain the circulatory system in detail with diagram.
- v. Define food. Explain the functions of food.
- vi. Define Nutrition. Write down the various nutrients with their respective functions.
- vii. What is food hygiene? Explain the rules to ensure hygiene of food.
- viii. Define health. Explain the 6 dimensions of health.
- ix. Explain Health Education and its Concepts, objectives and purposes.
- x. Explain Active ageing and the myths and misconceptions about ageing.
- xi. What is Community awareness? Explain the various factors affecting it.
- xii. Explain in detail the Individual, Community and Government levels of support measures for elderly.
- xiii. Write down the types of Government support available for the elderly.
- xiv. Define Psychology; also write down its branches.
- xv. Explain the basic concepts of Psychology.

## Paper - II

**Max. Marks: 50**

**Time : 3 hrs.**

### Distribution of Marks

<b>Practical record:</b>	<b>10 marks</b>
<b>Viva voce:</b>	<b>10 marks</b>
<b>Activities</b>	<b>30 Marks</b>

The students will be given any 2 of the following activities and each activity carries 15 marks.

- i. To assess the occupational profile of an elderly person.
- ii. To assess the family profile of an elderly person.
- iii. To assess the physical status of an elderly person.
- iv. To examine the Extremity function of an elderly person
- v. To examine the Respiratory system of an elderly person
- vi. To examine the Circulatory system of an elderly person
- vii. To assess the Mental status of an elderly person
- viii. To identify the age related changes in an elderly person
- ix. To identify and write any 10 points explaining the role of elderly towards their family and community.
- x. To identify and write any 10 points to assess the socio economic status of an elderly
- xi. To identify and write any 5 points on the basis of which you can assess the psychological changes in elderly.
- xii. To identify and write any 5 points, on the basis of which you can meet the spiritual needs of the elderly.

### **Paper - III**

**Max. Marks : 50**

**Time : 3 hrs.**

#### **Distribution of Marks**

**Practical record: 10 marks**

**Viva voce: 10 marks**

**Activities 30 Marks**

The student will be given any 2 of the following activities and each activity carries 15 marks:

- i. To plan a diet chart for 70 year old man having tooth decay and pain on chewing.
- ii. To plan a diet chart for 62 year old lady suffering from diabetes.
- iii. To plan a diet chart for 65 old year lady having hypertension.
- iv. To identify & write the problems of sensory system in an elderly person.
- v. To identify and write the problems of musculoskeletal system in an elderly person.
- vi. To identify and write the problems of Respiratory system in an elderly person.
- vii. To identify symptoms of an elderly person and write management of the same.
- viii. How will you manage an elderly person with hearing problem.
- ix. To identify and write the problems of Cardio Vascular system in an elderly person.
- x. To interview an elderly person and assess whether he has anxiety disorder.
- xi. To identify and write the characteristics of dementia.
- xii. To identify and write the guidelines for care of a cancer patient.
- xiii. To identify and write the various types of fracture and how will you take care of 60 years old elderly person, whose right knee is fractured.

## **Paper -IV**

### **Practical**

**Max. Marks: 50**

**Time : 3 hrs.**

#### **Distribution of Marks**

**Practical record: 10 Marks**

**Viva voce: 05 Marks**

**Spotting: 05 Marks**

**Activities: 30 Marks**

The student will be given any 2 of the following activities and each activity carries 15 marks:

1. To evaluate importance of morning Prayer.
2. To understand and assess difference between Yogabhyas and Exercise. Explain in tabular form.
3. To prove that all five elements of life are present in human body.
4. To identify basic needs required to have a healthy body and mind.
5. To demonstrate correct posture of hands and head in Shavasan.
6. To demonstrate and explain position, procedure and benefits of Udar Shakti Vikasak.
7. To demonstrate the correct posture of Bhujangasan. Explain the precautions to be taken during this asan.
8. To demonstrate and note down the benefits of Kati Shakti Vikasak.
9. To demonstrate the correct sequence of Jal Neiti.
10. To plan nutritious diet for the elderly.
11. List down any five food items which an elderly should avoid.
12. To demonstrate the correct method of meditation and write down importance of meditation.
13. To demonstrate procedure and position of following Pranayamas.
  - a) Nadi Shodhan Pranayam
  - b) Sheetal Pranayam.
  - c) Bharamri Pranayam
  - d) Sahej Pranayam.

## **Spotting**

**Note:** Learner should be able to identify given sample and write atleast 3-4 lines on any two items:-

1. Amla
2. Garlic
3. Ginger
4. Podina
5. Alpha Alpha
6. Tulsi

**Dance Course**  
**A Six Month Certificate Course**  
**Vocational Educational Programme (610)**  
**Guidelines for Practical Examination**

<b>PRACTICAL</b>	<b>3 HOURS</b>	<b>TOTAL MARKS : 75</b>
<b>MODULE 11 “Preparing for Dance”</b>		<b>35 Marks</b>
<b>1. Warm up exercises</b>		<b>5 Marks</b>
<b>Jogging - 1 mark</b>		
<b>Jumps - 2 marks</b>		
<b>Free exercises - 2 marks</b>		
<b>2. Flexibility exercises building Yoga</b>		<b>5 Marks</b>
Any two asanas to be demonstrated by the Candidate (2 marks for each asana), and 1 mark for correct Breathing		2 asanas for 2 marks each = 4 marks breathing - 1 mark
<b>3. Working with Rhythm</b>		<b>10 Marks</b>
● Clapping - 3 marks		
● Tool work - 3 marks		
● Aerobe exercises - 4 marks		
<b>4. Various body movements</b>		<b>15 Marks</b>
● Various ways of moving arms and legs		02 Marks
● Movement - 1 (using a turn)		03 Marks
● Movement - 2 (using a jump)		03 Marks
● Movement - 3 (using a hand-gesture)		03 Marks
● Movement - 4 (making an alphabet by using the whole body)		03 Marks

**MODULE III How to Dance****40 marks**

- 5. Recognizing Indian Traditional Dance Forms 10 marks**
- ◆ Recognition each classical Dance form by its basic position and costume  
One mark for each dance form -  $1 \times 7$  7 marks
  - ◆ Practical demonstration of any one basic position of a Dance form and overall presentation 3 marks
- 6. One Folk Dance each of the four region of India 10 marks**
- ◆ Thadeya/Chauphula - practical demo 2 marks
  - ◆ Bihu step Chauphula - practical dance 2 marks
  - ◆ Garba Chauphula - practical dance 2 marks
  - ◆ Kummi Chauphula - practical dance 2 marks
  - ◆ Overall presentation 2 marks
- 7. Mime 10 marks**
- Choose and perform any two of the mime activities described in the lesson for example 'the butterfly' and 'ice-cream or any others  
5 marks for each activity  $5 \times 2 = 10$  marks
- 8. Improvising 10 marks**
- ◆ Inspiration from nature and animals 3 marks
  - ◆ Expressing moods and emotions - any four (4×1) 4 marks
  - ◆ Use of props - (any one prop) 3 marks

**N.B. Note for examiners**

It is desirable to mark the candidate for comprehension of the said movements rather than the actual physical demonstration of stags.

## SAHAJ SANGEET VIDYA (609)

### A Certificate Course of Music (Hindustani)

(609)

#### Guidelines for Practical Examination

**Practical** **10 Marks**

(For Practical examination, about 15 minutes for each student)

**1. Dhrupad - One raga** **10 Marks**

(Learner should render the Drupad from the cassette)

- Performance of Dhrupad :
  - Raga Parichay (Vadi, Samvadi, Time, Jati etc.) 1 Marks
  - Aroha and Avroha 1 Marks
- Rendering of complete Bandish : -
  - Accuracy of Swar 3 Marks
  - Accuracy of Tala 3 Marks
  - Accuracy of Presentation 2 Marks

**2. Dhamar - One raga** **10 Marks**

(Learner should render the Dhamar from the cassette)

- Performance of Dhamar:
  - Raga Parichay (Vadi, Samvadi, Time, Jati etc.) 1 Marks
  - Aroha and Avroha 1 Marks
- Rendering of complete Bandish : -
  - Accuracy of Swar 3 Marks
  - Accuracy of Tala 3 Marks
  - Accuracy of Presentation 2 Marks

**Total 10 Marks**

**3. Khyal - Three ragas** **10 Marks**

(Learner should be able to render any one from the cassette)

- Performance of Khayal:

- Identification of the raga through some easy phrases or aroha and avroha of the raga, sung by the examiner 3 Marks
- Raga Parichay of the same raga 1 ½ Marks
- Rendering of complete bandish 3 Marks
- Accuracy of Sawaras 1 Marks
- Accuracy of Tala 1 Marks
- General presentation 2 Marks

**4. Thumri and Dadra, Tappa and Tarana 10 Marks**

(Learner should be able to identify forms, from the given cassette or sung by the examiner)

- To identify Thumri/Dadra (any one form) 2½ Marks
- To identify Tappa 2½ Marks
- To identify Tarana 2½ Marks
- Raga Parichay of any one raga given in the cassettes 2½ Marks

**Total 10 Marks**

**Module III - Hindustani Light/Folk Music**

**5. Sugam Sangeet : Geet, Ghazal, Bhajan and Sufi Sangeet 5 Marks**

(Learner should be able to identify forms, from the given cassette or sung by the examiner)

- Performance of Song :
  - Accuracy of Swara 2 Marks
  - Accuracy of Tala 1½ Marks
  - Pronunciation 1½ Marks

**Total 5 Marks**

**6. Chirapat Sangeet : Four Songs 5 Marks**

(Learner should be able to identify forms, from the given cassette )

- Performance of Song :
  - Accuracy of Swara 2 Marks
  - Accuracy of Tala 1½ Marks
  - Pronunciation 1½ Marks

**Total 5 Marks**

### **7. Lok Sangeet : Three Sangeet**

**5 Marks**

(Learner should be able to identify forms, from the given cassette or any regional songs)

● Performance of Song :

- Accuracy of Swara 2 Marks
- Accuracy of Tala 1½ Marks
- Pronunciation 1½ Marks

**Total 5 Marks**

### **8. National Anthem, National song and four Patriotic Song**

**5+5 = 10**

(Learner should be able to sing National Anthem, National song and any one Patriotic song from the cassette)

● Performance of Song :

- Accuracy of Swara 2+2 Marks
- Accuracy of Tala 1½ +1½ Marks
- Pronunciation 1½ +1½ Marks

**Total 10 Marks**

Over all performance:

- Confidence
- Memory 5 Marks
- Seriousness etc.

## CERTIFICATE COURSE IN TWO WHEELER MECHANISM (713)

**Max. Marks : 70**

**Time : 3 hrs.**

### Marking Scheme

(A) Practical Activities/Experiments (Any two - 25 Marks each)	50 Marks
(B) File/Record & Performance	10 Marks
(C) Viva Voce	10 Marks

S. No.	Sequence	Marks
1.	(i) Approach to the job	
	(ii) Selection & Use of proper tools	5
2.	(i) Removal From vehicle	
	(ii) Cleaning & Inspection	5
3.	(i) Dismantling	
	(ii) Diagnosing the fault & servicing (Repair / replacement of defective parts)	5
4.	(i) Re-assembling	
	(ii) Adjusting/Setting	
	(iii) Final Testing	10
	<b>Total</b>	<b>25 marks</b>

### Guidelines for Practical Examiner

1. Examiner should check up 2 Practical Activities/Jobs of the examinees.
2. Different sets on job can be given to the different examinees.
3. The object of Viva should be to judge the student's confidence and understanding.
4. Four Jobs should be given to the student from the list and they may have the option to perform any two jobs.

### List of Practical Activities

1. Decarbonizes the cylinder head of a two - wheeler and start the engine
2. Change the piston rings of given engine after checking the clearance

3. Remove the magnet wheel replace the CB points, Refit and set the gap.
4. Remove the clutch assembly from the vehicle, dismantle and inspect parts.
5. Reassemble the clutch after servicing. Adjust and test for proper functioning
6. Remove carburetor from engine, dismantle clean check parts
7. Replace defective parts of Carburetor, Assemble and check its functioning
8. Remove fuel tank from the vehicle, clean, check for any leakage, test fuel valve and fit the tank
9. Test ignition coil, spark plug, clean spar' plug and adjust the gap
10. Remove silencer from the vehicle decarbonizes it, fit back and check performance
11. Remove rear shock absorber, check its working, replace bushes and fit back
12. Test the front shock absorber replace its bushes and fit it
13. Remove steering handle bar, check and replace worn out bearings, and adjust for proper movement.
14. Check the condition of battery by hydrometer, top up electrolyte level and, if required clean the corroded terminals.
15. Remove the punctured wheel, dismantle, vulcanize the punctured tube, test for any leakage refit and inflate the wheel for proper air-pressure.
16. Wash and clean the vehicle, grease and oil all the points, check clutch, brake, and gear wires adjustments, set properly and test
17. Change the engine/gear oil. Start and tune-up the engine by adjusting the carburetor throttle and mixture screws.
18. Remove valves from a given engine, check for leakages if any. Replace worn - out guides and valves.
19. Remove valves from a given engine, check for leakages if any. Replace worn - out guides and valves.
20. Remove gear-shift box fit new one and adjust gear wires.
21. Dismantle the gear box, change gear-cross, oil seal etc. refit and test.
22. Dismantle the engine, replace main bearing oil seals
23. Re-assemble the engine, check for oil-leakage if any
24. Remove the rear brake shoes fit new ones, adjust for proper pedal play.
25. Remove front brake assembly service and all the fine. Replace shoes if required refit and adjust.

## CERTIFICATE COURSE IN JEEVAN VIGYAN (617)

i wkked% 60

l e; %2 ?k/s

v d ; kst uk

Ø l a	i z kkyh	v d
1.	प्रायोगिक फाइल	10
2.	बाह्य मूल्यांकन	40
3.	मौखिक	10
	कुल	60

ckg; eW; kdu

Ø l a	i z kkyh	v d
1.	मुद्राएँ (कोई एक)	2
	यौगिक क्रियाएं कोई एक प्रकार की	4
	श्वास की 10 क्रियाएं अथवा मेरु दंड की 8 क्रियाएं	4
	कुल	10
2.	आसन – 2	8
3.	श्वास के प्रयोग	
	श्वास (एक प्रकार)	3
	प्राणायाम (एक प्रकार)	3
	कुल	6
4.	ध्यान – प्रेक्षाध्यान	4
	अन्य ध्यान	2
	कुल	6
5.	अनुप्रेक्षा – कोई एक	10
	सकल	40

मौखिक प्रश्न उपरोक्त प्रायोगिक कार्य पर आधारित होंगे।

10 अंक

**fun? k&**

– एक समय में 2 या 3 छात्र प्रयोग करेंगे।

– सभी प्रयोग जहां विकल्प दिया जाना है उन्हें चित्रों में तैयार कर चित्रों को चयन कर प्रदर्शन करना होगा।

## CERTIFICATE COURSE IN VERMICOMPOSTING (621)

**Max. Marks: 140**

**Time: 3 hrs.**

Marking Scheme	Marks Distribution
Practical Activities (one major/one minor)	60
File / Record	20
Viva Voce	20
Internal Assessment	40
<b>Total</b>	<b>140 Marks</b>

Practical sequence of Operation/ skill and break up of marks for each Practical Activity

Sl. No.	Sequence	Marks
1.	<b>Major</b>	
	a. Shed design, estimate	10
	b. Collection of materials for composing	08
	e. Preparations of composting bed (Demonstration of process)	12
	d. Quality control mechanism	10
	<b>Total</b>	<b>40</b>
2.	<b>Minor</b>	
	a. Calculation and cost estimation	10
	b. Invoice and Documents	10
	<b>Total</b>	<b>20</b>

## **Guidelines for Practical Examiner**

1. Different sets of practical activities can be given to the different examinees.
2. Three sets of activities should be given to the students from the list and they may have the option to perform only two activities.
3. All the required material, tools & implements should be available at the disposal of examiner.

## **List of Practicals**

1. Identity arthworm, *Eisnia foetida*
2. To prepare vermicompost bed.
3. To study the effect of various concentrations of cow/cattle dung for vermicomposting.
4. To study the time taken to convert various types of feed substances to vermicompost.
5. To collect earthworms from field.
6. To collect cocoons from field.
7. To study the time required for hatching.
8. To study the response of earthworms to various pH solutions.
9. Transportation of earthworms.
10. Preliminary treatment of organic wastages.
11. Requirement of vermicomposting.
12. To determine good combination for vermicompost.

## **List of general Practical Activities to be conducted**

1. Identification and collection of earthworm
  - Field visit
  - Collection of different species of earthworm
  - Identification of species suitable for composting.
  - Developing familiarity with the different characteristics of *Esenia foetida* for its identification which are
    - i. 1.5 inches to 2 inches length
    - ii Color light gray
    - iii Circular movements
    - iv Moves in depth of 30 to 45 cms.

## **2. Collection of waste materials for composting**

- Collection of cow dung and identification of right quality of cow dung.
- Collection of biomass like leaves, tender twigs etc.
- Collection of other consumed degradable materials like kitchen waste, vegetable waste, and vegetable peels used tea leaves, left over rice etc.
- Differentiation between degradable and non degradable materials.
- Identifying material harmful for composting.

## **3. Preparation of temporary shed**

- Identification of plot area suitable for vermicompost shed.
- Constructing shed with locally available materials like straw, bamboo etc.
- Moistening of the land for making plots for composting
- Making 3 plots of dimensions 10 feet by 4 feet
- Preparing 2" thick shed with coconut, sugarcane fibers, glass etc. that is 1" layer.
- 2nd layer of shed - partially decayed cow dung, slurry waste about 2" thick
- Moistening of 2nd layer with mixture of water and cow urine
- Spreading 25-30 numbers of "*Esenia foetida*" per sq. ft. equally over the 2<sup>nd</sup> layer. This makes the 3<sup>rd</sup> layer.
- Preparing forth layer by mixing leaves and other biomass with cow dung and kitchen waste about 4" thick. The biomass can include leave tender twigs kitchen waste: vegetable waste, vegetable peals, used tealeaves etc.
- Preparing 4" to 5" thick 5<sup>th</sup> layer by mixing cow dung with biomass and waste. Covering the top layer with jute sack.

## **4. Preparation of permanent shed**

- Collection of different materials for constructing shed, trusses and pillar for shed
- Construction of shed with combination of different materials
- Comparative cost economics of each type of shed
- Judging the most viable one

## **5. Maintaining steps for maintaining good quality of compost**

- Maintaining cleanliness around the shed
- Watering the top layers of shed regularly, twice in summer and once in winter and rainy season.
- Moistening the jute sack, which covers the shed
- Covering the side of sheds with biomass like dry and gree layers

- Making arrangements for drainage of excess of water if rainy season
- Maintaining temperature record by using thermometer
- 6. Harvesting of compost**
  - ◆ Identifying the criteria for mature compost
    - Colors should be black
    - Odourless
    - Light in weight
  - ◆ Sieving of compost
  - ◆ Packing in poly bags.
  - ◆ Packing in jute bags.
- 7. Identification of various spots

**CERTIFICATE COURSE IN FOOTWEAR DESIGN AND  
PRODUCTION (716)**

**Max. Marks: 200**

**Time : 5 hrs.**

**Marking Scheme**

A) Practical Activities / experiments (One Major & one Minor)	100(80+20) marks
B) File / Record	40 Marks
C) Viva Voce	20 Marks
D) Project work	20 Marks
E) Performance	20 Marks
<b>Total</b>	<b>200 Marks</b>

Practical sequence of operation/skill and break up of marks for each practical activity/job.

S. No.	Sequence Marks
Major Activity - Design	
a) Inner	10
b) Outer	10
c) Mean Form	12
d) Standard upper	12
e) Sectional cutting patterns / Upper cutting patterns	
(i) Sectional Patterns	4
(ii) Marking Allowance	4
(iii) Net Patterns	4
f) Standard Mining	12
g) Sectional Pattern Mining	12
	<b>80</b>

## II Major Activity

a) Pattern Scale Area Calculation + Costism sheet	10
b) Invoice + Documents	10
	<b>20</b>

### **Guidelines for Practical Examiner**

1. Different sets on the job can be given to the different examiners
2. Four jobs should be given to the student from the list and they may have the option to perform any two jobs.

### **List of Practicals/Job Activities**

#### **Major Activities**

Formation of inner, outer and mean Forme of the last and drawing of standard; cutting, standard, lining standard and sectional patterns of Upper for clicking and closing and sectional patterns of lining and patterns of stiffeners.

#### **Designs to be used**

##### **Sixteen Basic Designs**

1. Sandal
2. Court Shoe
3. Derby
4. Oxford
5. Apron Derby
6. Children Derby
7. Monk
8. Casual
9. Casual with Elastic
10. Jodhpur
11. Boot
12. Ladies Boot
13. Children Boot
14. Sports
15. Moccasin -Slip on
16. Moccasin - Derby

The candidate can also be asked to develop these designs for strobel construction, stitch down or veldtschoen construction of Californian or Forced last construction or string lasting construction.

Styles based on Basic Design can also be given from Catalogues and magazines for pattern development

### **Minor - Activities**

1. Calculation of the Pattern Scale Area of the patterns and costing sheet.
2. Insole by Geometrical Method and Masking and also socks.
3. Filling up of export documents.
4. Preparation of Balance sheet for 10-15 entries.

In addition to this there will be Practical File; Viva voce, General performance and Projects done as assignments given by the instructors.

## CERTIFICATE COURSE IN MUSHROOM PRODUCTION (618)

Marking Scheme	Maximum Marks: 140	Time: 3 hrs.
Practical Activities (one major/one minor)	60	
File / Record	20	
Viva Voce	20	
Internal Assessment	40	
<b>Total</b>	<b>140 Marks</b>	

Practical sequence of Operation/skill and break up of marks for each Practical Activity

Sl. No.	Sequence	Marks
1.	Major	
	a. Shed design, estimate	10
	b. Collection of materials for composting	08
	c. Preparations of composting bed (Demonstration of process)	12
	d. Quality control mechanism	10
	<b>Total</b>	<b>40</b>
2.	Minor	
	a. Calculation and cost estimation	10
	b. Invoice and Documents	10
	<b>Total</b>	<b>20</b>

### **Guidelines for Practical Examiner**

1. Different sets of practical activities can be given to the different examinees.
2. Three sets of activities should be given to the students from the list and they may have the option to perform only two activities.
3. All the required materials and tools & implements should be available at the disposal of examiner.

### **List of Practicals**

1. Preparation of potato dextrose agar medium.
2. Tissue culture of Mushroom.
3. Preparation of substrate for spawn multiplication.
4. Mother spawn preparation.
5. Multiplication of bed spawn from mother spawn.
6. Processing of Paddy straw.
7. Preparation of mushroom beds.
8. After care of mushroom beds.
9. Harvesting and packaging of Mushrooms
10. Preparation of compost.
11. Spawing
12. Casing
13. Cropping, after care and packing.

**CERTIFICATE COURSE IN FOUR WHEELER CHASIS  
MECHANISM (623/723)**

<b>Marking. Scheme</b>	<b>Maximum Marks:. 200</b>	<b>Time: 4 hrs.</b>
Practical Activities (one major/one minor)	120	
File / Record	15	
Viva Voce	15	
Internal Assignment	50	
<b>Total</b>	<b>200 Marks</b>	

Practical sequence of Operation/skill and break up of marks for each Practical Activity

<b>Sl. No.</b>	<b>Sequence</b>	<b>Marks</b>
1.	Major	
	a. Correct selection of tools	10
	b. Proper handling of job & tools during performance	25
	c. proper inspection & diagnosing of job/part	25
	d. Rectifying & assembling	20
	<b>Total</b>	<b>80</b>
2.	Minor	
	a. Correct selection of tools	5
	b. Proper handling of job & tools during performance	10
	c. proper inspection & diagnosing of job/part	15
	d. Rectifying & assembling	10
	<b>Total</b>	<b>40</b>

## **Guidelines for Practical Examiner**

1. Different sets of practical activities can be given to the different examinees.
2. Three sets of activities should be given to the students from the list and they may have the option to perform only two activities.
3. All the required materials and tools & equipments should be available at the disposal of examiner.

### **List of Practicals**

1. Filing
2. Cutting
3. Drilling
4. Cutting internal thread
5. Cutting external thread
6. Clutch
7. Gear Box
8. Universal Joint & Propeller Shaft
9. Rear axle
10. Differential
- II. Front axle & Steering system
12. Master Cylinder
13. Drum Brakes
14. Wheels, tyres & tubes
15. Chassis
16. Steering wobble
17. Noisy Brakes
18. Tyre rotation
19. Shock absorbers
20. Adjusting breaks
21. Rear wheel bearing
22. Checking the differential oil
23. Clutch plate
24. Wiper arm
25. Leaf Spring

## CERTIFICATE COURSE IN FOUR WHEELER ENGINE MECHANISM (624/724)

Marking Scheme	Maximum Marks: 200	Time: 4 hrs.
Practical Activities (one major/ one minor)	120	
File/Record	15	
Viva Voce	15	
Internal Assignment	50	
<b>Total</b>	<b>200 Marks</b>	

Practical sequence of Operation/skill and break up of marks for each Practical Activity.

Sl. No.	Sequence	Marks
1.	Major	
	a. Correct selection of tools	10
	b. Proper handling of job & tools during performance	25
	c. proper inspection & diagnosing of job/part	25
	d. Rectifying & assembling	20
	<b>Total</b>	<b>80</b>
2.	Minor	
	a. Correct selection of tools	5
	b. Proper handling of job & tools during performance	10
	c. proper inspection & diagnosing of job/part	15
	d. Rectifying & assembling	10
	<b>Total</b>	<b>40</b>

### Guidelines for Practical Examiner

1. Different sets of practical activities can be given to the different examiners.
2. Three sets of activities should be given to the students from the list and they may have the option to perform only two activities.
3. All the required materials and tools & equipments should be available at the disposal of examiner.

### List of Practicals

1. Filing
2. Cutting
3. Drilling

4. Cutting internal thread
5. Cutting external thread
6. Engine- Identification of engine parts, dismantling of engine, servicing of engine, assembling of engine
7. Fuel system of Petrol engine
8. Fuel system of Diesel engine
9. Ignition system of petrol engine
10. Lubrication system
11. Cooling system
12. Misfiring and starting problems
13. Oil change
14. Change the diesel filter
15. Spark plug
16. Cleaning and adjusting the carburetors
17. Valve adjustment
18. Radiator
19. Fan belt adjustment
20. Timing belt
21. Cylinder boring
22. Crankshaft
23. Oil Pressure
24. Rocker Shaft



- Tongue depressor
- Charts / models of human body for identification
- Diagram of worms - Round Worm etc.

### **List of activities Modules wise**

#### **Module - 1 (401) Basics of Health - Care**

1. Drawing a picture of the human body and familiarizing ourselves with the various organs of the body
  - a. Diagram - An outline of the human body
2. How to identify an illness
3. Mutual dependence of nature and human beings
4. Importance of the bone structure/ cavity.
5. The immune system of the body
  - Examining the tonsils
6. Checking the pulse rate
7. Measuring blood pressure
8. Counting heartbeats
9. Examination related with the respiratory system
10. Examining the organs of the respiratory system
11. Examining for previous illness
  - Taking past history observing for surgical scars
12. Examining for present illness
  - Examining the eyes for anemia and jaundice
  - Abdominal examination
  - Diagram Nine quadrants of the abdomen
13. Mcburney's sign
14. Murphy's sign
15. Examining a patient's liver and spleen

#### **Module - 2 (402) Health and Environment**

1. The requirement of oxygen for combustion
  - (a Diag) Oxygen is required for combustion)
2. What is your rate of breathing
3. measurement of lung capacity

- (a. Diag.) What is the lung capacity
- 4. Getting acquainted with the income of the Gram Panchayat
- 5. Using bleaching powder to purify water
- 6. Mother solution
- 7. A-frame -a useful device for digging continuous channels at the same level
  - a. Diagram A-frame device
- 8. Preparing a drainage pit and maintaining it
  - a. Diagram Drainage pit
- 9. Purifying water using solar energy
- 10. Using solar energy
  - Diagram Solar cooker
- 11. Report writing

### **Module-3 (403) Health Education**

1. Recognising the signs and symptoms of the respiratory system diseases
2. Acute symptoms of the respiratory system diseases
3. Household remedies for illnesses of the respiratory system like the common cold
4. Oral Rehydration Solution
  - Preparing ORS/household saline
5. Recognising the symptoms of dehydration.
  - Examining for dehydration
6. Checking for fever
  - Diagram Thermometer
7. Recognising different types of fever
8. Symptoms of diseases

### **Module - 4 (404) Health Extension Activities**

1. Malnourishment
  - A graph for growth from birth till 5 years
2. The 'Sahli's method' of testing haemoglobin.
3. Recognising the nutrition quotient of foodstuff
4. Notice writing
5. Our tradition of well being and resource wealth
6. Enriching village life

## CERTIFICATE IN BEE KEEPING (619)

**Max. Marks : 60**

**Time: 3 hrs.**

### **Break up of 60 marks**

- |                                    |                   |
|------------------------------------|-------------------|
| <b>1. Any one Activity</b>         | <b>- 30 marks</b> |
| (i) Correct selection of equipment | - 4 marks         |
| (ii) Actual performance            | - 20 marks        |
| (iii) Precautions taken            | - 6 marks         |
| }                                  |                   |
| <b>2. Spotting (any five)</b>      | <b>10 marks</b>   |
| <b>3. Viva</b>                     | <b>10 marks</b>   |
| <b>4. Practical record</b>         | <b>10 marks</b>   |

### **List for spotting**

- Preserved or live specimen of queen, worker and drone
- Products of bees
- Bees wax
- Different types of flowers
- Different parts of langstroth ten frame hive
- Honey extractor
- Smoker
- Un capping knife
- Hive tool
- Overall
- Bee veil
- Bee gloves
- Bee brush
- Swarm catching basket
- Queen cage
- Sugar feeder
- Tray
- Phenyl balls

- Moths-dead or alive
- Wasp dead or alive
- Mites dead or alive
- Drip trays
- Glass bottles
- Thermometer

### List of Activities

#### 1- e/kəD[kh dh i gpkɪ dɦft ,

1. भारतीय मधुमक्खी
2. इटालियन मधुमक्खी
3. चट्टानी मधुमक्खी
4. छोटी मधुमक्खी
5. मधुमक्खी का छत्ता

#### 2- fɔɦɦkɦu 'kɦɦɦɦd l ɦpukvɦ dɦs vɦx dɦuk

1. पराग टोकरी
2. श्रृंगिका
3. पराग बुश
4. मोम ग्रंथि
5. मधुमक्खी डंक

#### 3- e/kəD[kh vɦɦ ml ds i fɦkɦ dh i gpkɪ dɦft ,

1. रानी मधुमक्खी
2. कमेरी मधुमक्खी
3. ड्रोन (नर मधुमक्खी)
4. कमेरी कोष्ठ
5. रानी कोष्ठ

#### 4- e/kəD[kh dk thou pØ r\$ kj dja

1. अंडा
2. लार्वा
3. प्यूपा
4. वयस्क

#### 5- e/kəfD[k; ka ea tkfr Hkn dhft ,

1. नर और कमेरी
2. नर और रानी
3. रानी और कमेरी

#### 6- fuEufyf[kr 0; ogkj l ca/kh fØ; k, j dhft ,

1. मधुमक्खी पेटी से रानी हटाना
2. कमेरी मधुमक्खी से श्रृंगिका अलग करना
3. मधुमक्खी पेटी के पास दूसरी पेटी की कमेरी लाना
4. मधुमक्खी पेटी से कमेरी को दूर ले जाकर छोड़ना
5. पेटी के पास चीनी का घोल रखना

#### 7- l j l ka ds [kr ea e/kəD[kh i \$/h j [kuk

1. सरसों की तीन क्यारी अंतराल पर तैयार करना (आकार 4 × 3 मी.²)
2. सरसों की बुवाई करना
3. सरसों लगी एक क्यारी में मधुमक्खी पेटी रखना
4. सरसों की एक क्यारी खाली छोड़ना
5. सरसों की क्यारी और मधुमक्खी की पेटी तथा क्यारी को जाल से ढंकना
6. सरसों के बीच बनाने पर मधुमक्खी पेटी हटाना
7. सरसों पकने पर तीन क्यारियों की बीज उपज अलग-अलग लें।

**8- i kks ds fofHku Hkxka l sedjn i klr djuk**

1. पुष्पी मकरंद
2. अतिरिक्त पुष्पी मकरंद

**9- fofHku i dkj ds ijkx d. kka dks , df=r dhft ,**

1. विभिन्न फूलों के पराग कोष और पराग
2. पराग कणों का अवलोकन
3. पराग कणों का चित्र बनाना

**10- vi us bykds ds fofHku eghuka ea e/kpD[kh dks ijkx vkj edjn nsukys  
i kka dh igpku dhft , %**

1. अलंकारी पौधे
2. झाड़ीदार पौधे
3. मौसमी पौधे

**11- fofHku ekj eka ea e/kpD[k; ka dh ns[kHky dS sdjx**

1. सर्दियाँ
2. बसन्त
3. ग्रीष्म
4. वर्षा

**12- ubz dkWksh dS sr\$ kj djx**

1. बकछुट का ज्ञान
2. विभाजन
3. खाली बक्से का उपयोग

**13- df=e Hkstu D; k gSvkj dI snrsgA**

1. कृत्रिम भोजन
2. चीनी का शर्बत बनाना
3. मौसम के अनुसार पानी व चीनी का अनुपात
4. पराग की आपूर्ति
5. पानी की आपूर्ति

**14- e/kpD[kh ds dhV 'k=q/ka dks i gpkua**

1. मोमी पतंगा
2. बर्र
3. चींटी
4. दीमक

**15- e/kpD[kh ds jkska dks i gpkfu,**

1. अमरीकन फाडल ब्रूड
2. यूरोपियन फाडल ब्रूड
3. सैक ब्रुड
4. नॉसीमा

**16- e/kpD[kh i \h dh I jpkuk crkb, \**

1. मधुमक्खी पेटि के प्रकार
2. स्टैंड
3. आधार शिशु खंड
4. चौखट फ्रेम

5. मधु खंड
6. भीतरी और बाहरी ढक्कन
7. मोम आधार

**17- e/kəD[kh ikyu dsvl; I kt&l kekukadh tkudkjh ysuk**

1. रानी रोक पट
2. धुआँ कर
3. दस्ताने और नकाब
4. द्वार रक्षक
5. डमी बोर्ड
6. मधु निष्कासन यंत्र
7. भोजन पात्र
8. इम्बीडर
9. आधार छत्ता बनाने की मशीन

**18- e/kəD[kh i v/h vkj ml dsfofHku Hkxka dk in'ku dhft ,**

1. न्यूटन पेटी
2. लैंग स्ट्रॉथ
3. ब्रिटिश स्टैंडर्ड

**19- 'kə o v'kə & 'kgn dh igpku dʃ sdjæks**

1. निष्कर्षित शहद प्राप्त करना
2. पुष्पी शहद की प्राप्ति
3. कच्चे शहद की प्राप्ति
4. क्रीम हनी का प्रदर्शन

## 20- NÜks I seke dks dñ s vyx djæx

1. सूर्य की गरमी से मोम निकालने का प्रदर्शन
2. आग पर मोम निकालना
3. छीलन से मोम निकालना
4. मोम का शोधन करना

## 21- NÜks dsfofHÜu mRi knka dks dñ sfudkyæx

1. रॉयल जैली निकालना
2. मधुमक्खी गोद को प्रदर्शन
3. मौन विष प्राप्त करना

## 22- 'kgn dñ sfudkyæx

1. शहद निकालने की क्रिया
2. शहद भरे फ्रेमों को अलग करना
3. छत्ते से डाट निकालना
4. फ्रेमों को शहद निष्कारक में रखना

## 23- 'kgn dk ekudhdj .k dñ sdjæx

1. मिथाइलपरफूरल परीक्षण
2. एगमार्क
3. शहद की गुणवत्ता

## 24- 'kgn dsfoi .ku dsfy, vko' ; drk, j Kkr djuk

1. संगठित उत्पादक
2. स्वतंत्र उत्पादक
3. विपणन विश्लेषण

**25- e/kæD[kh m | kx i kjEHk dŋ s djæλ**

1. मकरंद और पराग देने वाले पौधों की पहचान
2. मौनपालन संबंधी प्रशिक्षण के लिए जानकारी

**26- gkfudkj d dhVuk' kdkæ , oa i hMkuk' kdkæ ds i Hkko dh i gpkü**

1. स्वस्थ मधुमक्खी का व्यवहार
2. कीटनाशी से प्रभावित मधुमक्खी का व्यवहार
3. विष प्रभावित मौन वंशों को अलग करना
4. प्रभावित छत्ते हटाना
5. स्वस्थ और नए छत्ते रखना
6. खुले ब्रूडों को अलग करना

## CERTIFICATE IN WEB DESIGNING (622) (OLD)

**Note:** Given below are the distribution of marks, lists of practicals, Project Work, Internal Assignment and a sample question paper for practical examination. The examiner should set a similar paper for the candidates prior to the examination. The examiner may ensure that the following software (Licensed versions) must be available in the computer: Windows 2000/XP or higher, Macromedia Flash, DreamWeaver, Photoshop and MS-Office 2000 (MS Word and MS Front page). The students are required to submit the Project work and Internal assignment at the study centre before appearing in the public examination.

### Scheme of Evaluation

	Theory		Practical		Project work	Total
	External Exam.	Internal Assignment	External Exam.	Internal Assignment		
Max. Marks	80	-	70 (inclusive of 10 marks for viva)	20	30 (inclusive of 10 marks for record maintenance)	200
Time allowed	3 hrs.	-	3 hrs.	-	-	-
Pass Percentage	50%		50%	50%	50%	50%
Minimum marks required for pass	40		35	10	15	100

### Distribution of Marks for Practicals

S. No.	Name of Lessons	Marks
1.	Internet and Services	6
2.	Introduction to HTML	6
3.	Advanced HTML	10
4.	Planning and Designing a Website	8
5.	Developing Website Using Tools	10
6.	Scripting	10
7.	Advanced Topics in Web Designing	10
8.	Viva	10
	<b>Total</b>	<b>70</b>

## Suggested Practical Activities

1. Obtain information about various domain names and how to acquire them.
2. Open NIOS Website ([www.nios.ac.in](http://www.nios.ac.in)) and save various information such as saving web site, web page and images, etc.
3. Work on different types of search engine. Search websites of Government, individuals . and various organizations.
4. Search the websites of all leading national newspapers or colleges in your city.
5. Create a new e-mail account on any free email service and practice on different features such as compose (create email), send, read, reply, forward etc.
6. Create, save, and view an HTML document.
7. Create a web page and make use of various formatting tags in the same.
8. Create an ordered and an unordered list in an HTML document.
9. Create an HTML document and make use of graphics features in the document.
10. Use of Hyper links; create text/image links to different sections within the same document, different document, and to another website.
11. Create a webpage HTML document involving the use of Tables tags and other attributes.
12. Create/edit an HTML document using frames and various related attributes.
13. Create forms such as College Registration Form, Student Feedback Form, Train Enquiry Form, Student Details form etc.
14. Develop a sample website of your institute/ school.
15. Using Microsoft Front page, make use of Graphics, work with tables, frames and forms in creating web pages.
16. Create a website using Microsoft Front Page and Dreamweaver.
17. Make use of Java Script in HTML document.
18. Practice on handling of Java Script events.
19. Practice on programs using loop and conditional statements.
20. Create a form and test its validation using Java Script.
21. Practice on use of Front Page Active elements i.e., DHTML components in a web page.
22. Practice on use of audio and video files in HTML document.
23. Create and edit images using Adobe Photoshop.
24. Create an elliptical button with changing colour on Mouse using Macromedia Flash.
25. Create your own personal website, host it in any free web hosting server.

## Sample Question Paper

**Max. Marks: 70**

(inclusive of 10 marks for viva)

**Time: 3 hrs.**

### Answer All Questions:

1. (a) Create an e-mail account in any free email service website such as yahoo, hotmail, gmail etc.

**(3X2= 6 Marks)**

Send a mail to your course coordinator, NIOS with the following body text:

Dear Sir,

“I feel great to be a part of NIOS Family”

Thanking You.

With regards

<Name>

<Address>

and Subject: “Internet changes life”.

With this mail attach a word document containing brief description about your self.

(b) Check your mail(s) and reply to anyone with the body text “Received your mail”.

Forward the same mail to course coordinator, NIOS (provide an email ID) with the text “Mail has been forwarded”.

2. (a) Create an HTML document with background color: **(2 Marks)**

Yellow containing the following text:

“YOU ARE WELCOME TO NIOS”

or Create an HTML document to display the following text;

“INTERNET TERMINOLOGIES”

1. IP - Internet Protocol
2. DNS - Domain Name System
3. IIS - Internet Information server
4. URL - Uniform Resource Locator

(b) Create an HTML document with bulleted list of following items and their links to respective websites.

**(4 Marks)**

### “IMPORTANT WEB SITE LINKS”

- Google ([www.google.com](http://www.google.com))
- Yahoo ([www.yahoo.com](http://www.yahoo.com))
- Worlds best Encyclopedia ([www.wikipedia.com](http://www.wikipedia.com))

OR

Visit the web site [www.nios.ac.in](http://www.nios.ac.in), save the NIOS logo  into your hard disk. Create an HTML document to display the following.



National Institute of Open Schooling  
A-24/25, Inst. Area, Sec-62, Noida

**N.B:** NIOS logo should link to the web site [www.nios.ac.in](http://www.nios.ac.in)

3. (a) Create an HTML document to **display the following table** with green border color and gray background. (4 Marks)

#### States and their Capitals

State Name	State Capital
Andhra Pradesh	Hyderabad
West Bengal	Kolkata
Bihar	Patna
Tamilnadu	Chennai
Karnataka	Bangalore
Punjab	Chandigarh
Haryana	Chandigarh

- (b) Create an HTML document to generate the following form:

#### Personal Form

What is your name:

Sex:  Male  Female

What do you have to say for yourself?

to submit the form.

(c) Create an HTML document with Frames (Top Frame-banner page: display an image with your name, address, mail id, etc., Left Frame-link page: contains the items that are linked to web page, Right Frame: content page: display the web pages that are linked to items in left frame). **(10 Marks)**

<Your Image  
goes here>

Welcome to the web site of <your name goes here>  
<your address goes here>  
<your mail id goes here>

- [My Favorite](#)
- [My Interest](#) Click the respective items on left to get details
- [My School](#)
- [My Resume](#)

4. Create your own web site containing the following pages: **(4x2 = 8)**

(a) **Page-1** (index or home page: index.htm)

**Welcome to the web site of <your name goes here>**

<Your address, telephone number and mail id goes here>

To know about me and my family, my favorite and interests, click on the following links:

About Me and My Family

My Favorites and Interests

(b) **Page-2** (aboutMe.html)

***About Me and My Family***

**My Name:** <your name goes here>

**Father's Name:** <your father's name goes here>

**Mother's Name:** <your mother's name goes here>

**Know about Me:** <write few lines about you>

**aboutMe.html and my Favorites.html page should link to About Me and My Family, My Favorites and Interests items in the first page, home page.**

5. (a) Create an HTML document using Java Script, looping constructs to display the numbers from 1 to 10. (5X2= 10 Marks)

(b) Create an HTML document using Java Script to accept students Name, Class, Roll No and the marks secured in 3 different subjects: Mathematics, English, and Science. Calculate the average marks of three subjects, display “Passed”, if average  $\geq 50$ , else display “Failed”.

OR

Create an HTML document using Java Script, on loading the document, display a message “You are most welcome to the site”. On unloading the website it should display a message “Thanking you for visiting our site. You are about to leave the site”.

6. (a) Write an HTML document to display an animated message (5x2 = 10)

“Welcome to the world of Internet” using marquee tag at the top of the web page.

(b) Create the following navigational menu using Adobe Photoshop

**Home News Notices Events Contacts**

### Internal Assignment

**Max. Marks: 20**

**Answer any four questions:**

**1. Write short notes (any two)**

**5 Marks**

(a) Star Topology

(b) Digital Signature

(c) Worm

(d) Internet Explorer

**2. Differentiate between (any two)**

**5 Marks**

(a) ISDN and DSL

(b) M-Commerce and E-Commerce

(c) Static website and Dynamic website

**3. Write short notes (any two)**

**5 Marks**

(a) WWW

(b) URL

(c) C2C

(d) FTP

(e) LAN

4. Explain Hypertext links. What is the method to link a specific place within the same document? 5 Marks
5. Define Web Hosting? What are the types of hosting services? 5 Marks
6. Explain frames? What are the advantages of using Frames? 5 Marks

## Project Work

**Max. Marks: 30**  
(inclusive of 10  
marks for record  
maintenance)

*Answer either Section A or Section B*

### Section A

#### Activity - 1

#### **Design and Host NIOS (National Institute of Open Schooling) website**

Using HTML/Front Page Editor/DreamWeaver design the following NIOS website. The various activities involved in designing and hosting the website are as follows. (5 Marks)

### **NATIONAL INSTITUTE OF OPEN SCHOOLING**

A-24/25, Inst. Area  
Sector-62, Noida

- Home
  - Vision
  - Academic Programmes
  - Admission Guidelines
  - Examination
  - Administration
  - Notification
  - Vacancy
  - Result
  - Photo Gallery
  - Contact Us
- The National Institute of Open Schooling formerly known as National Open School (NOS) was established In November, 1989, as an autonomous organization in pursuance of National Policy on Education, 1986 by the Ministry of Human Resource Development, Govt, of India. Open Schooling was originally experimented upon since 1978 as a project of the CBSE and was later amalgamated with NIOS. It is partly funded by Government of India, keeping in view the need of the target groups, the NIOS is also providing a number of vocational and community oriented courses besides general and academic courses.

## Activity - 2

(10 Marks)

Design all other pages such as vision, Academic Programmes, Academic Guidelines, Examination, Administration, Notifications, Vacancy, Results, Photo Gallery, and Contact Us of your own.

Some of the sample sub pages and its layout display has been shown in figure below:

<b>NATIONAL INSTITUTE OF OPEN SCHOOLING</b> A-24/25, Inst. Area Sector-62, Noida	
<ul style="list-style-type: none"><li>• Home</li><li>• Vision</li><li>• Academic Programmes</li><li>• Admission Guidelines</li><li>• Examination</li><li>• Administration</li><li>• Notification</li><li>• Vacancy</li><li>• Result</li><li>• Photo Gallery</li><li>• Contact Us</li></ul>	<p style="text-align: center;">Programmes and Courses</p> <p><b><u>Open Basic Education:</u></b> Open Basic Education (OBE) Programme providing a elementary education at three levels, for school drop-outs and neo-literates, out of school learners through Accredited Agencies.</p> <p><b><u>-Secondary Course equivalent to class X</u></b></p> <p><b><u>-Senior secondary course equivalent to Class XII</u></b></p> <p><b><u>-Vocational Education</u></b></p> <p>NIOS has developed reading materials to do the following Life Enrichment</p> <p><b>Programmes:</b></p> <ul style="list-style-type: none"><li>-Bharatiya <b>Culture and Heritage</b></li><li>-Edutation in Human Values</li><li>-People of ladia</li><li>-Greate Personalities of India</li></ul> <p><b>-Yoga</b></p>

# NATIONAL INSTITUTE OF OPEN SCHOOLING

## A-24/25. Inst. Area Sector-62. Noida

The screenshot shows the 'Evaluation System' page on the NIOS website. The header includes the NIOS logo and name in Hindi and English, along with contact information and social media links. The navigation menu includes 'About Us', 'Departments / Units', 'Programmes', 'Results', 'Related Links', and 'Contact Us'. The left sidebar contains a menu for 'Information About' with options like Admission, On Demand Examination, e-Services, Accreditation/E-Accreditation, MuktaVidya Vank, Felicitations/Awards, Notice Board / Office Order, Tender Notice, Vacancy, Success Stories, and Library. The main content area is titled 'Evaluation System' and contains the following text:

You are here: [Home](#) > [Departments/Units](#) > [Evaluation](#)

### Evaluation System

Evaluation and Assessment is an integral component of any teaching-learning system. The Government of India in 1990 vested NIOS with the authority to examine and certify students up to pre-degree level, and thus, NIOS became one of the National Boards of Examination. It is the only Board which conducts two full-fledged examinations every year during April/May and October/November. NIOS has been conducting its public examinations since 1991.

Unique Features of the NIOS Examination System

- NIOS does not have the infrastructure of its own. It shares the infrastructure and human resources of the institutions established by the public sector and private sector to conduct its examinations without disturbing their academic schedule.
- NIOS gives a lot of flexibility to the students in matters related to examination such as (no compulsion of appearing in all the subjects at the same examination) appearing in one or more subjects in the examination as per the convenience, credit accumulation of the passed subjects, nine chances to appear in the public examinations over a period of five years, and transfer of credit of two subjects passed from other selected boards and up to four subjects in the case of ex-NIOS learners.
- A student is allowed to write answers in the examination in any of the scheduled languages of India except language papers even if he/she has not opted for that medium.
- A student can appear in On Demand Examination at Secondary level and Senior Secondary level examination any number of times as per his/her convenience.

The National Institute of Open Schooling has the following features Innovations in its Evaluation System:

The screenshot shows the 'Academic Department' page on the NIOS website. The header and navigation menu are identical to the previous screenshot. The left sidebar is also the same. The main content area is titled 'Academic Department' and contains the following text:

You are here: [Home](#) > [Departments/Units](#) > [Academic](#)

### Academic Department

#### Programmes and Courses

The Academic Department and the Vocational Education Department can be said to be the two most important departments of the NIOS. These two departments develop education programmes and/or courses to give opportunity to the learners to pursue the course of learning of their choice. Both the departments collaborate with each other to develop functional and need-based courses to benefit the learners.

The Academic Department takes care of academic courses which encompasses the entire school education continuum from primary to predegree level. The Academic Department is engaged in development of curriculum and self learning materials, revision of learning materials, together with research and development activities and also provides support in the area of evaluation of learners.

The NIOS Academic Department has the following units.

- Open Basic Education (OBE)
- Secondary and Senior Secondary Education
- Capacity Building Cell
- NCOS Secretariat
- COMOSA Secretariat
- Graphic Unit
- Library and Documentation Services

### Activities - 3

(5 Marks)

Host the website into any free web hosting server.

## Section - B

### Design and Hosting an Educational website

Using HTML/Front Page Editor/DreamWeaver design the following educational website. The various activities involved in designing and hosting the website as follows.

#### Activity - 1

(5 Marks)

Design the home page/index page of your education website as shown in figure below.

The screenshot shows the profile page of the National Institute of Open Schooling (NIOS). The page features a header with the NIOS logo and name in Hindi and English, along with its status as an autonomous institution under the Ministry of HRD, Govt. of India. A navigation menu includes links for Home, About Us, Departments / Units, Programmes, Results, Related Links, and Contact Us. The main content area is titled 'Profile' and contains a list of links for downloading NIOS profiles in English and Hindi, as well as links for 'What is NIOS?', 'What does NIOS do?', and 'How does NIOS Function?'. Below this, there is a section titled 'What is NIOS' with a detailed paragraph about the institute's history and mission, followed by a list of its objectives: universalisation of education, greater equity and justice in society, and the evolution of a learning society. The page also includes a sidebar with 'Information About' and 'Examination / Result' sections, and a footer with search and system information.

## Activity - 2

(10 Marks)

Design all other pages such as Sports, Activities, Vision, Photo Gallery, and Contact Us, Admission Guidelines, Results, Examination time table, Vacation and Holidays, and Achievement pages of your own.

Some of the sample sub pages and its layout display has been shown in figure below:

The figure displays two screenshots of the National Institute of Open Schooling (NIOS) website. The top screenshot shows the 'Academic Department' page, and the bottom screenshot shows the 'Vocational Education' page. Both pages feature a navigation menu, an 'Information About' sidebar, and main content sections.

**Academic Department Page:**

- Navigation:** Home, About Us, Departments / Units, Programmes, Results, Related Links, Contact Us.
- Information About Sidebar:** Admission, On Demand Examination, e-Services, Accreditation/E-Accreditation, MuktaVidya Vani, Felicitation/Awards, Notice Board / Office Order, Tender Notice, Vacancy, Success Stories, Library.
- Examination / Result:** [Dropdown]
- News & Events:** [Dropdown]
- NIOS Logo:** National Institute of Open Schooling (An autonomous institution under Ministry of HRD, Govt. of India) (The Largest Open Schooling System in the World) ISO 9001:2008 CERTIFIED.
- Main Content:**
  - Academic Department:** You are here: Home > Departments/Units > Academic. Includes Print and Large Print options.
  - Programmes and Courses:** The Academic Department and the Vocational Education Department can be said to be the two most important departments of the NIOS. These two departments develop education programmes and/or courses to give opportunity to the learners to pursue the course of learning of their choice. Both the departments collaborate with each other to develop functional and need-based courses to benefit the learners.
  - The Academic Department takes care of academic courses which encompasses the entire school education continuum from primary to predegree level. The Academic Department is engaged in development of curriculum and self learning materials, revision of learning materials, together with research and development activities and also provides support in the area of evaluation of learners.**
  - The NIOS Academic Department has the following units:**
    - Open Basic Education (OBE)
    - Secondary and Senior Secondary Education
    - Capacity Building Cell
    - NCOS Secretariat
    - COMOSA Secretariat

**Vocational Education Page:**

- Navigation:** Home, About Us, Departments / Units, Programmes, Results, Related Links, Contact Us.
- Information About Sidebar:** Online Admission, On Demand Examination, E-Accreditation, MuktaVidya Vani, E-Governance Award, Notice Board / Office Order, Tender Notice, Vacancy, Success Stories, Library.
- Main Content:**
  - Vocational Education:** You are here: Home > Departments/Units > Vocational Education. Includes Print and Large Print options.
  - About the Department and the Courses:** Vocational Education and Training (VET) is an important element of the nation's education initiative. In order for Vocational Education to play its part effectively in the changing national context and for India to enjoy the fruits of the demographic dividend, there is an urgent need to redefine the critical elements of imparting vocational education and training to make them flexible, contemporary, relevant, inclusive and creative. The Government is well aware of the important role of Vocational education and has already taken a number of important initiatives in this area. School-based vocational education in India is currently covered by a centrally sponsored scheme which was mooted in 1988 and was aimed at providing an alternative to the pursuit of higher academic education. One of the objectives of the Vocational Education Programme of NIOS is to meet the need for skilled and middle-level manpower for the growing sectors of economy, both organized and unorganized. The range of Vocational Education courses has been expanding over the years depending upon needs of learners and market demands. The present Vocational Education courses of NIOS are meant for both urban and rural sectors.
  - Links:**
    - Vocational - Departmental Advisory Committee
    - Stand-Alone Courses
    - Package Courses

## Activity - 3

(5 Marks)

Host the website into any free web hosting server.

## Certificate in Computer & Office Applications (631)

### Scheme of Examination

**Max. Marks: 60**  
**Duration: 2 Hours**

Practical	-	40 Marks
Practical Record	-	10 Marks
Viva	-	10 Marks
<b>Total</b>	-	<b>60 Marks</b>

### Distribution of Marks

Basics	5 Marks
MS Word	10 Marks
MS Excel	10 Marks
MS Access	10 Marks
MS PowerPoint	5 Marks
<b>Total</b>	<b>40 Marks</b>

Practical record – Students should maintain at least 10 – 15 practical activities they have done during their PCP session of Computer and Office Applications (631) in their practical record notebook.

### List of suggested practicals

1. Searching files & Folders. (using search option).
2. File Management activities such as opening / creating / renaming / moving copying/Deleting.
3. Folder Management activities such as Exploring / creating / renaming / moving/copying/deleting.
4. Installing an Antivirus software in your machine.
5. Scanning the computer through an Antivirus Software and removal of virus (If traced out).
6. Downloading files from internet on your machine at desired location.
7. Inserting the following in your document.
  - a. Bullets & tabs
  - b. Header & Footer
  - c. Page Numbers
  - d. Borders
  - e. Graphics in your word – document

8. Changing
  - a. Page layout
  - b. Page Margins
  - c. Line Spacing
  - d. Text colors
  - e. the Alignments
9. Create mailing labels by merging an address list.
10. Worksheet activities like
  - (1) Selecting a row / column
  - (2) Adding a row / column
  - (3) Renaming the worksheet
  - (4) Deleting a row
  - (5) Modifying the cell content
  - (6) Rearranging the row / column in your MS-Excel workbook.
11. Applying 'Mathematical Formulas' in Ms-Excel Worksheets.
12. Inserting charts in MS –Excel worksheet.
13. Creating Database/table and entering data.
14. Accessing the data in tables.
15. Changing the views of a table and modifying the design of a table.
16. Creating forms (Using WIZARD and form tool).
17. Creating reports (using WIZARD and Report tool).
18. Use various views of slides for MS-PowerPoint presentation.
19. Use various slide layout in MS-PowerPoint
20. Apply various design templates in slides in MS-PowerPoint.
21. Apply various Color schemes in slides in MS-PowerPoint.
22. Working with slides –
  - Changing Slide layouts
  - Hiding Slides
23. Use a slide show and transition of slides.
24. Add animation on slides and also insert slide numbers and current date on slides.

## Advanced Web Designing (633)

### Scheme of Examination:

**Max Marks: 60**

**Duration : 2 Hours**

Practical	-	40 Marks
Practical record	-	10 Marks
Viva	-	10 Marks
<b>Total</b>		<b>60 Marks</b>

### Distribution of Marks

1. Internet and World Wide Web	-	5 Marks
2. HTML	-	5 Marks
3. Cascading Style Sheet	-	10 Marks
4. Developing Website using tools (Dreamweaver)-		10 Marks
5. Scripting	-	5 Marks
6. Multimedia in web designing	-	5 Marks

Practical record – Students should maintain at least 10 – 15 practical activities they have done during their PCP session of Advanced Web Designing (633) in their practical record notebook. Practical record notebook, student should mention the name of the practical, aim of the practical, steps or procedure involved to complete the task, expected result of the practical and actual result of the practical. Student has to produce the practical record at the time of Practical Examinations.

### List of suggested Practicals

1. Save an image and sound from web browser.
2. Create a web page by using different attributes (BGCOLOR, LEFT MARGIN, RIGHT MARGIN) of HTML.
3. Create a HTML file for NIOS website having an image (Logo) on the Top of Page, Address of NIOS and some other useful Links.
4. Create an email account in Gmail, yahoo or hotmail and try to send an email to any one of your friend.
5. Create an HTML form using Repeat Background image using CSS (Repeat X, Repeat Y, Repeat, no-repeat).
6. Create a Table using HTML for following :

<b>Name</b>	<b>Mathematics</b>	<b>Science</b>	<b>English</b>	<b>Hindi</b>
Ram	55	65	69	60
Shyam	50	49	82	65
Alok	92	72	80	67

7. Write a JavaScript program for displaying current date and time.
8. Write a JavaScript program to convert temperature from Celsius to Fahrenheit.
9. Embed an audio or video file in your web page.
10. Create a new image in Photoshop around 30 pixels high by 550 wide.
11. Create a table and use attributes of Table (border, ALIGN, cellpadding, width, bGCOLOR)
12. Display any image with its attributes in Browser using ALIGN, BORDER, HEIGHT, WIDTH, HSPACE, VSPACE
13. Design an HTML file and set margin, set padding Border by using CSS.
14. Create the object and fill appropriate color by using Photoshop.
15. Create a website using Dreamweaver (insert tables, frames and forms).

## Data Entry Operations (632)

**Total marks : 70**

**Total Time : 3 Hours (Including the time for viva)**

**Note:** Given below are the distributions of marks, list of activities for practical examination.

### Distribution of Marks

	<b>Topic</b>	<b>Marks</b>
1	Operating System	5
2	Word Processing	15
3	Spreadsheet	15
4	Presentation	10
5	Database	15
6	Viva	10
	<b>Total</b>	70

### Activity – 1

1. Identify various parts of a computer in your lab. Make separate lists for input and output devices.
2. Visit a bank, hospital, school or any other educational institute in your area and list out various input and output devices used there along with their computer systems and observe their functioning
3. Draw a block diagram of your computer system and label its various parts neatly.
4. Select atleast three photographs of different activities of your institute/ study centre, scan and place them at the desktop of your PC.
5. Send the above photographs by e-mail to your friends.
6. Identify the antivirus package loaded on your system and with the help of this, check the presence of virus in your system's C: drive.

## Activity – 2

1. Switch on a computer in the lab. Prepare a list of software packages including the operating system loaded in the system.
2. Write down the following details:
  - (i) Configuration of your system.
  - (ii) Hard disk capacity
  - (iii) RAM capacity.
  - (iv) Different drives available on your system and their capacity.
3. Create a folder of 'Your Name' on the desktop. Make a copy of this folder in 'My documents'. Rename this folder with your friend's name. Now delete the folder of 'Your Name' from the desktop. List out the activities you have completed.
4. Prepare a short cut of any 2 application programs on the desktop.

## Activity – 3

- (1) Enter your Bio-data with the following details using Times New Roman and save this file with the name 'Details' in My documents
  - (i) Name :
  - (ii) Father's Name :
  - (iii) Date of Birth :
  - (iv) Postal Address :
  - (v) Sex :
  - (vi) Nationality :
  - (vii) Educational Qualification :
  - (viii) Work Experience :Close this file.
- (2) Open this file and do the following
  - (a) Make the headings from serial no. (i) to (viii) bold.
  - (b) Make the entry at serial no. (v) underline

- (c) Make the entry at serial no. (iii) italics.
- (d) Select the entry at serial no. (ii) and increase its size by 2 points.
- (3) Create another file with the text 'BIODATA' and save it with the name 'Resume' in My documents. Now do the following activities.
- (a) Copy the entire text from the file 'Details' and then paste it in the file 'Resume'.
- (b) Make the word 'BIODATA' bold and underline and centre it and change its font and size to Arial Black and size 16. Now save the file and close.
- (4) Open a new file and type two paragraphs of about 100 words each regarding your experience in the study centre.
- Note the time before you start typing.
  - Also note the time after completing the task.
  - Save the file with the name 'test'.
  - Count the number of characters including spaces and word count in your file 'test' using Tools menu.
  - Calculate your speed per minute by dividing number of total words with the time taken in minutes
  - Calculate your speed of key strokes per hour by multiplying word per minutes with 300. (approximately)
- Save and close this file.

- (5) Open the file 'Resume'

- (a) In the beginning type the following text.

Dear Sir,

As per your requirement, I am submitting my Bio-data for your kind information for the post of Data Entry Operator.

Yours faithfully,

(Your name)

- (b) Create a data source by taking the address of at least 5 organizations.

(6) Create a table containing the following data.

601, Class 6 English, 55

602, Class 6 Maths, 88

704, Class 7 Maths, 58

705, Class 7 Science, 65

802, Class 8 Maths, 75

(7) Create the following table structure


#### Activity - 4

(1) Create a workbook containing three worksheets.

(2) Save the workbook with the name 'Marksheet'

(3) Rename the three worksheet as Marksheet -1 Marksheet-2 and Marksheet-3

(4) Enter the data as Marksheet -1 as following:

#### Marksheet -1

	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>
1	<b>Name of Students</b>	<b>Roll No.</b>	<b>Paper I</b>	<b>Paper II</b>	<b>Paper III</b>	<b>Paper IV</b>
2	Ajay Bhatia	1259	79	81	72	85
3	Rita Sharma	1029	70	69	65	72
4	Vina Bhasin	1526	82	84	81	85
5	Rekha Mishra	1301	73	74	71	76
6	Ankit Sinha	1250	64	69	67	65

(5) Copy the above data in Marksheet -2 and Marksheet -3.

(6) Close all three sheets after saving all the records.

(7) Now open the Marksheet-1. Insert a new row just above last record and enter data as follows:

Pankaj Behra      1179      85      89      84      83

(8) Enter a formula in cell G2 for adding the marks of all four papers and copy the formula for other records.

(9) Name this column as total marks.

(10) Enter appropriate function in H2 cell for finding the average marks. Name this column as average marks.

(11) In the worksheet named as marksheet 3, plot a bar chart and label the X and Y axis.

(12) Following are the percentage of expenses made by your family for different heads.

20% for Savings

10% for Clothing

30% for education of children

20% for fruits & Vegetables and grocery

20% for Medical expenses.

Prepare a worksheet for the above data and draw a Pie chart for showing the above data and label it.

### Activity - 5

1. Prepare a database using Access 2007 for the following data.

Roll No.	First Name	Last Name	Course code	Duration	Gender
10100	Vipul	Yadav	331	1 Year	M
10101	Atul	Sinha	330	6 months	M
10102	Sarita	Sharma	330	6 months	F
10103	Vibha	Sharma	331	6 months	F
10104	Vibha	Gupta	229	1 Year	F

- (a) Create a table structure for the above data.
- (b) Insert a new column between last name and course code with the title Father's Name and make following entries.

R K Yadav

B K Sinha

C K Sharma

P P Sharma

S P Gupta

- (c) Make a simple query to show Roll No. and first name of all the students.
- (d) Make the query to list the course code and duration for the first name 'Vibha'. Save the query as query-2.
- (e) Display the first name and last name of those students who offered course code 330. Save the query as query -3
- (f) Generate a separate report Gender wise.
- (g) Insert a new row at the end of the table with the following data.  
10105 Saurabh Gaur MK Gaur 229 1 Year M now run query – 3 and see the effect of newly entered data.

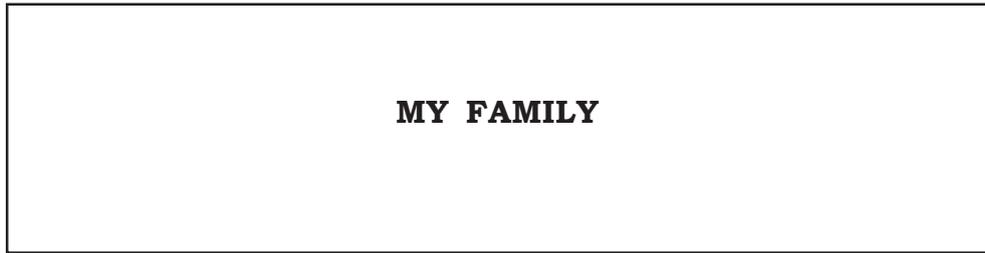
### Activity -6

1. Create a presentation using following slides and save this with the name 'My family'.

Slide 1

Your Name	
Address	
Phone No.	

Slide 2



Slide 3

<b>Family Members</b>	
• Father's Name	: _____
• Mother's Name	: _____
• Brother's Name	: _____
• Sister's Name	: _____

Slide 4



2. Open the presentation and rearrange the slides so that the 1st slide becomes the last slide i.e. slide 4.
3. Insert any clip art picture in the 1st slide and make the heading Bold.
4. In the 2<sup>nd</sup> slide select the bulleted text and change the colour of the text.
5. Add a new slide at the end and insert the Pie chart which you have created in activity 4.

#### **Activity -7**

1. Open NIOS website and list out various courses available.
2. Create your e-mail ID in at least two free Internet Service Providers like Yahoo, Gmail, Hotmail etc. Send a letter to your friend inviting him to attend a family function from your created e-mail ID.
3. Send a carbon copy of the same to your teacher or another friend.
4. E-mail the 'Resume' file which you created earlier in Activity -3 as an attachment to your friend.
5. Search for popular newspaper site like TOI or HT and download important events related to sports on a particular day.

## JAN SWASTHYA (802)

Max. Marks: 100

Time : 3 hrs.

### Marking Scheme

#### A) *External Examination*

Practical Activity (Any one)	-	10
Viva Voce	-	10
Marks		<b>20</b>

#### B) *Internal Assessment*

File/Record	-	20
Performance	-	20
Project work	-	20
Field visit / visit of Hospital Or Health Organisation	-	20
<b>Total Marks</b>	-	<b>80</b>
<b>Grand Total</b>	<b>A + B =</b>	<b>100 Marks</b>

### List of Practical Activities

1. Use of clinical thermometer for measuring the body temperature
2. Use of Blood Pressure Instrument for measuring the Blood Pressure
3. Measurement of the Height, Weight & Chest
4. Practice of Artificial respiration
5. Use of splints for fracture of limbs
6. Use of Triangular bandage
7. Management of snake bite
8. Management of dog bite
9. Practice of sterilization of instruments i.e. needle, syringes, knife etc. by boiling/ autoclaving.
10. Estimation of Hemoglobin
11. Examination of urine for Albumin, sugar etc.
12. Purification of water by bleaching powder or chlorine tablets
13. Examination of peripheral blood smear for detection of malarial parasite

14. Identification of High risk mother
15. Investigation for pregnant mother - Blood Pressure, Temperature, Hemoglobin, urine etc.
16. Measurement of the weight & height of New born baby
17. House Hold Survey - Door to Door survey, Random Survey
18. Immunization schedule
19. Methods of Birth control through spacing devices (IUD).
20. Role of Health worker in the society

Examiner should assess the quality of experiment done by the student. The following points should be kept in mind by the examiner during evaluation:

1. Aim
2. Requirements
3. Description of Experiment/Procedure
4. Observation
5. Conclusion Result
6. Precaution

**Note :** Examiner may allot group activities instead of individual experiment when the no. of students is high.

### **Sample Experiment**

**Aim :** To measure the blood pressure

**Requirements:** B.P. Instrument, Stethoscope, cuff attached by rubber tubing.

**Method:** Blood pressure cuff is wrapped around the arm of the patient

- i) Radial Pulse is palpable on forearm.
- ii) Pressure is raised to a point when radial Pulse is not palpable i.e. up to 160 mm of Hg.
- iii) The dial stethoscope is placed above the brachial artery at elbow joint.
- iv) Pressure in the cuff is lowered slowly till the sound of heart is audible by the stethoscope; this is "systolic blood pressure".
- v) The pressure in the cuff is further lowered where intensity of the sound gradually decreases till such time when the sound suddenly reduces and disappear. This point is "Diastolic Blood Pressure".

**Observation:** Blood Pressure is arterial Blood Pressure exerted by the blood on its vessels which is measured in mm of Hg. The exact reading is mm of Hg.

**(Note: The normal Blood Pressure of adult is 120/80 min of Hg)**

**Result:** Blood Pressure of the patient is \_\_\_\_\_ mm of Hg.

## CERTIFICATE COURSE IN SECURITY SERVICE (615)

**Max. Marks: 60**

**Time: 2 Hrs.**

### Marking Scheme

<b>A. Practical Activity(s) (Demonstration)</b>	<b>20</b>
<b>B. Documentation (File/Record/Maintenance of record or register)</b>	<b>10</b>
<b>C. General</b>	<b>20</b>
• Physical Endurance (High Jump, climbing of wall Broad Jump, swearing etc.)	- 5
• Physical Appearance (Active Smartness & turn-out)	- 5
• General Behavior / Attitude (Way of conduct & expression)	- 5
• Presence of mind (Reaction of Security Problems)	- 5
<b>D. Viva Voce</b>	<b>10</b>

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<b>Grand total</b>	<b>60 Marks</b>
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## **List of Practical Activities**

1. Gate Pass checking
2. Checking of the incoming/ outgoing stores through gate
3. Use of Metal detector for search
4. Searching of outgoing labour at the gate by cursory search
5. Drill
6. Use of Fire extinguisher
7. Use of other fire fighting equipments
8. Salvage of stores
9. Traffic control
10. First Aid in case of various type of accident-
  - Fire burns
  - Heart attack
  - Fractures
  - Dog bite
  - Snake bite etc.
  - All the listed Practical Activities are demonstration activities. Examiner may choose any of the activity for demonstration.
  - Separate Activity may be given to examine or a group of examinees.

## CERTIFICATE COURSE IN COMMUNITY HEALTH (449 TO 451)

Max. Marks: 120

Time: 2 hrs

### Paper - 1: Basic Life Sciences (449)

#### Marking Scheme:

Activities	Marks Allotted	Remarks
Practical Activities-any two	50 (25x2)	
Spotting (02 Spots)	10(5x2)	
Project work/Report on the work during attachment with concerned centre.	20	
Viva-Voce	20	
Internal Assessment (Practical Record/File, Discipline, Performance etc.	20	
<b>Total Marks</b>	<b>120</b>	

#### Breakup of Practical Activities:

- To understand the Aim - 2
- Correct Selection of Tools/ equipment - 8
- Procedure - 7
- Observation - 3
- Result - 5

**Total Marks 25**

#### Guidelines for Practical Examiner

- Three practical activities should be given to the students from the list and they may have the option to perform any two activities.
- All the required material (Tools, Equipments etc.) should be available at the disposal of examiner.
- Different sets of the practical activities can be given to the different examinees.

## List of Practical Activities

### Section (A)

1. Estimation of Hemoglobin by using Hemoglobin meter
  - To estimate the hemoglobin percentage in blood
2. Blood Grouping and **Rh factor**
  - To determine the grouping of blood and Rh factor of an individual.
3. Urine Test for Sugar by using Benedict's solution
  - To determine the percentage of sugar in the urine.
4. Estimation of Blood sugar by Glucometer
  - To determine the percentage of sugar in the blood to rule out diabetes.
5. Urine test for Albumin
  - To detect albumin in urine
6. Use of clinical Thermometer
  - To determine the human body temperature
7. Demonstration of Yogasanas and pranayam (6 Asans & 4 Pranayams)
  - To know the postures of yoga Asanas and Pranayam.
8. Techniques of maintaining oral hygiene
  - To know the correct techniques of maintaining oral or food hygiene.
9. Techniques of maintaining food hygiene
  - To know the correct techniques of maintaining food hygiene

### Section (B)

- 1 Identification of bones (one line questions)
  - To identify of bones and their position in the body.
- 2 Respiratory System: Organs and their functions.
  - To know the different organs involved in Respiration and their functions.
- 3 Digestive System: Organs and their functions.
  - To know the different organs involved in digestion and their functions.
- 4 Excretory System : Organs and their functions.
  - To know the different organs involved in Excretory system and their functions.
- 5 Reproductive System (Male & Female) : Organs and their functions.

To know the different organs involved in Reproduction and their functions.

- 6 Nervous System: Organs and their functions.
  - To study the structure and function of brain & working of Nervous system.
- 7 Food and its nutrients
  - To know the composition different food items.

### **Section (C)**

#### **Project Work**

- (1) Diet chart/Sample menu of Balanced Diet
- (2) To paste pictures of different food items on chart paper, and mention:
  - a. Calorific Value
  - b. Nutrients present in the food
- (3) To record five cases of Anaemia with their Hb estimation.

### **Section (D)**

#### **Spotting**

Note : Learner will spot the given sample and write 3-4 lines on it.

1. Skull bone
2. Radius
3. Humerus
4. Femur
5. Hip bone
6. Tibia
7. Fibula
8. Vertebral
9. Ribs
10. Model: Chart of digestive system
11. Model: Chart of circulatory system
12. Model: Chart of excretory system
13. Model: Chart of Reproductive system
14. Model: Chart of Respiratory system
15. Charts / posters of food items and their nutrients

**Paper 2 : Maternal & Child Health Care (450)**

**Max. Marks : 120**

**Time : 2 hrs**

**Marking Scheme**

<b>Activities</b>	<b>Marks Allotted</b>	<b>Remarks</b>
Practical Activities-any two	50 (25x2)	
Spotting (02 Spots)	10 (5x2)	
Project work/Report on the work during attachment with concerned centre.	20	
Viva-Voce	20	
Internal Assessment (Practical Record/File, Discipline, Performance etc.	20	
<b>Total Marks</b>	<b>120</b>	

**Breakup of Practical Activities:**

To understand the Aim	-	2
Correct Selection of Tools/ equipment	-	8
Procedure	-	7
Observation	-	3
Result	-	5

**Total Marks 25**

- Three practical activities should be given to the students from the list and they may have the option to perform any two activities.
- All the required material (Tools, Equipments etc.) should be available at the disposal of examiner.
- Different sets of the practical activities can be given to the different examinees.

## List of the Practical Activities

### Section (A)

- 1 Antenatal Care
  - To check the vital parameters of 5 pregnant women.
- 2 Assessment of vital signs for antenatal women
  - To measure blood pressure, height, weight etc. of 5 pregnant women
- 3 Identification of high risk pregnant women.
  - To identify the signs and symptoms of high risk pregnant women
- 4 One day sample menu for pregnant women
  - To maintain health and guide the pregnant women
- 5 One day sample menu for lactating mothers
  - To maintain health and guide the lactating mothers
- 6 Assessment of Infant.
  - To check the vital signs of infants
- 7 Preparation of Area map
  - To understand the composition of population in a particular area

### Section (B)

- 1 Identification of contraceptives
  - To identify the contraceptive and understand its use
- 2 Estimation of EDD (Expected Date of Delivery) for given LMP (Last Menstrual Period)
  - To find out the EDD from LMP
- 3 Providing health Education to villages through role play
  - To educate the community about the importance of health education by role-play
- 4 Prepare a chart of National Immunization Schedule
  - To guide mother to protect infants against vaccine preventable diseases.
- 5 Weaning foods
  - To give knowledge to mothers about supplementary food
- 6 National Health Programmes in India
  - To understand the importance of National health programmes and their successful implementation.
- 7 Calculation of Birth rate, Infant Mortality Rate (IMR), Maternal Mortality Rate (MMR)
  - To know the health status of women and children.

## **Section (C)**

### **Project Work**

1. Household Survey
2. Filling of antenatal card
3. Visit to well baby clinic
4. Participate in Immunization programme (Pulse Polio)
5. Referral of High risk antenatal women

## **Section (D)**

### **Spotting**

**Note - Learner will spot the given sample and write 3-4 lines on it.**

1. B.P instrument
2. Clinical Thermometer
3. Stethoscope
4. Fundal height Chart
5. Foetoscope
6. Weighing machine (Baby weighing Scale)
7. Copper T /Multiload device
8. Oral pills
9. Nirodh
10. Foam Tablets
11. Identification of maintenance of cold chain for polio
12. Formula of IMR/MMR. (Infant Mortality Rate/Maternal Mortality Rate)
13. Calculate EDD from given LMP (Expected Date of Delivery, Last Menstrual Period)
14. Benedict solution
15. Hemoglobinometer

**Paper-3: Prevention & Management of Diseases & Emergency (451)**

**Max. Marks - 120**

**Time - 2 Hrs.**

**Marking Scheme**

<b>Activities</b>	<b>Marks Allotted</b>	<b>Remarks</b>
Practical Activities-any two	50 (25X2)	
Spotting (02 Spots)	10 (5x2)	
Project work/Report on the work during attachment with concerned centre.	20	
Viva-Voce	20	
Internal Assessment (Practical Record/File, Discipline, Performance etc.	20	
<b>Total Marks</b>	<b>120</b>	

**Breakup of Practical Activities:**

To understand the Aim	-	2
Correct Selection of Tools / equipment	-	8
Procedure	-	7
Observation	-	3
Result	-	5

**Total Marks 25**

**Guidelines for Practical Examiner**

- Three practical activities should be given to the students from the list and they may have the option to perform any two activities.
- All the required material (Tools, Equipments etc.) should be available at the disposal of examiner.
- Different sets of the practical activities can be given to the different examinees.

## List of Practical Activities

### Section (A)

- 1 Health Education for prevention and control of communicable diseases.
  - To give the knowledge of prevention and control of communicable diseases.
- 2 Free chlorine test for drinking water ..
  - To estimate the safety level of drinking water by Orthotoludine test.
- 3 Preparation and staining of Blood slide of Malaria patients.
  - To rule out the presence of malarial parasite in the peripheral blood smear.
- 4 Preparation of sputum slide for staining
  - To rule out the presence of tuberculosis.
- 5 Artificial Respiration.
  - To revive the patient with respiratory difficulty.
- 6 AFB stained slides for tuberculosis patients.
  - To detect the tubercular bacteria by ZN stain.
- 7 Gram staining of slides.
  - To study bacilli and cocci.
- 8 Preparation of ORS (Oral Rehydration Solution).
  - To prevent the death in diarrhea cases due to dehydration.
- 9 First Aid management of drowning
  - To revive the drowning patient and start respiration
- 10 First Aid management of fracture.
  - To prevent unnatural movement of fractured part.
- 11 First Aid management of bleeding nose.
  - To prevent the loss of blood.

## **Spotting**

### **Section (B)**

- 1 Use of Tourniquet, Ambubag and practice cardiac massage.
  - To revive patient with respiratory and cardiac distress.
- 2 Examine the label of a vial.
  - To make correct choice of viable medicine.
- 3 Bandaging of wounds.
  - To prevent infection.
- 4 Bandaging techniques for scalp.
  - To prevent slipping of bandage.
- 5 Finger bandage technique.
  - To provide support and prevent bleeding.
- 6 Contents of First Aid Box.
  - To provide proper first aid.
- 7 Prepare intake and output chart of a patient.
  - To assess the function of kidneys.
- 8 Practice Heimlock's maneuver
  - To remove foreign bodies from the trachea.
- 9 Recording of pulse rate.
  - To understand the pulse rate of a patient.
- 10 Practice the First aid treatment of dog-bite.
  - To give first aid before sending the patient to the doctor

### **Section (C)**

#### **Project Work**

1. Visit to Primary Health Centre (PHC) to understand the activities for prevention and control of communicable diseases.
2. Plan one day sample Menu for obese person.
3. Visit to DOTS centre and observe how the patients are administered medicines. Prepare observation report.

4. Visit to Malaria centre/clinic to observe anti-larval measures and prepare observation report.
5. Visit a clinic/hospital, observe and write how Anti Rabie vaccine is administered there.

**Note : Learner will spot the given sample and write 3-4 lines on it.**

#### **Section (D)**

##### **Spotting**

- Polio vial
- BCG vaccine Vial
- DPT vaccine Vial
- Splint
- Triangular Bandage
- First Aid Box
- Tourniquet
- Chlorine Tablets
- Microscope
- Chart of Bacteria
- Hemoglobinometer
- B.P. Apparatus
- Ambubag

## CERTIFICATE IN INDIAN EMBROIDERY (628)

Max. Marks: 50

Time: 3 hrs

Candidate has to do any 2 activities

20 marks each

### Breakup of activities

1. Transfer of design and placement	5 Marks
2. Actual performance	5 Marks
3. Neatness	5 Marks
4. Correct choice of colour/motif/thread/needle etc.	5 Marks
Viva	5 Marks
Record Book	5 Marks

### List of Practicals

1. Do the manipulation with the lines and workout elements of arts.
2. Draw the designs which show contrast/repetition/harmony/etc.
3. Draw and colour the design showing formal/informal/proportion/rhythm and emphasis being achieved.
4. Draw the following designs—naturalistic/geometrical/abstract.
5. Show various placements using the given motif.
6. Do the enlargement/reduction of the given motif to the scale given.
7. Transfer the given motif using various methods on fabric.
8. Prepare a colour wheel.
9. Make a hue/value chart of the colour given.
10. Colour the given motif in monochromatic/complementary/split complementary triad/tetrad; for ladies, gents and for children garment.
11. Make sample using the motif given. Use any 5 basic hand embroidery stitches.
12. Make a sample using all kantha stitches.
13. Make a Sujani sample.
14. Make a Kasuti sample using the given motifs and using all the stitches.
15. Make a Phulkari sample using all the stitches.
16. Make a Kashida sample using all the stitches.
17. Make a Zardozi sample using all the stitches.
18. Make a Chikan kari sample using any 2 stitches.

## CERTIFICATE IN FIRE PREVENTION & INDUSTRIAL SAFETY (626)

**Max. Marks: 200**

**Time: 4 hrs**

### Marking Scheme:

Activities	Marks Allotted	Remarks
Practical Activities-any two Demonstrative	70 (35X2)	
Practical Record file	20	
Project work/Report on the work during attachment with concerned Industry	40	
Viva-Voce	20	
Internal Assessment (Discipline, Performance, Physical Drill, Squad Drill and others)	50	
<b>Total Marks</b>	<b>200</b>	

### Breakup of Practical Activates:

- |   |   |    |
|---|---|----|
| ● To Understand the AIM                 | - | 5  |
| ● Correct Selection of Tools/ equipment | - | 10 |
| ● Procedure                             | - | 10 |
| ● Observation                           | - | 5  |
| ● Result                                | - | 5  |

**Total Marks 35**

### Guidelines for Practical Examiner

- Three practical activities should be given to the students from the list and they may have the option to perform only two activities.
- All the required material (Tools, Equipments etc.) should be available at the disposal of examiner.
- Different sets of the practical activities can be given to the different examinees.

**List of the practical activities: enclosed**

## **Practical**

### **01. House Drill (Any number of men)**

**Time : 10 hrs.**

- A. Lifting of delivery hose
- B. Running with hose and joining it to other length of hose
- C. holding of branch and standing position
- D. Disconnecting of hose
- E. Under laying of hose (removal of water)
- F. Coiling of hose
  - I. Foiling
  - II. Flaking
  - III. Figure of 8 (eight)
- G. Drying of hose
  - I. Ramp
  - II. Hose tower

### **02. Pump Drill (Six men)**

**Time: 25 hrs.**

- A) Systematic pitching of pump to
  - I. Open water source (pond, tank, river, canal, etc.)
  - II. Hydrant
- B) Lifting of suction hose and
  - I. Joining of two lengths of suction hose using suction key.
  - II. Fitting of metal strainer and/ or basket strainer
  - III. Fitting of suction hose to pump inlet
  - IV. Using of line at
    - A. Metal strainer
    - B. Joint stand using knots, clove hitch, half hitch, round turn and two half hitch respectively
- C) Laying out delivery line with branch at the end
- D) Use of dividing breeching and collecting breeching
- E) System of changing over a burst delivery hose by a good length of delivery hose.
- F) Reverse coiling of damaged delivery hose

- G) Practice of standard signals and convey message to the pump operator for different functions such as
  - I. Water on
  - II. Decrease pressure
  - III. Increase pressure
  - IV. Knock off
  - V. Knock off and make up

**03. Hydrant Drill (Three men)**

**Time: 10 hrs.**

- A) Laying of hose to hydrant
- B) Use of
  - I. Hydrant stand pipe
  - II. Hydrant key
  - III. Lid key

**04. Foam Drill**

**Time: 10 hrs.**

**(35 feet aluminium extension ladder)**

(In conjunction with pump drill/hydrant drill/motor fire engine)

- 1. Use of different foam making branches such as FB2, FB5, FBIO and FB5x.
- 2. Use of mechanical foam generator/foam compound.

**05. Ladder Drill (Four Men)**

**Time : 12 hrs.**

**(35 feet aluminum extension ladder)**

- A) Lifting the ladder
- B) Pitching of the ladder and extending
- C) Procedure of climbing up
- D) Procedure of climbing down
- E) Leg lock
- F) Arm hold
- G) Holding of charged hose with branch on the round of ladder at a height.
- H) Closing and allowing the ladder on the appliance

**06. Practical Operation of Extinguishers**

**Time : 15 hrs.**

- A) Identification of various types of extinguishers
- B) Use of suitable extinguisher for various types of fire
- C) Practical operation of CO<sub>2</sub> Extinguisher / dcp extinguisher / water CO<sub>2</sub> type extinguisher / off (mechanical foam) extinguisher
- D) Identification of various parts
- E) Safety measures
- F) Re-filling of extinguisher after use
- G) Labelling

**07. Breathing Apparatus**

**Time: 12 hrs.**

- A) Identification of parts
- B) Fittings of the charged cylinder to the set
- C) Knowledge on low cylinder duration
- D) Knowledge on low pressure harness warning whistle
- E) Fitting of face mask and head harness
- F) Testing of the set before entry (pre entry test)
- G) Use of DSU (distress signal unit)

**08. Fixed Fire Fighting Installation**

**Time: 15 hrs.**

- A) Fire bucket & sand
- B) Visual inspection to sprinkler /drencher /riser installations
- C) Knowledge on CO<sub>2</sub> / DCP / foam installation
- D) Closing of main water valve and re-fitting of new sprinkler head

**09. First-aid**

**Time: 15 hrs.**

- A) Different artificial respiration methods
- B) Cardio pulmonary resuscitation
- C) Use of stretcher and carrying casualty
- D) Practice of simple bandage

**10. Personal Protective Equipment**

**Time: 08 hrs.**

- A) Asbestos suit
- B) Alluminised proximity suit
- C) Chemical suit
- D) Helmet
- E) Gum-boot
- F) Gloves
- G) Earpuff
- H) Goggles
- I) Gas mask/dust marb

**11. General Fire Fighting Gears**

**Time: 15 hrs.**

- A) Standard branch
- B) Hand control led/branch
- C) Diffuser branch
- D) Low pressure applicator
- E) Suctoin in-let adaptor
- F) Insulated fireman axe
- G) Fire hook
- H) Fire brater
- I) Ceiling hook
- J) Collecting head
- K) Dividing breeching
- L) Collecting breeching
- M) Rope ladder
- N) Shovel
- O) Pick axe
- P) Crow bar

**12. Rescue Gears**

**Time: 10 hrs.**

- A) Tirfor
- B) Chain pulley
- C) Hydraulic jack

- D) Pneumatic jack
- E) Life buoy
- F) Life jacket
- G) Rope ladder
- H) Rope and lines
- I) Cutting gears
- J) Power operated saw

**13. Rescue Technique**

**Time: 15 hrs.**

- A) Rescue from smoke filled chamber
- B) Rescue from drowning cases
- C) Rescue from sewerage
- D) Rescue from well
- E) Road accident
- F) Rescue from trap in electricity
- G) Rescue from lift
- H) Rescue from height

**14. Knot Drill**

**Time: 08 hrs.**

- A) Thumb knot
- B) Half hitch
- C) Roof knot
- D) Single seat bend
- E) Double seat bend
- F) Clove hitch
- G) Cat's paw
- H) Rolling bow line
- I) Bow line
- J) Running bow line
- K) Bow line on the height
- L) Chair knot

- M) Draw hitch
- N) Timber hitch
- O) Figure of eight
- P) Fisherman bend
- Q) Ship shank

**15. Watch Room Procedure**

**Time: 05 hrs.**

- A) Method of receiving message
- B) Informing
- C) Alarming
- D) Turn-out
- E) Knowledge on availability of fire fighting appliances at the fire station
- F) Topography of the locality
- G) Route and water source
- H) Proper entry in the guard book
- D) Turning-out to duty with full uniform

**SECRETARIAL PRACTICE (326) (REVISED)**  
**SAMPLE QUESTION PAPER (PRACTICAL)**

**Max. Marks: 30**

**Time 1.5 hrs**

Q. 1 Depict Functional and Divisional Structure of an organisation engaged in manufacturing activities. Show at least five hierarchical levels.

Or 5

Mr. Ashok Kumar, Manager of a multi-national organisation is planning an itinerary for his official visit to Mumbai from Delhi via Chennai. Prepare imagining itinerary of Mr. Ashok Kumar and e-mail the same to the Head of your Institute.

Q. 2 Design the following section of a Report in a word processing package as per display 5

a) First page of the Report.

Report on  
Information System Outsourcing  
*in*  
Mis. XYZ Company  
NOIDA, U.P.

Submitted by: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

b) Prepare the following spreadsheet and carry out the operations given at the end of the question:

Monthly Expenses in respect of Mr. Amit Verma

S. N.	Head	January	February	March
1.	Education			
2.	Grocery			
3.	Conveyance			
4.	Entertainment			
5.	Electricity Bill			
6.	Rent			

(a) Centralise and underline the main heading in Italics with font size -16. (b) Bold and centralise the columnar headings of the table.

(c) Apply border to the body of the table.

Q. 3 Design the columns of Inward/Outward Mail Register in a word processing package and make five imaginary entries in the Register.

Or 5

Make five new folders in “My Documents” in computer and save at least two files in each folder according to the Geographical Classification of Filing System.

Q.4 Mr. Vijay Kumar; Manager of M/s Concept Technology records his appointments in computerised engagement diary. Make five imaginary entries in his diary.

Or 5

Annual General Meeting of M/s XVZ Company is scheduled for second Saturday of the next month. Draft a notice for the meeting enclosing therewith the agenda for the same.

Q. 5 Prepare your resume in a word processing package for the post of “Office Executive”. Use Mail Merge and send the resume to five different placement agencies with the help of internet.

10

## Secretarial Practice (326)

### Sample question paper

Time : 1 hr. 30 min.

Max. Marks :30

#### Note for the examiner:

1. Each learner should be evaluated for file consisting of suggested activities given at the end of course book. Practical file carries 5 marks.
2. Given below is a Sample Paper for the practical examinations. The Practical examiner may set a similar paper for the candidates using the facilities available at the examination centre.

#### Do any five on the following. All activities carry equal marks

1. Design a section of a Report as per the following specifications:
  - The first page of the Report contains the title, the name of the writer / publisher and address in footer
  - On the second page, write the objectives of the report with justified alignment
  - Insert an image on the third page
  - Page number should be inserted on every page.
2. Draft a Notice for a meeting which is scheduled to be held in the second week of next month.
3. Depict functional & divisional structure of an organization with example.
4. Using mail merge send an invitation to 10 different colleagues. Write the steps for the same.
5. Prepare itinerary for a tour programme of your Manager who is visiting USA next month.
6. Demonstrate the use & Operation of the following machines (any two)
  - a) Photocopier
  - b) FAX
  - c) Franking machine
7. Sonali has to issue an order to some of the employees of her organization who are habitual late comers what means of communication she should choose so as to make her communication effective also justify the answer.
8. Discuss the procedure you would adopt before, during, after holding an official meeting.
9. Karan had scheduled appointment of his boss tomorrow at 4 pm which is to be cancelled due to some emergency. Discuss the procedure which he should follow for rescheduling the appointment of his boss.
10. a. Which of the method is quicker when you to mail one hundred letters at a time:
  - i. Affixing postage stamps on the envelopes using franking machines.

ii. Which of the method is sought after when you have to dispose off confidential documents:

(a) Using paper shredder

(b) Tearing off the documents

Also justify your answer

b. Send an email to one of your friend inviting him/her on your birthday bash.

**SECURITY SERVICE - 615 (REVISED)**  
**GUIDELINES FOR THE PRACTICAL EXAMINATION**

**Max. Marks - 60**

**Time - 2 Hrs.**

**Marking Scheme**

Activities	Marks Allotted	Remarks
Practical Activity - anyone (Demonstrative)	20	
Practical maintenance of Records / Files and registers during attachment with the concern industry		
Practical Record/File during the attachment with concerned Industry.	10	
<b>General Assessment</b>	20	
<ul style="list-style-type: none"> <li>• Physical Endurance (High Jump, climbing of wall, Long Jump, fireman lift etc.) 5</li> <li>• Physical Appearance (Active Smartness &amp; Turn out ): 5</li> <li>• General Behaviour/ Attitude (Way of conduct &amp; expression) 5</li> <li>• Presence of mind (Reaction on Security problems) 5</li> </ul>		
Viva - Voce	10	
<b>Grand Total</b>	<b>60</b>	

**Breakup of Practical Activity:**

• To understand the AIM	-	02
• Correct Selection of Tools/equipments	-	08
• Procedure/demonstration	-	10
<b>Total Marks</b>	<b>-</b>	<b>20</b>

### **Guidelines for Practical Examiner**

- Two or three practical activities should be given to the students from the list and may have the option to perform only one activity.
- All the required material (Tools, Equipments etc.) should be available at the disposal of examiner.
- Different sets of the practical activities can be given to the different examinees.

### **List of Practical Activities**

#### **S. No. Practical Activity**

1. Gate Pass checking
2. Checking of the incoming/outgoing stores through gate
3. Use of Metal detector for search
4. Searching of outgoing labour at the gate by cursory search
5. Searching of vehicles
6. Drill
7. Monitoring of DFMD
8. Use of Fire extinguisher
9. Use of other fire fighting equipments
10. Salvage of stores
11. Traffic control

#### Guarding of various establishment & installations

12. Banking & ATM security,
13. Security of cash in transit
14. Security in Educational Institutions
15. Security in corporate offices, Malls and Hotels
16. Security in Residential areas and colonies
17. Security in Hospitals
18. Security in Metro, Railway & Air ports
19. Documentation at Gate
  - i. Filling up of Visitor's Pass and register
  - ii. In/Out Gate Pass at Material Gate
  - iii. Attendance Register - Filling and Maintenance

iv. Filling and maintenance of Vehicle In/Out Register

v. Maintenance of Key Register.

vi. Maintenance of Handing/Taking Over Register

vii. Maintenance of Search Registers of following :-

- Routine Search.
- Cursory Search.
- Periodical Search
- Suspected Search

First Aid in case of various type of accident:

20. Fire burns
21. Heart attack
22. Fractures Dog bite
23. Snake bite

## GUIDELINES FOR PRACTICAL EXAMINATIONS

### Diploma Course in Basic Rural Technology

#### Paper - I

#### Our Health

Max.Marks: 70

Time: 2.00 Hrs

#### Marking Scheme:

Activities	Marks Allotted	Remarks
Practical Activities - any two	40 (20 x 2)	
Internal Assessment	20	
Project Work/Practical Record/File, Discipline, Performance etc.	5	
Viva-Voce	5	
<b>Total Marks</b>	<b>70</b>	

#### Breakup of Practical Activities:

- To understand the AIM - 02
- Correct selection of Tools/Equipments - 05
- Procedure - 06
- Observation - 02
- Result - 05

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<b>Total Marks</b>	-	<b>20</b>
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- Four practical activities should be given to the students from the list and they may have the option to perform any two activities.
- All the required material (Tools, Equipments etc.) should be available at the disposal of examiner.
- Different sets of the practical activities can be given to the different examinees.

## LIST OF PRACTICALS

### PAPER - 1: OUR HEALTH

<b>Sr.No.</b>	<b>Name of the Topic/Practical</b>
1.	Universal Safety Precautions
2.	Skeletal System
3.	Respiratory System
4.	Digestive System
5.	Circulatory System
6.	Excretory System
7.	Reproductive System (Male & Female)
8.	Nervous System
9.	Washing of Hands with Soap & Water
10.	Use of Clinical Thermometer
11.	Recording of Pulse Rate
12.	Recording of Respiration Rate
13.	Checking of Blood Pressure
14.	Personal Hygiene
15.	Food and its Nutrients
16.	Chlorination of Water
17.	Preparation of Oral Rehydration Solution (ORS)
18.	Immunization Schedule
19.	Urine Test for Sugar
20.	First Aid Box
21.	First Aid Management of Drowning
22.	First Aid Management of Fracture
23.	First Aid Management of Dog Bite
24.	First Aid Management of Nose Bleeding
25.	Food Adulteration Tests
26.	Vajrasan
27.	Bhujangasan
28.	Gom u khasan
29.	Pawanmuktasan
30.	Pasch i mottanasan
31.	Shalabhasan
32.	Pranayan~A Anulom-Vilom
33.	Suryabhedhi Pranayam
34.	Bhastrika Pranayam
35.	Shitali Pranayam

**PAPER - II**  
**AGRICULTURE & ANIMAL HUSBANDRY**

**Max.Marks: 70**

**Time: 2.00 Hrs**

<b>Activities</b>	<b>Marks Allotted</b>
Practical Activities - any two	40 (20 x 2)
Internal Assessment	20
Project work/ Practical Record/File, Discipline, Performance etc.	5
Viva-Voce	5
<b>Total Marks</b>	<b>70</b>

**Breakup of Practical Activities**

● To understand the AIM	-	02
● Correct selection of Tools/equipment	-	05
● Procedure	-	06
● Observation	-	02
● Result	-	05
<b>Total Marks</b>	<b>-</b>	<b>20</b>

- Two practical activities from each section (Agriculture and Animal Husbandry) should be given to the students from the list and they may have the option to perform one activity from each section.
- All the required material (Tools, Equipments etc.) should be available at the disposal of examiner.
- Different sets of the practical activities can be given to the different examinees.

**LIST OF PRACTICALS**  
**PAPER - II SECTION - A: AGRICULTURE**

<b>Sr. No.</b>	<b>Name of the Topic/Practical</b>
1.	Seed treatment for various seeds against pests & diseases
2.	Seed treatment for breaking seed dormancy
3.	Identification and application of organic, chemical and bio-fertilizers
4.	Treating seeds with bio fertilizers
5.	Design and layout of irrigation methods for field crops
6.	Design and layout of drip and sprinkler irrigation
7.	Cultivation of field crop (soyabean)
8.	Cultivation of horticultural crop (french bean)
9.	Practicing weed control operation
10.	Collection and identification of samples of crop plants having different diseases
11.	Collection and identification of pests of crop plants
12.	Preparation and spraying of insecticides and fungicide solutions
13.	Use and maintenance of plant protection appliances
14.	Cultivation cost of crop plant
15.	Practicing nursery operations
16.	Practicing plant propagation operations
17.	Practicing green house operations
18.	Preparation of growth regulator solution & spraying
19.	Hardening of tissue cultures seedlings in fields

**LIST OF PRACTICALS**  
**PAPER - II SECTION - B : ANIMAL HUSBANDRY**

<b>Sr.No.</b>	<b>Name of the Topic/Practical</b>
1.	Identification of dairy animals
2.	Grooming and washing of animals
3.	Dehorning calves
4.	Cleaning and sanitation of animal sheds
5.	Identification of feeds and fodders
6.	Preparation of silage
7.	Preparation of hay
8.	Milking of dairy animal (hand & machine)
9.	Field tests to evaluate the quality of milk
10.	Determination of milk adulterants
11.	Recording pulse, temperature and respiration of dairy animals
12.	Estimation of age of animal on the basis of dentition
13.	Estimation of weight through body measurements
14.	Study of dairy farm records
15.	Economics of a dairy unit
16.	Economics of layer & broiler farming

**PAPER - III**  
**RURAL ENGINEERING**  
**(Material, Mechanics, Drawing & Costing)**

**Max.Marks: 70**

**Time: 2.00 Hrs**

**Marking Scheme:**

<b>Activities</b>	<b>Marks Allotted</b>	<b>Remarks</b>
Practical Activities - any two	40 (20 x 2)	
Internal Assessment	20	
Project work/Practical Record/File, Discipline. Performance etc.	5	
Viva-Voce	5	
<b>Total Marks</b>	<b>70</b>	

**Breakup of Practical Activities:**

● To understand the AIM	-	02
● Correct selection of Tools/equipment	-	05
● Procedure	-	06
● Observation	-	02
● Result	-	05
<b>Total Marks</b>	-	<b>20</b>

**Guidelines for Practical Examiner**

- Four practical activities should be given to the students from the list and they may have the option to perform only two activities.
- All the required material (Tools, Equipments etc.) should be available at the disposal of examiner.
- Different sets of the practical activities can be given to the different examinees.

## LIST OF PRACTICALS

### Paper - III: Rural Engineering (Material, Mechanics, Drawing & Costing)

Sr.No.	Name of the Topic/Practical
1.	Use of Tools and Equipments
2.	Measuring Instruments
3.	Threading and Tapping
4.	Brick Arrangement
5.	Cement Hollow Block
6.	Fixing Sunmica on Plywood
7.	Making Foundation for Room
8.	Welding
9.	Soldering
10.	Painting
11.	Carpentry
12.	Hinges
13.	Funnel
14.	Use of L.T. Joint for Wooden Work
15.	Ferro-Cement Article
16.	Ferro-Cement Tank
17.	R.C.C. Column

## OUR HOME ENVIRONMENT

**Max.Marks: 70**

**Time: 2.00 Hrs**

### Marking Scheme:

Activities	Marks Allotted	Remarks
Practical Activities - any two	40 (20 x 2)	
Internal Assessment	20	
Project work/ Practical Record/File, Discipline, Performance etc.	5	
Viva-Voce	5	
<b>Total Marks</b>	<b>70</b>	

● To understand the AIM	-	02
● Correct selection of Tools/equipment	-	05
● Procedure	-	06
● Observation	-	02
● Result	-	05
<b>Total Marks</b>	-	<b>20</b>

### Guidelines for Practical Examiner

- Two practical activities from each section (Our Home Environment and Basics of Electricity) should be given to the students from the list and they may have the option to perform one activity from each section.
- All the required material (Tools, Equipments etc.) should be available at the disposal of examiner.
- Different sets of the practical activities can be given to the different examinees.

**LIST OF PRACTICALS**  
**PAPER-IV SECTION - A: OUR HOME ENVIRONMENT**

<b>Sr.No.</b>	<b>Name of the Topic/Practical</b>
1.	Preparation of Mango Jam
2.	Preparation of Guava Jelly
3.	Preparation of Tomato Ketchup
4.	Preparation of Chikki
5.	Preparation of Mango Pickles
6.	Preparation of Nankhatai
7.	Preparation of Cake
8.	Preparation of Khoa
9.	Preparation of Apple Jam
10.	Preparation of Lemon Squash

**LIST OF PRACTICALS**  
**PAPER-IV SECTION - B : BASICS OF ELECTRICITY**

<b>Sr.No.</b>	<b>Name of the Topic/Practical</b>
1.	Plane Table Survey
2.	Level Tube
3.	Bumpy Tube
4.	Biogas
5.	Solar Cooker
6.	Installation of Solar Lights
7.	Electricity Bill
8.	Soak Pit
9.	Wick and Pressure Stove
10.	Diesel Engine
11.	Specific Gravity of the Electrolyte of a Battery
12.	Rainfall Measurement
13.	Smokeless Chulha (Stove)
14.	Artificial Respiration (Schaffer's Method)
15.	Artificial Respiration (sylevester's Method)
16.	Skinning Cable Insulation (Manual Stripper)
17.	Skinning Cable Insulation (Auto-Stripper)
18.	Measurement of Wire(Micro Meter)
19.	Connecting up Plug Pin Top
20.	Connecting up Appliances Socket
21.	Plate Type Earthing
22.	Measuring Voltage of Various Cells
23.	Working of Capacitor Motor
24.	Split Phase Motor

## **Certificate in Construction Supervision (Civil), code 620**

### **Guidelines for Instructors**

1. All instruments cited in the 'List of Equipments' should be made available in the training center.
2. Demonstration of all equipments used at construction site with their working should be ensured.
3. Students should be shown physically the heavy machines like digging machines, rollers, cranes, mixers etc. And should understand their working and precautions and safety regulations problems.
4. Out of 30 practical activities listed, students should conduct any 15 practical activities. The Practical Record book of a student should have the details of the practical done throughout the course.
5. During practical examination the practical record book should be made available to the practical examiner.
6. In examination, the student should be allotted 02 practical activities from his/her practical record book and he/she should conduct the practical (both) at the site/laboratory.

## **Certificate in Construction Supervision (Civil), code 620**

### **List of Recommended Practical for AVI's**

15 Practical activities out of the following Practical activities are required to be performed by students at AVIs during the course.

1. To draw Plan, Elevation and Side view building (one room set) with dimensions. (A)
2. To measure the plaster work in walls. (P)
3. To perform practical for calculation of amount of Earthwork in cutting and filling at any site. Pictures should be submitted. (P)
4. To lay out the foundation for a room on the ground as per given dimension of foundation (write the process & dimensions). (P)
5. To arrange the bricks for English bond (Three layers). (P)
6. To arrange the bricks for Flamish Band (Three layers) (P)
7. To prepare two wooden joints used in Timber works of building. (P)
8. To study different types of cement mixers along with their pictures and description. (A)
9. To study different types of construction joints in Roofs and floors with sketch. (A)
10. To conduct slump Test of the given concrete material and write the observations. (A)
11. To study different types of roofs at any construction site. (Write a short note) (A)
12. To study different types of expansion joints used in the construction of roofs. (A)
13. To prepare cement sand mixture for plastering of walls with demonstrate of plastering in 1 (one) square ft. area. (A)
14. To prepare concrete surface for painting. (P)
15. To prepare wooden surface for painting polishing. (A)
16. To study different types of flooring along with material, specification and method of construction (A)
17. To prepare a flooring surface of specified area with the help of 09 tiles.  
Write procedure along with picture (before & after flooring) (A)
18. To study various types of pipes and pipe fittings for drains and sewer lines (along with line sketch) (A)
19. To study various types of man holes with sketches. (A)

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1(A) stands for Academic activities

(P) stands for Practical activities

20. To study the installation of various sanitary fitting in building (A)  
(a) Wash basin and Kitchen sink  
(b) Western and Indian style seat with Cistern.
21. To study the different layers in road constructions and their procedure for construction. (A)
22. To study different types of road rollers. (A)
23. To study different types of roads and the methods of construction. (A)
24. To list out various types of security/safety equipments used in the construction works in a construction sites. (A)
25. To study the method of laying Damp proof course in building. With sketch (A)
26. To study water proofing at the junction of Parapet and Roof. (A)
27. To study Application of Dermite in Building for protection against termite. (A)
28. Measurement of length and angle at site with the help of theodolite and chain. (P)
29. Determination of reduce level of plinth of an existing building (P)
30. Study of Total station at site for measuring angle, distances and levels. (A)

## **Certificate in Construction Supervision (Civil), code 620**

### **Practical Examination**

**Total Practicals: 30**

**Permitted Practicals : 15 out of 30**

<b>Exam Time</b>	<b>Time</b>	<b>:</b>	<b>2½ hours</b>
Marks for	Practical File	:	15
Marks for	Viva	:	10
Marks for	Practical Exam	:	45 for 2 practical @ 22½ per practical
<b>Total</b>			<b>70</b>

**Note:**

Students will be asked to perform two practical problems of 22 marks each. He/She has to submit practical file and has to appear for viva - voce exam. The student will perform 02 Practical problems as chosen from blind chits.

1. Out of these 2, one experiment will be of long duration and the other one will be of short duration.
2. Experiments will be allotted to a group of four students.

# GUIDELINES FOR PRACTICAL EXAMINATIONS

## Certificate Course in Homeopathic Dispensing

### Introduction to Homeopathy (718)

**Max. Marks : 40**

**Time : 3 Hrs**

#### Marking Scheme:

Activities	Marks Allotted
Practical Activities - any one	10
Spotting	10 (05 Marks x2)
Project work/Report on the work during attachment with concerned centre.	10
Discipline, Performance etc.	05
Viva-Voce	05
<b>Total Marks</b>	<b>40</b>

#### Guidelines for Practical Examiner

- ◆ Two practical activities should be given to the students from the list and they may have the option to perform only one activity.
- ◆ All the required material (Tools, Equipments etc.) should be available at the disposal of examiner.
- ◆ Different sets of the practical activities can be given to the different examinees.

#### Breakup of Practical Activities:

◆ Aim	-	01
◆ Selection of Tools/Equipment	-	03
◆ Procedure	-	03
◆ Observation	-	02
◆ Result	-	01
<b>Total Marks</b>	<b>-</b>	<b>10</b>

## LIST OF PRACTICAL ACTIVITIES

1. Measurement of Blood Pressure and pulse rate.
2. To assess the:
  - i) Physical generals of the patient.
  - ii) Past history of the patient.
3. To assess the personal history and family history of the patient.
4. To assess the gynaecological and obstetrical history of the patient.
5. To perform the physical general examination on the patients.
6. To assess the particulars of the patient.
7. To draw the diagram of digestive system along with labelling.
8. To draw the diagram of eye along with labelling.
9. To draw the diagram of ear along with labelling.

### Spotting – (5 Marks X 2)

#### Breakup of Spotting:

Identification - 3 Marks

Question related to the particular spot – 2 Marks

1. Blood Pressure Instrument (Sphygmomanometer)
2. Identification of bones and their position in the body.
3. Stethoscope
4. Model/Chart of Digestive System.
5. Model/Chart of Circulatory System.
6. Model/Chart of Excretory System.
7. Model/Chart of Reproductive System.
8. Model/Chart of Respiratory System.
9. Model/Chart of Sensory Organs.
10. Model/Chart of Nervous System.

## GUIDELINES FOR PRACTICAL EXAMINATIONS

### Certificate Course in Homeopathic Dispensing

#### Introduction to Homeopathic Dispensing (719)

Max. Marks : 40

Time : 3 Hrs

#### Marking Scheme:

Activities	Marks Allotted
Practical Activities - any one	10
Spotting	10 (05Marks x2)
Project work/Report on the work during attachment with concerned centre.	10
Discipline, Performance etc.	05
Viva-Voce	05
<b>Total Marks</b>	<b>40</b>

#### Guidelines for Practical Examiner

- Two practical activities should be given to the students from the list and they may have the option to perform only one activity.
- All the required material (Tools, Equipments etc.) should be available at the disposal of examiner.
- Different sets of the practical activities can be given to the different examinees.

#### Breakup of Practical Activities:

• Aim	-	01
• Selection of Tools/Equipment	-	03
• Procedure	-	03
• Observation	-	02
• Result	-	01
<b>Total Marks</b>	-	<b><u>10</u></b>

## LIST OF PRACTICAL ACTIVITIES

1. Prepare the medicine from the given prescription, along with labelling and instructions.  
Eg: ACONITE 30 / 4 pills in 30 number globules / TDS / 1 week
2. Measure the size of the globule and medicate 1 drachm globule with the given medicine.
3. Given mother tincture prepare the liniment.
4. Given mother tincture prepare the ointment.
5. Prepare the given medicine by trituration.
6. Potentization of given medicine by succussion.
7. Given Hepar Sulph 6X, prepare jumping potency.

### **Spotting**

#### **Breakup of Spotting:**

Identification - 3 Marks

Question related to the particular spot - 2 Marks

1. Identify Instruments/Apparatus used in Homeopathic Dispensary:
  - a. Mortar/Pestle
  - b. Spatula/spoon
  - c. Dropper
  - d. Phials - 5 ml, 10 ml, 15 ml, 30 ml, 60 ml, 120 ml.
  - e. Solid vehicles - Sugar of milk, globules.
  - f. Liquid vehicles - Distilled water, alcohol.
2. Charts from vegetable kingdom.
3. Charts from animal kingdom.
4. Charts from mineral kingdom.
5. Types of weighing balance

**GUIDELINES FOR PRACTICAL EXAMINATIONS**  
**CERTIFICATE COURSE IN AYURVEDIC THERAPY**  
**COURSE CODE - 721-722**

**Marking Scheme :**

**Max. Marks : 120**  
**Time : 3.00 Hrs.**

<b>Activities</b>	<b>Marks Allotted</b>	<b>Remarks</b>
Practical Activities - any two	30 (15x2)	
Spotting (10 spots)	20 (10x2)	
Project work/Report on the work during attachment with concerned centre	20	
Viva-Voce	30	
Internal Assessment (Practical Record/File	20	
Discipline, Performance etc.)	–	
<b>Total Marks</b>	<b>120</b>	

**Breakup of Practical Activities:**

• To understand the Aim	-	01
• Correct selection of Tools/equipment/ material required	-	04
• Procedure	-	06
• Observation	-	02
• Result	-	02
<b>Total</b>	-	<b>15</b>

**Guidelines for Practical Examiner**

- Four practical activities should be given to the students from the list and they may have the option to perform only two activities.
- All the required material (Tools, Equipments etc.) should be available at the centre of examiner.
- Different sets of the practical activities can be given to the different examinees.

## **Paper - 1 (Introduction of Fundamentals of Ayurveda)**

**Records:** Charts, Files, Models related to basic principles of Ayurveda, history of Ayurveda etc. **20 Marks**

**Spotting:** **20 Marks (10x2)**

- Identification of viscera (organs) of thorax and abdomen. Write main function
- Identification of bones (long bones, ribs, vertebrae) its place in the body.
- Identification of any two marma points, location and their types according to Ayurveda.
- Identification of instruments (Stethoscope, B.P instrument, etc.), name and function
- Identification of Rasa (taste) (salt and sugar). Its mahabhoot and pacifying dosha according to Ayurveda.

**Practical Activities** **30 Marks (15x2)**

- Find out the place of important organs (liver, stomach, heart, lungs, intestine etc.) draw the labelled diagram and its function
- Find out the prakriti of the patients and make a chart according to Ayurveda
- According to Ayurveda find out the places of types of vata dosha and draw the diagram and write its function
- According to Ayurveda find out the places of types of pita dosha and draw the diagram and write its function
- According to Ayurveda find out the places of types of kapha dosha and draw the diagram and write its function
- Prepare the General information about the given patient (height, weight, temperature, B.P, etc.)
- Make a diagram and show the location of 10 marmas in the body according Ayurveda
- Make a chart showing different cephalic presentation of foetus

## **Paper - II Introduction to different Therapies (Ayurveda)**

**Records:** Charts, Files, Models related to Panchkarma technique.

**20 Marks**

**Spotting:**

**20 Marks (10x2)**

- Any five equipments used in panchkarma and their functions (two marks for each equipment)
- Identification of any 5 plants and its use in panchkarma (two marks for each plants)

**Practical Activities**

**30 Marks (15x2)**

- Preparation of swaras, Kalpana described in Ayurveda.
- Preparation of kalka, kalpana described in Ayurveda.
- Preparation of kvatha, kalpana described in Ayurveda.
- Preparation of Hima, kalpana described in Ayurveda.
- Preparation of pinda, used for Pinda Sweda.
- Preparation of pottli used for Pottli Sweda.
- Demonstrate the correct posture and method of massage.
- Write the correct schedule of samsarjana karms.

**Diploma in Insurance Services**  
**Business Environment (Code 456)**

**Sample Question Paper**

**Scheme of Evaluation**

S.No.	Component	Max. Marks	Exam time
1	Theory	80 marks	3 hrs
2	Practical	20 marks	2 hrs.
	<b>Total</b>	<b>100 marks</b>	

**Design of Questions (Theory)**

Questions	Weightage	Marks x No. of questions	
VSA	30%	1x8 2x8	24
SA	30%	3x4 4x8	24
LA	40%	5x4 6x2	32
<b>Total</b>	<b>100</b>		<b>80</b>

**Components of Practical Paper**

- Viva will be of 5 marks
- Practical paper of 15 marks

**Diploma in Insurance Services**  
**Practice of Business Environment (Code 456)**  
**Sample Question Paper**  
**Practical Paper**

**Time : 2 hrs.**

**Max. Marks-20**

Viva will carry 5 Marks

1. Give the format of Balance sheet of M/s Ram Enterprises (Partnership Concern) 4
2. The insurance ombudsman is empowered to receiving individual complaints on insurance matters .  
Give any four points of complaint. 4
3. A group of farmers having small holding of Land , wants to maximise their agriculture output  
through large scale farming . Suggest the organization and give its benefit. 4
4. Fill the following table given below: 3

<b>Transaction</b>	<b>Accounts involved</b>	<b>Equation based analysis</b>
Business commenced with cash Rs. 80000		
Purchased goods on credit from B Rs. 10000		
Paid salaries Rs. 2000		

**Diploma in Insurance Services**  
**Sample Question Paper**  
**Paper : Principles Of Insurance**  
**Course Code: 457 (Practical)**

**Scheme of Evaluation**

S.No.	Component	Max. Marks	Exam time
1	Theory	80 marks	3 hrs
2	Practical	20 marks	2 hrs.
	<b>Total</b>	<b>100 marks</b>	

**Design of Questions (Theory)**

Questions	Weightage	Marks x No. of questions	
VSA	30%	1x16 2x4	24
SA	30%	3x4 4x3	24
LA	40%	5x4 6x2	32
<b>Total</b>	<b>100</b>		<b>80</b>

**Components of Practical Paper**

- Viva will be of 5 marks
- Case based 5 question of 3 marks each.

**Diploma in Insurance Services**  
**Sample Question Paper**  
**Paper : Principles Of Insurance**  
**Course Code: 457 (Practical)**

**Time: 2 hrs**

**Max. Marks : 20**

**Viva will be of 5 marks**

Attempt all questions . Each question carries 3 marks

1. A person while taking life insurance policy does not disclose the fact that he was suffering from a heart disease. On his death , the insurance company didn't admit the claim . Is the insurance company justified ? If yes, give reason. State the duties of the insured.
2. Apoorva has insured her house for Rs. 5 Lakhs and suffered a loss of 4 lacs due to fire . At the time of loss the surveyor finds that the actual market value of the house is 8 lacs. Calculate the amount of claim that will be paid by the insurance company. Depict the calculation.
3. A building was insured against earth quake and not against fire . Building collapsed due to earthquake and fire took place. Goods were burnt by fire. Will the claim be admitted by the insurance company? How would you deal with the situation. Give reasons.
4. Your Grandfather is against taking up marine insurance policy for voyage as he thinks that it is nothing but gambling . Do you agree? If not, give the reasons in support of your answer.
5. A building was insured against fire for Rs. 10,00,000 lakhs from three different companies which was distributed as

Company A      Rs. 5 Lakhs

Company B      Rs. 3 Lakhs

Company C      Rs. 2 Lakhs

Fire took place and loss due to fire was estimated Rs. 6 Lakhs . How will it be payable by the insurance companies? Calculate the amount and give the reasons.

**Diploma in Insurance Services**  
**Paper : Practice of Life Insurance**

**Course Code: 458**

**Sample Question Paper**

**Scheme of Evaluation**

S.No.	Component	Max. Marks	Exam time
1	Theory	60 marks	2.5 hrs
2	Practical	40 marks	2 hrs.
	<b>Total</b>	<b>100 marks</b>	

**Design of Questions (Theory)**

Questions	Weightage	Marks x	No. of questions
VSA	33.3%	1x20	20
SA	40%	2x12	24
LA	26.6%	5x2 6x1	16
<b>Total</b>	<b>100</b>		<b>60</b>

**Components of Practical Paper**

- Viva will be of 10 marks
- Case based 6 ques of 5 marks each

**Diploma In Insurance Services**  
**Practice of Life Insurance (Practical)**  
**Course Code: 458**  
**Sample Question Paper**

**Time:- 2 hours**  
**Max. Marks: - 40**

**Viva will be of 10 marks**

**Attempt all questions from the following. Each question carries 5 marks.**

1. Calculate the amount of premium with the following information

Age of the insured	30 years
Plan of assurance	Endowment with profit
Term of assurance	20 years
Sum assured	Rs. 50000
Mode of Payment of Premium	Half yearly

Premium per thousand as per the manual for agents is Rs. 53.19 for age 30 and term period 20 years. Rebate allowed is Rs. 2 per thousands
2. In case of ULIP policies, the premium that insurers called is subject to deductions of certain charges. Name those charges. Take imaginary amount of such charges and calculate units the company will allocate in the following cases  

Premium for a policy is fixed-as Rs. 10000 NAV of the growth fund in which the policy holder wants to invest is Rs. 18.2%
3. You as an agent of life insurance has to obtain details at the stage of proposal from the prospective insured. For that a proposal form has to be filled up. Draw the format and fill up this taking imaginary information.
4. You have purchased a life insurance policy for a period of 15 years. During the continuance of the policy so many documents are used. Name such documents and give their importance for the smooth continuation of the policy.
5. Before accepting the proposal for life insurance, the insurance company would like to know about the hazards that may affect the life of the prospective insured. It affects the decision of the company regarding accepting the proposal and the premium to be charged. Discuss
6. In business, pulling up money is an investment, while pulling in money in fire & marine insurance provides only protection. But in life insurance one gets protection as well as investments. Explain with suitable examples.

**Diploma in Insurance Services**  
**Sample Question Paper**  
**Practice of General Insurance**  
**Code: 459**

**Scheme of Evaluation**

<b>S.No.</b>	<b>Component</b>	<b>Max. Marks</b>	<b>Exam time</b>
1	Theory	60 marks	2.5 hrs
2	Practical	40 marks	2 hrs.
	<b>Total</b>	<b>100 marks</b>	

**Design of Questions (Theory)**

<b>Questions</b>	<b>Weightage</b>	<b>Marks</b>	<b>No. of questions</b>
VSA	30%	18	18
SA	40%	24	12
LA	30%	18	2 ques. × 4 marks 2 ques. × 5 marks
<b>Total</b>	<b>100</b>	<b>60</b>	

**Components of Practical Paper**

- Viva will be of 10 marks
- Case based six questions × 5 marks

**Diploma in Insurance Services**  
**Sample Question Paper**  
**Practice of General Insurance (Practical)**  
**Code: 459**

**Time:-2 hours**

**Max. Marks:-40**

**Viva will be of 10 marks**

**Attempt all questions from the following. Each question carries 5 marks.**

- Q.1 A company insurance goods valuing Rs.1 crore each with A & B Company. A fire broke out and 60% of the total goods destroyed. Company claims Rs.60 Lakhs each from both the Insurance Company. Can company recover the loss from the companies? Write your answer keeping in view the principal involved. 5
- Q.2 Ram send the goods to Laxman on C & F basis. Who will be responsible for insurance and why? 5
- Q.3 Hari, the owner of Motor Car, hit Ram while returning from office to home. Ram lost his one right leg. He claim Rs. 10,000 as compensation from Hari, Hari claims the said amount from the insurance company. The insurance company wants to settle the claim under the Principle of “No Falt” of the motor vehicle Act 1988. Explain your view. 5
- Q.4 Kâlu, a villager took GRAMIN Personal Accident Policy and paid Rs.5 as Premium. During rains due to leakage of current (power) he died, for your information, he took four such policies on his life, how much amount his wife can claim. 5
- Q.5 Explain the farmer’s package insurance including multiple covers under one policy. 5
- Q.6 Explain the different type of Health Insurance Policy. 5

**Diploma in Insurance Services**  
**Paper : Legal Framework (Practical)**  
**Code:460**  
**Sample Question Paper**

**Scheme of Evaluation**

S.No.	Component	Max. Marks	Exam time
1	Theory	60 marks	3 hrs
2	Practical	40 marks	2 hrs.
	<b>Total</b>	<b>100 marks</b>	

**Design of Questions (Theory)**

Questions	Weightage	Marks	No. of questions
VSA	15%	12	12
SA	45%	36	6 ques.×2 marks 8 ques.×3 marks
LA	40%	32	4 ques. × 5 marks 2 ques. × 6 marks
<b>Total</b>	<b>100</b>	<b>80</b>	

**Components of Practical Paper**

- Viva will be of 5 marks
- Case based five questions × 3 marks

**Diploma in Insurance Services**  
**Paper : Legal Framework (Practical)**  
**Code:460**  
**Sample Question Paper**

**Time :-2 hrs**

**Max marks: 20**

**Viva will be of 5 marks**

**Attempt all questions. Each Question carries 3 marks**

- Q.1 Mention the License Fees against the following category of Brokers (3)
- (a) Direct Broker
  - (b) Reinsurance Broker
  - (c) Composite Broker
- Q.2 Give the Investment Pattern of Pension and General Annuity Business under the Head of Life Insurance Company. (3)
- Q.3 Hari, a worker in Chemical factory, aged 25 years drawing a wages of Rs.8000/- per month died in an accident within the Factory Area while he was on duty. Calculate the compensation, his family can received under the “Workmen’s Compensation Act 1923’. (3)
- Q.4 Calculate the taxable Income of a life Insurance Company from the following Income :- (3)
- (a) Income from life Insurance Activities Rs. 1000 crores
  - (b) Actuarial Liability Rs. 50 Crores
  - (c) Income from other activities Rs.30 crores
- Q.5 Write the benefits available to an individual by investing income in Insurance. (3)

## E-TYPEWRITING (PRACTICAL) SCHEME

Course Code: 483/484/383/384

1.	<b>Practical File</b>	:	<b>10 Marks</b>
2.	<b>Viva Voce</b>	:	<b>10 Marks</b>
3.	<b>E-Typewriting Skill Test*</b>	:	<b>50 Marks</b>

**Time: 1½ hrs** **70 marks**

Note: External examiner should be appointed at AVI during the practical exam

\* E-Typewriting Skill Test of 50 Marks to be conducted as per the following jobs:

a)	<b>Job – I</b>		
	Speed Test @ 80 wpm for 10 minutes	:	15 Marks
b)	<b>Job – II</b>		
	Editing a document	:	10 Marks
c)	<b>Job – III</b>		
	Typing of a Business Letter or Mail Merge	:	10 Marks
d)	<b>Job – IV</b>		
	Test of Excel	:	10 Marks
e).	<b>Job – V</b>		
	Creating Power Point Presentation	:	05 Marks

**Time : 1½ hrs** **50 Marks**

### Instructions to the candidates and invigilators

- i. All the above mentioned five jobs are compulsory for the candidates
- ii. All the jobs may be given to the candidates simultaneously
- iii. It must be ensured that given speed passage is completed by the candidate within the given time frame .

### Guidelines for the test

1. To type on computer a passage of about 1500 words in single space with a given margin, formatting options and multiple typefaces such as bold italics and underline. Marks : 10

2. Exercises to change spacing left margin right margin, use spell check. Marks : 10
3. A letter/label to be created in MS OFFICE with list of addresses. Use mail merge to produce an individualized copy of the letter for the list of addresses . Marks : 10
4. To perform formula and functions in a given spreadsheet exercise . Use of charts and reports to display the same Marks : 10
5. Prepare the PPT on the given topic Marks : 10

## Sample Question Paper

### JOB – I (SPEED TEST)

**Time: 10 Minutes**

**Marks: 15**

- Note: (a) Type the following passage accurately using double line spacing. Start typing only on getting the ‘Start’ signal. If the whole passage is completed once, repeat it. However, typing must be stopped immediately at the ‘Stop’ signal.
- (b) Do not type strokes give in the right hand margin.
- (c) After the test, hand over the Job – I (Speed Test) to the Invigilator.

	<b>Strokes</b>
Even people with very little education are aware of the remarkable	67
advances in science that have taken place during this century. What they are	152
not, perhaps, so aware of is that rate of those changes is growing faster. That	235
is to say that what science has done in the past ten years is considerably more	327
than what science did in the ten years before that. There seems to be every change	405
that the next ten years will see even greater and faster changes.	471
One great advance which will without a doubt raise production of goods	559
in a remarkable way is the development of automation. This is not just a matter of	660
inventing and making machines to do the jobs formerly done by hand but to	742
devise machines which will serve and maintain other machines so that long	820
and complex processes become entirely automated from the beginning to the end.	904
Beneath the surface of the sea another revolution is in progress. Men are	984
learning how to live under water for long periods, and to explore the depths. At the	1074
same time they are learning how harvest may be gathered from the sea which will	1163

contribute greatly to maintaining the growing population of the world. The resources	1251
of the sea are known to be huge. Not only may we derive much food from the sea	1330
but also a great deal of our mineral wealth. The sea covers four times the area occupied	1421
by the land and there is no doubt that below the sea floor lie vast deposits of minerals.	1511
Already in various parts of the world oil is being produced by plants established at	1597
sea and drilling down into the sea bottom.	1639

### **JOB – II**

**Marks: 10**

Create your resume in MS Word in times New roman font sized 14 Hobbies listed in bullets, Left margin 1.5, Right margin 2.0, Gutter at 1.5”

### **JOB – III (BUSINESS LETTER)**

**Marks: 10**

Prepare a list of five of your business associates /friends . Considering it as a data source prepare a merged document for sending request letters to attend an event.

Or

Note: Type the following letter in Block Style of Display.

M/s Ashok Kumar & Company  
Grand Shopping Centre New Delhi

Ref: AKC/01/2013

Dated: (Insert today’s date)

M/s. Vijay Sales Company  
23, Arcade Road  
Mumbai.

**Sub: Request for Outstanding Payment**

Dear Sirs

We wish to bring to your kind attention that against your order dated March 3, 2013, we had dispatched you the goods and sent our invoice No. 2345 dated March 1, 2013. We also sent you all the relevant documents and requested to retire the same from your bank. But it has come to our notice that you have

not retired the said documents as the same have been returned back to us by the bank along with certain charges.

We had sent you a letter on 4 April 2013 requesting you to kindly favour us with a demand draft of Rs. 10,000/- towards the dishonoured documents to enable us to send you the same. You will kindly appreciate that the non-retirement of the documents was not a desirable approach and the further delay on your part in sending the due payment is also unpleasant. We fail to understand the reason for your long silence. Should we presume that you are not interested in having further dealings with us? If it is so, please do not hesitate and write us a word clearly indicating so that we may recall the goods back from the transport company.

It is requested that you must either send us the payment immediately on receipt of this letter or inform us that you are not interested. Whatever your decision may be, it should be intimated to us at the earliest. We will accept the same with pleasure.

Thanking you and hoping to be favoured soon with your considered decision.

Yours faithfully  
(A K Sharma)  
Sales Manager

### JOB – IV (EXCEL)

**Marks: 10**

Create a Worksheet of M/s. Vijay Enterprises with the following title and column headings using EXCEL.

S.No.	Employee's Name	Date of Joining	Basic Pay (Rs.)	Allowances (Rs.)	Gross Salary (Rs.)	Income Tax(Rs.)	Net Salary (Rs.)
1	Sweety	12.12.1999	20000				
2	Mohit	02.05.2000	9000				
3	Anita	09.05.2003	25000				
4	Karan	01.05.2007	15000				
5	Sona	08.01.2009	19000				
6	Geeta	12.03.2012	10000				

Fill the data in the above worksheet according to the following instructions:

1. Save the worksheet with the name "SALARY."
2. Enter the formula and calculate the allowances of all the employees as 50% of Basic Pay.

3. Calculate Gross Salary of all the employees, which is Basic Pay and allowances.
4. Income Tax to be calculated @ 10% of Gross Salary.

Calculate Net Salary by deducting Income Tax from Gross Salary.

### **JOB – V**

**Marks: 10**

Create a Power Point Presentation of five slides and save the same with your roll number. Also add animations to the text. The Presentation has to be on any one of the following topics:

1. Importance of Education
2. Time Management
3. Qualities of an Efficient Computer Operator

## BEEKEEPING (650)

**Time: 3hrs**  
**Max. Marks: 70**

### Scheme of Practical Examination:

S.No.	Items	Distribution of Marks	Remarks
1.	Spotting	10 (10 spots of 1 mark each)	10 spots may be selected from the list
2.	Practical exercise/ activity	40 ( 2 exercise/ activity of 20 marks each)	2 problems/ exercise may be selected from the list
3.	Practical Record	10	Student has to produce Practical record at the time of Practical Exam.
4.	Viva Voce	10	Knowledge and understanding of the students should be ascertained by the examiner.

### Breakup of Practical Activities: Total 40 marks (20 marks each)

S.No.	Break up	Marks
1.	To understand the Aim and Principle	02
2.	Appropriate selection of tools/ equipments	03
3.	Procedure	05
4.	Observations	05
5.	Precautions	02
6.	Result	03
	<b>Total</b>	<b>20</b>

### Guidelines for Practical Examiner:

1. Different sets of practical activities can be given to the different examinees.
2. Three sets of activities should be given to the students from the list and they may have the option to perform only two activities.
3. All the required materials, tools and implements should be available at the disposal of examiner.

**Sample/suggested Questions:**

**Spotting**

Any 10 spots may be selected from the list

1. Brood Chamber
2. Frame
3. Honey Chamber
4. Inner Cover
5. Outer Cover
6. Comb foundation Sheet
7. Smoker
8. Hive tool
9. Bee veil
10. Dummy board
11. Gloves
12. Honey extractor
13. Queen excluder
14. Stand
15. Decapping knife
16. Uncapping tray
17. Bee brush
18. Honey bee feeder
19. Comb foundation making machine
20. Preserved or live specimen of worker, queen and drone
21. Larva of honey bee
22. Pupa of honey bee
23. Queen cell
24. Drone cells
25. Bee wax
26. Pollen
27. Capped honey
28. Wax moth
29. Different types of flower
30. Mites dead or alive
31. Wasp dead or alive
32. Swarm catching basket
33. Queen gate
34. Propolis
35. Pollen trap

**Practical Exercise/ activities**

Select any three questions from the list below and learner will attempt any two activities of 20 marks each.

1. Assemble a bee hive and write down the steps followed.
2. Select any bee colony and write a report about the hive after the inspection. Also clean the bee colony.
3. Perform the lighting and use of Smoker in bee hive.
4. Catch a stray swarm from a post or tree and write characteristics.
5. Perform installation / fixation and storage of comb foundation sheet.
6. Divide/ multiply the bee colonies.
7. Unit two bee colonies into one colony.
8. Identify & collect pesticides poisoned honey bees and suggest preventive measures.
9. Extract honey from honey comb.
10. Perform the activities of processing of extracted honey & write down steps.
11. Perform the activities of packing and storage of honey & write down steps.
12. Perform the activity of transferring nucleus to hive box.

## Sample Question paper

**Time: 3hrs**  
**Max. Marks: 70**

**1. Spot and comment on the following**

**1 x 10 = 10 marks**

- i. Hive tool
- ii. Honey extractor
- iii. Queen cell
- iv. Queen excluder
- v. Frame
- vi. Honey chamber
- vii. Pollen
- viii. Propolis
- ix. Bee brush
- x. Worker bee

**2. Attempt any two of the following exercise:**

**2 x 20 = 40 marks**

- i. Assemble a beehive and show steps of assembling.
- ii. Inspect a bee colony and perform its cleaning.
- iii. Install/ fix the comb foundation sheet on frame and show its storage steps.

**3. Practical record**

**10 marks**

**4. Viva voce**

**10 marks**

## PADDY FARMING (652)

**Time: 3hrs**  
**Max. Marks: 70**

### Scheme of Practical Examination:

S.No.	Items	Distribution of Marks	Remarks
1.	Spotting	10 (10 spots of 1 mark each)	10 spots may be selected from the list
2.	Practical exercise/ activity	40 ( 2 exercise/ activity of 20 marks each)	2 problems/ exercise may be selected from the list
3.	Practical Record and Herbarium	10	Student has to produce Practical record at the time of Practical Exam.
4.	Viva Voce	10	Knowledge and understanding of the students should be ascertained by the examiner.

### Breakup of Practical Activities: Total 40 marks (20 marks each)

S.No.	Break up	Marks
1.	To understand the Aim and Principle	02
2.	Appropriate selection of tools/ equipments	03
3.	Procedure	05
4.	Observations	05
5.	Precautions	02
6.	Result	03
	<b>Total</b>	<b>20</b>

### Guidelines for Practical Examiner:

1. Different sets of practical activities can be given to the different examinees.
2. Three sets of activities should be given to the students from the list and they may have the option to perform only two activities.
3. All the required material, tools and implements should be available at the disposal of examiner.

**Sample/suggested Questions:**

**Spotting:** Any 10 spots may be selected from the list

1. Paddy seedling
2. Flowering stage of paddy
3. Panicle stage of paddy
4. Tillering stage of paddy
5. Basmati rice
6. Harrow
7. Seed drill
8. Dibbler
9. Drum Seeder
10. Oven
11. Urea
12. Compost
13. Plough
14. Cono weeder
15. Nitrogen deficient paddy leaves
16. Zinc deficient paddy leaves
17. Iron deficient paddy leaves
18. Any paddy weed
19. Any insect infected paddy leaves
20. Any diseases infested paddy plant
21. Rice husk
22. FYM
23. Poultry manure
24. Any bio fertilizer
25. Neem cake

### **Practical Exercise/ activities**

Select any three questions from the list below and learner will attempt any two activities of 20 marks each.

1. Perform the seed treatment of 2 kg paddy seed with Carbendazim & Streptocyclin.
2. Perform the paddy seedling treatment with Carbendazim & Streptocyclin.
3. Prepare 2m x 2m sized nursery bed either by dry method or Dapog method.
4. Prepare a mixture of compost for SRI method using FYM/vermicompost, soil & rice husk/sand.
5. Collect five leaf samples of paddy having nutrient deficiency and explain them along with remedies.
6. Collect five leaf samples of paddy affected by insect & pest and explain their characteristics symptoms and control measure.
7. Collect five samples of paddy affected by diseases & pathogens and their explain characteristics symptom and the control measures.
8. Collect ten popular weeds of paddy and write their characteristics.
9. Wear all safety appliances used before pesticide application and explain their uses/benefits.
10. Calculate the amount of Urea, DAP, & MoP should be applied in one hectare of paddy field, if recommended dose for paddy is NPK @ 150-50-60. Calculate the moisture content of harvested paddy crop if the mass of sample is 100 gm & mass of dried sample is 70 gm.

## Sample Question paper

**Time: 3hrs**  
**Max. Marks: 70**

1. Identify and comment on the following spots: **1 x 10 = 10 marks**
- i. Zinc deficient paddy leaves
  - ii. Poultry manure
  - iii. Panicle stage of paddy
  - iv. Tillering stage of paddy
  - v. Basmati rice
  - vi. Harrow
  - vii. Seed drill
  - viii. Dibbler
  - ix. Drum Seeder
  - x. Oven
2. Attempt any two of the following exercise: **2 x 20 = 40 marks**
- i. Perform the seed treatment of 2 kg paddy seed with Carbendazim & Streptocyclin.
  - ii. Calculate the amount of Urea, DAP, & MoP should be applied in one hectare of paddy field, if recommended dose for paddy is NPK@150-50-60. Calculate the moisture content of harvested paddy crop if the mass of sample is 100 gm & mass of dried sample is 70 gm.
  - iii. Collect five leaf samples of paddy having nutrient deficiency and explain them along with remedies.
3. Practical record **10 marks**
4. Viva voce **10 marks**

## POULTRY FARMING (653)

**Time: 3hrs**  
**Max. Marks: 70**

### Scheme of Practical Examination:

S.No.	Items	Distribution of Marks	Remarks
1.	Spotting	10 (10 spots of 1 mark each)	10 spots may be selected from the list
2.	Practical exercise/ activity	40 ( 2 exercise/ activity of 20 marks each)	2 problems/ exercise may be selected from the list
3.	Practical Record and Herbarium	10	Student has to produce Practical record at the time of Practical Exam.
4.	Viva Voce	10	Knowledge and understanding of the students should be ascertained by the examiner.

### Breakup of Practical Activities: Total 40 marks (20 marks each)

S.No.	Break up	Marks
1.	To understand the Aim and Principle	02
2.	Appropriate selection of tools/ equipments	03
3.	Procedure	05
4.	Observations	05
5.	Precautions	02
6.	Result	03
	<b>Total</b>	<b>20</b>

### Guidelines for Practical Examiner:

1. Different sets of practical activities can be given to the different examinees.
2. Three sets of activities should be given to the students from the list and they may have the option to perform only two activities.
3. All the required material, tools and implements should be available at the disposal of examiner.

## Sample/suggested Questions:

### Spotting

Any 10 spots may be selected from the list

1. Comb
2. Cock
3. Spade
4. Recker
5. Linear feeder
6. Waterer
7. Tube feeder
8. Candler
9. Incubator
10. Hatcher
11. Rice bran
12. Mustard cake
13. Fish meal
14. Wheat bran
15. Hanging feeder
16. Bleaching powder
17. Potassium Permanganate
18. Debeaker
19. Sprayer
20. Codrinal
21. Lime
22. Crates
23. Malathion
24. Vaccinator
25. Canopy brooder
26. Nipple drinker
27. Egg filler flats
28. Blow pump
29. Wet and dry bulb thermometer
30. Bukhari

### **Practical Exercise/ activities**

Select any three questions from the list below and learner will attempt any two activities of 20 marks each.

1. Identify and write down the external body parts of poultry.
2. Perform chick brooding and write the steps taken.
3. Prepare quality feed for broiler.
4. Select good Layers and write their characteristic features.
5. Explain and perform Deworming and Medication in poultry.
6. Perform the activities involved in proper sanitation of farm Premises and equipments/ Appliances.
7. Explain and perform collection, packaging and storage of eggs.
8. Perform the steps involved in proper disposal of poultry farm waste.
9. Write down the steps involved in proper handling of birds and perform the activities.
10. Draw a sketch with dimensions of a poultry shed.

## Sample Question paper

**Time: 3hrs**  
**Max. Marks: 70**

- 1. Spot and comment on the following** **1 x 10 = 10 marks**
- i. Linear Feeder
  - ii. Incubator
  - iii. Rice bran
  - iv. Manual Debeaker
  - v. Potassium Permanganate
  - vi. Egg filler flats
  - vii. Candler
  - viii. Crates
  - ix. Wet and dry bulb thermometer
  - x. Lime
- 2. Attempt any two of the following exercise:** **2 x 20 = 40 marks**
- i. Perform chick brooding and write the steps taken.
  - ii. Explain and perform collection, packaging and storage of eggs.
  - iii. Prepare quality feed for broiler.
- 3. Practical record** **10 marks**
- 4. Viva voce** **10 marks**

**Certificate Course in Community Health (Revised)**  
**Course Code - 449-451**  
**Guidelines for Practical Examination**

**Paper - 1 Basic Life Sciences (449)**

**Maximum Marks: 120**

**Time : 2.00 Hrs.**

**Marking Scheme:**

<b>Activities</b>	<b>Marks Allotted</b>	<b>Remarks</b>
Practical Activities – Any two	50	(25 × 2)
Spotting – Any two	10	(5 × 2)
Practical records / Projects	20	
Viva-Voce	20	
Internal Assessment i.e. Discipline, Performance, Personality etc.	20	
<b>Total Marks</b>	<b>120</b>	

**Breakup of Practical Activities:**

• <b>Understanding of the objective</b>	–	<b>02</b>
• <b>Selection of equipment</b>	–	<b>08</b>
• <b>Principles and Laws</b>	–	<b>07</b>
• <b>Overview</b>	–	<b>03</b>
• <b>Results</b>	–	<b>05</b>
<b>Total Marks</b>	–	<b>25</b>

**Guidelines for Practical Examiner**

- Three practical activities (one from each section) should be given to the students from the list of practicals, and they have the option to perform any two activities.
- All required material (Tools, equipments etc.) should be available at the disposal of the examiner.
- Different sets of practical exercises can be given to different examinees.

**(A) List of Practical Activities**

**Section - A**

1. To examine the Human Skeletal system, draw the figure and write about its main parts & their functions.
2. To examine the Human Respiratory system, draw the figure and write about its main parts & their functions.
3. To examine the Human Digestive System, draw the figure and write about its main parts & their functions.

4. To examine the Human Circulatory system, draw the figure and write about its main parts & their functions.
5. To examine the Human Excretory System, draw the figure and write about its main parts & their functions.
6. To examine the Human Reproductive system, draw the figure and write about its main parts & their functions.
7. To examine the Human Nervous System, draw the figure and write about its main parts & their functions.

#### **Section - B**

8. To estimate the hemoglobin percentage in blood of the patient.
9. To determine the Blood Group and Rh Factor of an individual.
10. To determine the percentage of sugar in urine.
11. To determine the percentage of sugar in blood.
12. To detect the percentage of albumin in urine.
13. To take the body temperature of a patient.

#### **Section - C**

14. To perform and write in brief on the Practice of joints for leg (पैर के लिए संधि संचालन (जोड़ों) का अभ्यास)
15. To perform and write in brief on the Practice of joints for hands (हाथों के लिए संधि संचालन का अभ्यास)
16. To perform and write in brief on the Practice of Asans of abdominal group (उदरसमूह के आसनों का अभ्यास)
17. To perform and write in brief on the Relaxation Asans (विश्रामात्मक आसन)
18. To perform and write in brief on the Meditative Asans (ध्यानात्मक आसन)
19. To perform and write in brief on the Asans of Vajrasana group (वज्रासन समूह के आसन)
20. To perform and write in brief on the a group of Standing Asnas
21. To perform and write in brief on the Surya Namaskar
22. To perform and write in brief on the Backward Asanas
23. To perform and write in brief on the Exercises that are done prior to pranayama
24. To perform and write in brief on the Nadi-purification pranayama
25. To perform and write in brief on the Shitali Pranayama
26. To perform and write in brief on the Bhramari Pranayama
27. To perform and write in brief on the Bhastrika Pranayama
28. To perform and write in brief on the Yoganidra.

## **(B) Spotting**

### **General Instructions:**

During the examination, four spots from the list should be given to each students to identify them and write the brief comments (about 4-5 sentences) on it :

### **List for Spotting**

1. Diagram of a Human Cell
2. Model / Posters of skeletal system (कंकाल तंत्र का मॉडल/पोस्टर्स)
3. Skull Bones (करोटी-अस्थि)
4. Radius (बहिप्रकोष्ठिका)
5. Humerus (प्रगण्डिका)
6. Femur (फीमर)
7. Hip Bone (नितम्ब-अस्थि)
8. Tibia (टीबिया)
9. Fibula (फिबुला)
10. Vertebra (कशेरूक)
11. Rib (पसली)
12. Poster of Digestive system or any organ
13. Poster of Circulatory system
14. Poster of excretory system
15. Poster of Reproductive system
16. Poster of Respiratory system
17. Poster of Nervous System
18. Posters of Foods and their nutrients
19. Posters of Simple Diet
20. Posters of Rajasik Diet (राजसिक आहार पोस्टर्स)
21. Posters of Tamsic Diet (तामसिक आहार पोस्टर्स)
22. Posters of Shat karma (षट्कर्म पोस्टर्स)
23. Posters of Yogik Sukshma Kriyan (यौगिक सूक्ष्म क्रियाओं के पोस्टर्स)
24. Posters of Yogasan (योगासन के पोस्टर्स)
25. Posters of Pranayam (प्राणायाम के पोस्टर्स)

## **(C) Project work (Report of One Project)**

### **List of Project work:**

1. Dietary chart of balanced diet / sample diet.

2. Paste the images of different food items on the chart paper and mention the following points on them
  - 
  - Calorific Value
  - Nutrients present in food items
3. Record five cases of Anaemia and detect their haemoglobin (Hb)
4. Prepare a slide of the malaria parasite and write about it.
5. Take a blood sample to detect blood group and write about it.
6. Examine Urine for albumin and sugar.
7. Check blood sugar of a patient and write on it.

**Certificate Course in Community Health (Revised)**  
**Course Code - 449-451**  
**Guidelines for Practical Examination**

**Paper -2 Maternal and Child Health Care - 450**

**Maximum Marks: 120**

**Time : 2.00 Hrs.**

**Marking Scheme:**

<b>Activities</b>	<b>Marks Allotted</b>	<b>Remarks</b>
Practical Activities – Any two	50	(25 x 2)
Spotting –Any two	10	(5 x 2)
Practical records / Projects	20	
Viva-Voce	20	
Internal Assessment i.e. Discipline, Performance, Personality etc.	20	
<b>Total Marks</b>	<b>120</b>	

**Breakup of Practical Activities:**

• <b>Understanding of the objective</b>	–	<b>02</b>
• <b>Selection of equipment</b>	–	<b>08</b>
• <b>Principles and Laws</b>	–	<b>07</b>
• <b>Overview</b>	–	<b>03</b>
• <b>Results</b>	–	<b>05</b>
<b>Total Marks</b>	–	<b>25</b>

**Guidelines for Practical Examiner**

- Three practical activities should be given to the students from the list of practicals, and they have the option to perform any two activities.
- All required material (Tools, equipments etc.) should be available at the disposal of the examiner.
- Different sets of practical exercises can be given to different examinees.

**(A) List of Practical Activities**

1. To demonstrate the correct method of hands washing with soap and water and write about it.
2. To demonstrate the Purification of water by chlorination and write about it.
3. To prepare the Malaria Parasite Slide and write the procedure.
4. To Prepare the Sputum Slide and write its procedure.
5. To examine the bacilli & cocci through Gram Staining and write about it.
6. To examine the Contraceptives and write about it.

7. To Calculate the expected date of delivery (EDD) of a pregnant woman.
8. To Identify the high-risk pregnant women by recognizing signs, symptoms and factors leading to high risk pregnancy.
9. To examine the major criteria for confirmation a pregnancy.
10. To prepare a One-day sample Menu for pregnant women.
11. Major investigations for children.
12. One-day sample menu for lactating mother.
13. To advise a mother about nutrition and weaning practices.
14. To Calculate birth rate, infant mortality, and maternal mortality rate.
15. To prepare the Immunization Chart.
16. To demonstrate the correct Techniques of Personal Hygiene.
17. To demonstrate the food groups and their nutrients.
18. To Provide health education to the community.
19. To prepare the Map of your area.

### **(B) Spotting**

#### **General Instructions:**

During the examination, four spots from the list should be given to the students to identify them and write the brief comments (about 4-5 sentences) on it :

#### **List for spotting**

1. B.P. Instrument (रक्तचाप उपकरण)
2. Clinical thermometer
3. Stethoscope
4. Embryo height chart
5. Photo-scope
6. Weighing Machine
7. Copper-T / Multiload Devices
8. Oral Pills (खाने की गोलियाँ)
9. Condom (निरोध)
10. Foam Tablets
11. Chart to maintain the cold chain for polio
12. Formulae for calculating IMR/MMR (Infant Mortality rate / Maternal Mortality Rate)
13. Calculating the expected date of delivery (EDD) from the last menstrual period (LMP)
14. Bandit Solutions
15. Hemoglobinometer

### **(C) Project work (Report on One Project)**

#### **List of Project work:**

1. Survey of houses in your community
2. Filling up of an Antenatal Card.
3. Visit the childrens clinic.
4. Participation in an Immunization Program/Pulse Polio programme.
5. Refer the high risk pregnant women to the doctor for further investigation.

**Certificate Course in Community Health (Revised)**  
**Course Code - 449-451**  
**Guidelines for Practical Examination**

**Paper -3 Prevention and Management of Diseases and Emergency - 451**      **Max. Marks: 120**  
**Time : 2.00 Hrs.**

**Marking Scheme:**

<b>Activities</b>	<b>Marks Allotted</b>	<b>Remarks</b>
Practical Activities – Any two	50	(25 x 2)
Spotting –Any two	10	(5 x 2)
Practical records / Projects	20	
Viva-Voce	20	
Internal Assessment i.e. Discipline, Performance, Personality etc.	20	
<b>Total Marks</b>	<b>120</b>	

**Breakup of Practical Activities:**

• <b>Understanding of the objective</b>	–	<b>02</b>
• <b>Selection of equipment</b>	–	<b>08</b>
• <b>Principles and Laws</b>	–	<b>07</b>
• <b>Overview</b>	–	<b>03</b>
• <b>Results</b>	–	<b>05</b>
<b>Total Marks</b>	–	<b>25</b>

**Guidelines for Practical Examiner**

- Three practical activities should be given to the students from the list of practicals, and they have the option to perform any two activities.
- All required material (Tools, equipments etc.) should be available at the disposal of the examiner.
- Different sets of practical exercises can be given to different examinees.

**(A) List of Practical Activities**

1. To prepare the First aid box.
2. To impart the Health education on prevention and control of infectious diseases.
3. To Prepare the life-saving solution (ORS).
4. To demonstrate First-aid management in the event of a drowning emergency.
5. To provide Primary treatment management on fracture.

6. To demonstrate the First aid management of bleeding from the nose.
7. To demonstrate First aid to be given in case of dog bite.
8. To stop hemorrhage in an emergency, when a blood vessel is injured.
9. To demonstrate the use of Ambu Bag in case of respiratory distress.
10. To provide the External cardiac massage in an emergency.
11. To Check the label of a drug packet/vial.
12. To prepare a Chart of patient on his fluid consumption and urine passed out.
13. Checking body temperature of a patient.
14. To Check the pulse rate of the patient.
15. To Measure the respiratory rate of the patient.
16. To Measure Blood Pressure (BP) of the patient.
17. Understanding/reading of doctor's prescription.
18. To demonstrate the First aid care to be provided in case of a foreign body in the ear.
19. To provide the First aid in case food poisoning.

## **(B) Spotting**

### **General Instructions:**

During the examination, four spots from the list should be given to the students to identify them and write the brief comments (about 4-5 sentences) on it :

### **List for spotting**

1. Pulses Polio Medicine Vial
2. Chlorine tablets
3. B.C.G. Vaccine vial
4. Microscope
5. D.P.T. Vaccine vial
6. Bacterial Poster
7. Splint (लकड़ी का तख्ता)
8. Triangular Bandage
9. Blood pressure measurement device
10. First-Aid box
11. Ambu Bag
12. Tourniquet

### **(C) Project work (Report on one Project)**

#### **List of project works:**

1. Visit a primary health centre and prepare a report.
2. Make a one-day Sample Diet Plan (Menu).
3. Visit a DOTS Centre and observe how patients are given medicines and prepare an overview report.
4. Visit a Malaria Centre / Clinic and observe the anti-larvae measures being taken and prepare a detailed report.
5. Visit a hospital, observe the anti-rabies treatment provided to the persons bitten by dogs and write a report.

# Yoga Teacher Training Programme

## Guidelines for Practical Examination

Paper - 4: Practical Yoga Training (498)

Maximum marks: 200

Time : 5.00 hrs

### Marking Scheme:

Activities	Marks Allotted	Remarks
Practical activities - any four	100	(25 x 4)
Spotting - any four	20	(5 x 4)
Practical Record/File	20	
Viva-Voce	10	
Internal Assessment i.e. Discipline, Performance, Personality etc.	50	(given by centre)
Total Marks	<b>200</b>	

### Breakup of Practical Activities:

• Understanding of the objective	-	02
• Selection of Initial Position	-	02
• Principles and Methods	-	14
• Overview	-	05
• Result	-	02
Total marks	-	<b>25</b>

### Guidelines for Practical Examiner

- Six practical activities (one from each group) should be given to the students from the list of practicals, and they have the option to perform any four activities.
- All required material (Tools, equipments etc.) should be available at the disposal of the examiner.
- Different sets of practical exercises can be given to different examinees.
- One Practical Activity from each group may be given to the examinees.

### (A) List of Practical Activities

#### Group -1

1. Karma yoga
2. Bhakti yoga
3. Yogic diet: Fasting with lemon water
4. Yogic diet: Preparation of diet chart

5. Preparation of Seasonal diet chart

6. Preparation of Medicinal foods

**Group -2**

7. Shatkarma Practice: Kunjal kriya

8. Shatkarma Practice: Laghu shankh prakshalana

9. Shatkarma Practice: Jalneti kriya

10. Shatkarma Practice: Nauli kriya

11. Shatkarma Practice: Kapalbhata

12. Shatkarma Practice: Tratak kriya

13. Suksham Yogic Practices: Sandhi sanchalan practice for legs (joints)

14. Suksham Yogic Practices: Sandhi sanchalan practice for hands

15. Suksham Yogic Practices: Practice of Udarsamuh asanas

16. Suksham Yogic Practices: practice of shakti-bandh samuh asanas

17. Suksham Yogic Practices: practice for eyes

**Group - 3**

18. Vishramatmak asan

19. Dhyanatmak asan

20. Asanas of vajrasan group

21. Gaumukhasan

22. Set of asans performed while standing

23. Surya-namaskar

24. Asanas performed by bending backward

25. Asanas performed by bending forward

26. Asanas performed by using head

27. Asanas performed by twisting Spine

28. Asanas of balancing

29. A set of classical asanas

**Group - 4**

30. Pre-practices of Pranayama

31. Nadi-shodhan pranayama

32. Shitli

33. Bhramari

34. Bhastrika

**Group - 5**

35. Posture of hands/Hast-mudra

36. Viprit karni posture

37. Udidyaan-bandh

**Group - 6**

38. Chanting of Mantras

39. Yog-Nidra

40. Dharna practice

41. Meditation

**(B) List for Spotting**

Necessary instructions: During the examination, four spots from the list may be given to the students to identify and brief comments (about 4-5 sentences) on them:

1. Srimad Bhagvad Gita

2. Hathayoga Pradipika

3. Gherand sahinta

4. Patanjali Yoga Sutra

5. Gurukul education system

6. Picture of Mumukshutva

7. Diagram of Cell structure

8. Model/Posters related to Anatomy & Physiology

9. Model /posters related to Yogic Practices

# Yoga Teacher Training Programme

## Guidelines for Practical Examination

**Paper - 5: Yoga Teaching Skills and Practices (499)**

**Maximum marks: 150**

**Time : 3.00 hrs**

### Marking Scheme:

Activities	Marks Allotted	Remarks
<b>Training</b> on one of Yogic practices (shatkarma, Suksham vyayam, Asana, Pranayama, Meditation etc.)	80	Student will demonstrate the same
<b>Micro and macro training</b> (Training of at least one practice on shatkarma, Yogic Suksham vyayam, Asana, Pranayama, Meditation)	30	Marks on the basis of in-house teaching & training
<b>Internal assessment</b> (on the basis of Yoga teacher's qualities / ethics, personality, and lifestyle)	20	
<b>Viva - Voce</b>	20	
Total Marks	<b>150</b>	

### Breakup of Practical Activities:

• Planning and Structure of Yoga Sessions	–	10
• Voice projection	–	10
• Pre-feasibility of yoga exercises	–	10
• Posture and confidence (state)	–	10
• Training session	–	40
– Prayer/ mantra Chanting		
– Sukshma Kriyaen		
– One Asana		
– A Pranayama or Mudra- bandh practice		
– Meditation		
– Motivation and Encouragement		
– Total marks	–	80

**Guidelines -:** Internal and external assessments of learners will be done under the following subjects:

1. Principles of Performance and Teaching.
2. Yoga teacher's qualities and personality.
3. Yoga's lifestyle.

4. Voice projection, motivations of learners, and guidance
5. Overview, support and improvement
6. Planning / preparations and points to be kept in mind while conducting the yoga class
7. Preparation of Yoga
8. Precautions to be taken
9. Yoga's lifestyle
10. Yoga teaching
11. Yoga Training
  - Micro Training (with learners of yoga classes)
  - Group training (with the students of any institute / school)

#### **Guidelines for Practical Examiner :**

- Examiner should ask the learners to provide training on any one or two exercises out of Shatkarma, Yogic micro exercise, Pranayam, Meditation etc.
- Practical exercise from any one of these exercises-: Yoga and diet, a yoga practice, Pranayam or mudra-bandh and meditation, yoga nidra, Mantra chanting group etc. can be given to examines.
- All necessary materials (Equipment, materials etc.) should be available at the disposal of the examiner.
- Individual trainee can be examined on different -different exercises among the given practical exercises.

#### **Internal assessment:**

Internal assessment of learners will be assigned by AVIs

#### **Micro training:**

- For the training of learner in yoga exercises, the experimental yoga will be selected from the training manual; Shatkarma, Yogic micro exercise, Pranayam, Asana, Meditation etc.).
- The learners will complete the micro-training with their colleagues in yoga class.
- Internal evaluation of the learner's micro-training will be done by Yoga teacher and his/her companion.
- Each learner will prepare a file / record on micro training, which will be checked by the examiner at the time of the examination.

#### **Macro Training -:**

- Just like micro training, each learner will also do macro training. This training will be conducted in other institutions, yoga centers, or schools etc.
- Each learner may select one or two exercises from yoga training practical manual (Shatkarma, Yogic micro exercise, Pranayam, Asan, Meditation etc.).
- According to the exercises selected from the yoga training practical manual, the learner will have to train, in which yoga teacher will evaluate the training of the learner.
- On the basis of training, the learners will prepare a file / record.

## Certificate in Web Designing and Development (622)

**Time: 3 Hrs**

**Max. Marks: 70**

### Scheme of Evaluation

Practical - 60 marks

Practical Record - 5 marks

Viva Voce - 5 marks

### Note:

- (i) The examiner should set a similar question paper for the candidates prior to the examination.
- (ii) The examiner must ensure the required software is available in the computer.

### Distribution of Marks

S.No.	Name of Lessons	Marks
1	Internet and Services	5
2	Basics of HTML and CSS	15
3	Advanced HTML and CSS	15
4	Dreamweaver	5
5	Scripting	10
6	Creating Animation using Flash	5

### Suggested Practical Activities

- 1) Create a Navigation bar (with dropdown) using CSS.
- 2) Create a web page basic.html that shows the use of <P>, <BR> and <PRE>
- 3) Create a simple animation file in Flash.
- 4) Design a HTML page that displays the following table

### QUALITY COMPUTER ACCESSORIES

S.No.	Description	Cost Price	Selling Price	Profit %	Qty Sold	Sale Amount	Profit
1	CD	5	8	60.00	12	96	36
2	DVD	10	15	50.00	20	300	100
3	Pen Drive	300	330	10.00	5	1650	150
4	Mouse	120	140	16.67	8	1120	160
5	Keyboard	180	210	16.67	12	2520	360
					<b>Total</b>	<b>5686</b>	<b>806</b>

- 5) Obtaining IP address of your computer, with Internet connection and without Internet connection.
- 6) Identify type of Internet connection (WiFi or LAN) on computer and enable and disable it.
- 7) Open NIOS website ( [www.nios.ac.in](http://www.nios.ac.in)) and save various information such as saving web site, web page and images.
- 8) Use Google and Yahoo search engine to search NIOS, NIC and DRDO website.
- 9) Search websites of all leading newspapers and universities in your state.
- 10) Create new email account on Gmail and Rediffmail.
- 11) Obtain IP address of [www.google.com](http://www.google.com) and [www.yahoo.com](http://www.yahoo.com)
- 12) Change Default Gateway, Subnet mask and IP address of your computer.
- 13) Create a web page and make use of various formatting tags in the same.
- 14) Create an ordered and an unordered list in an HTML document.
- 15) Create a web page in Dreamweaver software.
- 16) Create webpage HTML document and insert tables in it.
- 17) Create a webpage HTML document and add hyperlink [www.google.com](http://www.google.com) in the page.
- 18) Create a HTML document using frames and various related attributes.
- 19) Create form such as Students Registration Form, Student Feedback Form, and Train Enquiry Form.
- 20) Develop a webpage for your school using HTML tags and use scripting in the code.

## Sample Question Paper

Time: 3 hrs.

Max. Marks: 60

1. Write a HTML form to design a form which should allow you to enter the following data (use text box, Combo box etc.)

Registration	
First Name:	<input type="text"/>
Last Name:	<input type="text"/>
Father's Name:	<input type="text"/>
Date of Birth:	<input type="text"/>
Qualification:	<input type="text"/>

2. Search websites of all leading newspapers and universities in your state.
3. Design a HTML page that displays the following table

**NIOS Vocational Computer Courses**

S.No.	Vocational Computer Courses	Course Code	Theory	Practical
1	Basic Computing	608	40	60
2	Desk Top Publishing	613		
3	Web Designing and Development	622	80	70+30
4	Data Entry operations	632	30	70
5	Certificate in Computer Applications	711	40	60
		712	40	60

4. Create a web page in Dreamweaver software.
5. Create any one form such as Student Feedback Form, and Enquiry Form. Add alert box when the form is submitted.
6. Create a simple animation file in Flash.

## Web Development (660)

**Time: 3 Hrs**

**Max. Marks: 70**

### Scheme of Examination

<b>Practical</b>	<b>50 marks</b>
<b>Viva Voce</b>	<b>10 marks</b>
<b>Practical record / Files</b>	<b>10 marks</b>

### Note:

- (i) The examiner should set a similar question paper for the candidates prior to the examination.
- (ii) The examiner must ensure the required software is available in the computer.
- (iii) The examiner should inform the learners that they have to take the screenshots of their work progress and place the print outs of those screenshots in practical record or file.

### Distribution of Marks

OpenOffice – 10 marks

HTML and Dreamweaver – 10 marks

Advanced HTML and Scripting – 20 marks

Flash and Photoshop – 10 marks

### List of Suggested Practicals

1. Create a webpage using all types of the container tags.
2. Using objects in Flash, create a movie in which the objects change their colors.
3. Create four frames having stars of different color and then create a frame by frame animation of blinking stars in Flash.
4. Using Dreamweaver create a webpage having three different sections. Give these sections a heading, a background color. Insert following three items in each of the sections respectively – an image, some text and a video.
5. Create a form for student registration in HTML. It should be having all types of inputs like textbox, dropdown, radio button and check box.
6. Create an input form for users to enter their name, date of birth, email id in HTML. Validate all these inputs against all possible scenarios like, name should not contain any numeric characters, date of birth should not be greater than today's date and email id should be valid – check the format – it should have an '@' symbol and no spaces etc.
7. Create a web page that contains the image of a human. Form an image map such that the user clicks on any part of the body, a web page showing information on that part of the body is displayed.

8. Use Macromedia Flash, create an animation showing “Disco lights”. In this about 8 to 9 balls appear randomly on the screen one by one such that they give an appearance of disco lights.
9. Create webpages similar to your institution website using Dreamweaver.
10. Create an HTML page which should have a table that shows the performance of students of your institution. Add background colors, use rowspan and colspan attributes in table tag.

### Sample Question Paper

**Time: 3 Hours**

**Max. Marks: 50**

1. Create a web page with the following details:

- (i) Title – About Solar System

Content – Two lines about Solar system. This text should be in center aligned with blue colour and left margin of minimum 20px.

Background Color – Yellow

**5 marks**

- (ii) Insert a numbered list of all the planet names in a table.

**5 marks**

- (iii) Insert the table and write the following information in it

Name of the Planet	Distance from Sun
Mercury	57.91 million km
Venus	108.2 million km
Earth	149.6 million km
Mars	227.9 million km
Jupiter	778.5 million km
Saturn	1.433 billion km
Uranus	2.871 billion km
Neptune	4.495 billion km
Pluto	3.67 billion miles

Table should be bordered (4px) and centrally aligned.

Headings should be in uppercase alphabets and centrally aligned.

**10 marks**

(iv) Now insert the following in your web page:

- Take pictures of any three planets. Insert the name of the planet on each respective picture using Photoshop. Text size should be 24 px and it should be in white color.
- Now create an animation on Flash in which these three pictures shall appear one by one.

**20 marks**

OR

- Insert a text box where one can input any text. Insert a submit button after this text box. On clicking of this submit button, read the content of the text box and check whether the text entered was any name of the planet. If it is not a planet name then display an alert message “please enter any planet name”. If it’s a planet name then display an alert message “Your planet name is \_\_\_\_\_”.

**20 marks**

2. Document the project that you have just created in PowerPoint presentation. Show your progress using screenshots of important steps (atleast add 5 screenshots)

**10 marks**

## CRM Domestic Voice (661)

**Time: 3 Hours**

**Max. Marks: 70**

### **Scheme of Examination**

Practical	30 marks
Communication skills	10 marks
Presenting the results	10 marks
Viva Voce	10 marks
Practical record / Files	10 marks

### **Note:**

- (i) The examiner should set a similar question paper for the candidates prior to the examination.
- (ii) Some of the activities can be performed like role play. The examiner should observe their performance and the marks should be awarded depends upon their motive / response /confidence in solving the issue, what are the factors he / she considered for solving the issue. His response should be satisfactory for both company and the customer.

### **Distribution of marks**

Team building and Work life balance – 10 marks

Communication and Customer services – 10 marks

Internet and email – 10 marks

### **List of suggested practicals**

1. Prepare a brief introduction about yourself. Speak for three minutes.
2. Create a new folder named personal\_data in a drive in your computer. Create your resume in MS Office or OpenOffice and save it in a personal\_data folder.
3. Read any newspaper for fifteen to twenty minutes in a day and write the brief news.
4. Create your email account and send an email to your teacher with attaching your assignment in that.
5. Reset your browser by clearing browsing history / data from the browser.
6. Assume that you are planning to apply for the post of “Customer Support Executive”. Send an e-mail to your instructor that you are applying for the post of customer support executive. Attach your brief resume in the email.
7. Send an e-mail to your friend about new services / offers launched in your company.

8. You being a team leader have been given an assignment from your company to sell the products. Please describe the parameters of your prospective team as per the requirements so that your task is completed within the given time frame.
9. Describe any product that you want to promote or sell – for example a pen.
10. One of the customers made a complaint about the product your company is selling. Write a proper reply mentioning that your company can solve the issue immediately.

### **Sample question paper**

**Time: 3 Hours**

**Max. Marks: 30**

Attempt any 3 activities:

1. You are working with a mobile company. A customer purchased a new mobile last week from your company which has stopped working suddenly. He calls in to complain. How will you take this call up?
2. You are a manager at XYZ organization. Five new members have joined your team. Write an Email to welcome them. Write another email to send the information about their joining with other members of your team.
3. This is the time for annual review and your friend has to meet his /her boss next week. Write a note for your friend to prepare for his/her meeting and how should he/she represent himself / herself in order to get promoted?
4. One of your team members is loaded with some really important work. He has a family get-together tomorrow and thus wants to leave early. Being a team leader what should you do? How will you solve this? Please write your points in the document and submit to the examiner.
5. While solving the customer's issues you might have visited different URLs. Find out the complete list of pages you have visited and email them to your boss.

# Computer Hardware Assembly and Maintenance (663)

**Time: 3 Hours**

**Max. Marks: 70**

## Scheme of Examination

Practical	50 marks
Viva Voce	10 marks
Practical record / Files	10 marks

## Note:

- (i) The examiner should set a similar question paper for the candidates prior to the examination.
- (ii) The examiner must ensure the required software is available in the computer. Also, learners need to install some of the software(s) as a practical – so make sure that those software(s) are NOT already installed in the system.

## Distribution of marks

Computer Components - 10 marks

Assembling a Personal Computer and Operating System Installation – 20 marks

Network Configuration – 10 marks

Problem Diagnosis, Troubleshooting and Maintenance – 10 marks

## List of Suggested Practicals

1. In a school there are three computer labs each having 10 computers in three wings. What topology and transmission medium you will use to connect computers within the labs and to connect all three labs.
2. Setup a broad band connection for a personal computer.
3. Install wired network in Windows 7 operating system.
4. Configure a network in Ubuntu Operating system.
5. Install wireless network in Windows 7.
6. Configure your browser for not to store the browsing history.
7. Take a backup of your computer system and store it in DVD / hard disk.
8. Create a new disk drive of 15 GB in your computer system using the volume partition.
9. Configure the network printer with a new computer.
10. Set up a new E-mail account on Outlook.
11. Identify types of computer and find its usage in agricultural, education and weather forecasting areas.
12. Identify various computer components.
13. Dismantle a Desktop Computer.
14. Assemble Desktop Computer.
15. Install any operating system.

## Sample Question Paper

**Time: 3 Hours**

**Max. marks: 50**

1. Identify any five ports of your CPU and name the corresponding devices connected to these ports.  
**5 Marks**
  
2. For the Windows operating system installed on your computer, identify and mention the following configurations:
  - a. RAM
  - b. Processor
  - c. System type (32 bit / 64 bit)
  - d. Workgroup
  - e. Volume partition**5 marks**
  
3. Install the following:
  - a. Driver for printer / scanner.
  - b. OpenOffice or any open source software, for example Open Shot Video editor.

**OR**

Setup an email account on Outlook.

**15 marks**

4. Network printer is connected through a cable but still the system is not able to identify the connected device. Troubleshoot the issue and take the print out of the test page.  
**10 marks**
  
5. Setup a restore point for any date of the last week and take a backup also.  
**15 marks**

## Beauty Therapy (640)

**Time: 3 hrs**

**Maximum Marks: 70**

### Scheme of Practical Examination:

S. No.	Items		Distribution of Marks	Remarks
1.	Practical Activity	Major Activity	1 X 20 = 20 marks	Learner has to perform any one activity out of the given two.
		Minor Activity	3 X 10 = 30 marks	Learner has to perform any three activities out of the given five.
2.	Practical Record		10 marks	Learner has to produce Practical Record at the time of Practical Exam.
3.	Viva		10 marks	Knowledge and understanding of the learners should be assessed by the examiner

### Note:

- Each student will be required to do one activity listed under 'Major Activities' out of the two activities given in the question paper. (See list attached)
- Each student will be required to perform any three activities listed under 'Minor Activities' out of given five activities given in the question paper. (See list attached)
- Each major activity is of 20 marks and minor activity is of 10 marks each.
- The examiner while allotting the activities must ensure that the activities assigned help assess varied skills in different areas of beauty.

### Breakup of Marks for the Practical Activities:

S. No.	Criteria	Major Activity	Minor Activity		
			I	II	III
1.	Preparation of Client	2	1	1	1
2.	Preparation of trolley and tray	2	1	1	1
3.	Precautions observed	2	1	1	1
4.	Proper sequence and procedure	8	4	4	4
5.	Finishing	2	1	1	1
6.	Time taken	2	1	1	1
7.	Outcome of performance/client satisfaction	2	1	1	1
		20	10	10	10
	<b>Viva = 10 (4+2+2+2)</b>	4	2	2	2

## Beauty Therapy (640)

### List of Major Activities:

1. Assemble the required tools, equipment and materials and demonstrate 'Cleanup with bleach' on face of the client.
2. Analyze the skin of the client, and as per your observations do a Facial for
  - oily skin
  - dry skin
  - normal skin
  - acne prone skin
3. Demonstrate Anti ageing facial on a client.
4. Administer a Fruit facial to a client with sensitive skin.
5. Observing all prescribed precautions undertake waxing on arms with under arms.
6. Show the procedure of Full legs waxing.
7. Undertake and show the method of a simple Manicure.
8. Undertake and show the method of a simple Pedicure.
9. Choosing the correct size of rollers in relation to length and texture of hair demonstrate Roller setting.
10. Prepare the client and do Step cutting of hair.
11. Demonstrate Razor cutting on shoulder length hair.
12. Do Party makeup with hair style on your client.
13. Demonstrate the application of Bridal make up on a client.
14. Prepare the Henna Paste and apply the henna paste to colour the hair using the correct procedure.

### List of Minor Activities:

1. Analyse the skin of the client. Prepare and apply face packs for any one of the following to suit your client's skin:
  - oily,
  - dry and
  - normal skin
2. Prepare the tray and show the procedure of Eye brow shaping and threading of the client.
3. Remove facial hair of a senior citizen client ensuring no damage to the loose skin of the client.

4. Demonstrate the procedure of Hand massage you would adopt as a part of Manicure.
5. Observing all prescribed precautions apply Nail polish on your client's Hand nails.
6. Undertake Head massage using hot oil.
7. Demonstrate the steps you will adopt for Shampooing and Conditioning of hair.
8. Blow dry hair of a client who has just undertaken a shampoo in the salon.
9. Undertake Trimming of hair of a client with short hair.
10. Following the correct procedure show how Henna is applied on hair.

**Beauty Therapy (640)**  
**Sample Question Paper**

**Time: 3 hrs**

**Max. Marks: 70**

**1. Perform any one of the following. 20 marks**

Prepare the client and demonstrate 'Cleanup with bleach' on face.

or

Demonstrate waxing on arms with under arms, observing all prescribed precautions.

**2. Perform any 3 activities out of the following: 3 X 10 = 30 marks**

- i. Prepare the tray and show the procedure of Eye brow shaping and threading of the client.
- ii. Demonstrate the steps you will adopt for Shampooing and Conditioning of hair.
- iii. Observing all prescribed precautions apply Nail polish on your client's Hand nails.
- iv. Undertake Head massage using hot oil.
- v. Following the correct procedure, show how Henna is applied on hair.

**3. Practical Record 10 marks**

**4. Viva Voce 10 marks**

## Hair Care and Styling (641)

**Time: 3 hrs**

**Maximum Marks: 70**

### Scheme of Practical Examination:

S. No.	Items		Distribution of Marks	Remarks
1.	Practical Activity	Major Activity	1 X 20 = 20 marks	Learner has to perform any one activity out of the given two.
		Minor Activity	3 X 10 = 30 marks	Learner has to perform any three activities out of the given five.
2.	Practical Record		10 marks	Learner has to produce Practical Record at the time of Practical Exam.
3.	Viva		10 marks	Knowledge and understanding of the learners should be assessed by the examiner

#### Note:

- Each student will be required to do one activity listed under 'Major Activities' out of the two activities given in the question paper. (See list attached)
- Each student will be required to perform any three activities listed under 'Minor Activities' out of given five activities given in the question paper. (See list attached)
- Each major activity is of 20 marks and minor activity is of 10 marks each.
- The examiner while allotting the activities must ensure that the activities assigned help assess varied skills in different areas of beauty.

#### Breakup of Marks for the Practical Activities:

S. No.	Criteria	Major Activity	Minor Activity		
			I	II	III
1.	Preparation of Client	2	1	1	1
2.	Preparation of trolley and tray	2	1	1	1
3.	Precautions observed	2	1	1	1
4.	Proper sequence and procedure	8	4	4	4
5.	Finishing	2	1	1	1
6.	Time taken	2	1	1	1
7.	Outcome of performance/client satisfaction	2	1	1	1
		20	10	10	10
	<b>Viva = 10 (4+2+2+2)</b>	4	2	2	2

## **Hair Care and Styling (641)**

### **List of Major Activities:**

1. Demonstrate a Blunt Hair Cut on a client with shoulder length hair.
2. Prepare the trolley and show the procedure of 'U' Cut hair style.
3. Analyze the texture of hair and show the steps you would adopt to do a Layer Cut.
4. Following the prescribed precautions, undertake Hair pressing.
5. Undertake Hair crimping of medium length hair.
6. Show Hair curling using curling rod.
7. Demonstrate Electric roller setting on a client with curly hair.
8. Using the appropriate technique demonstrate Hair lightening.
9. Undertake perming of client with thin hair.
10. Demonstrate the method of Hair relaxing and re-bonding.

### **List of Minor Activities:**

1. Undertake Head massage using hot oil.
2. Assemble required tools and materials and show the procedure of Shampooing and Conditioning.
3. Show the procedure of Trimming of long hair.
4. Demonstrate sectioning of hair for any one of the following:
  - ◆ cutting,
  - ◆ perming and
  - ◆ roller setting
5. Set the right temperature of dryer according to the season and Blow dry the client's hair.
6. Prepare the hair colour paste and apply using the correct procedure for coloring the hair.
7. Following the correct procedure show how Henna is applied on hair.
8. Choose the correct size comb and brush in relation to the hair quality and do Back combing.
9. As per the client's preference do hair Braiding

10. Demonstrate the following roller setting –
  - ◆ on - base,
  - ◆ half- base and
  - ◆ off- base
11. Demonstrate any two hair styles using curling rods.
12. Undertake the preparation of clients for different hair services.
13. Select and do a hair style for the given model, giving four reasons to validate your choice.
14. Demonstrate the using of end papers in perming.
15. Demonstrate hair lightening of two streaks of hair.

## Sample Question Paper

**Time: 3 hrs**

**Max. Marks: 70**

**1. Perform any one of the following.**

**20 marks**

Demonstrate Blunt Hair Cut on a client with shoulder length hair.

or

Undertake Hair crimping of medium length hair.

**2. Perform any 3 activities out of the following:**

**3 X 10 = 30 marks**

- i. Apply Henna on hair of the client, using the correct procedure.
- ii. Demonstrate **on - base , half- base and off- base** roller setting on client's hair.
- iii. Select a hair style for the given model giving four reasons to validate your choice.
- iv. Demonstrate hair lightening of two streaks of hair.
- v. Show the procedure of Trimming of long hair.

**3. Practical Record**

**10 marks**

**4. Viva Voce**

**10 marks**

## Hand and Foot Care (642)

**Time: 3 hrs**

**Maximum Marks: 70**

### Scheme of Practical Examination:

S. No.	Items		Distribution of Marks	Remarks
1.	Practical Activity	Major Activity	1 X 20 = 20 marks	Learner has to perform any one activity out of the given two.
		Minor Activity	3 X 10 = 30 marks	Learner has to perform any three activities out of the given five.
2.	Practical Record		10 marks	Learner has to produce Practical Record at the time of Practical Exam.
3.	Viva		10 marks	Knowledge and understanding of the learners should be assessed by the examiner

#### Note:

- Each student will be required to do one activity listed under 'Major Activities' out of the two activities given in the question paper. (See list attached)
- Each student will be required to perform any three activities listed under 'Minor Activities' out of given five activities given in the question paper.
- Each major activity is of 20 marks and minor activity is of 10 marks each.
- The examiner while allotting the activities must ensure that the activities assigned help assess varied skills in different areas of beauty.

#### Breakup of Marks for the Practical Activities:

S. No.	Criteria	Major Activity	Minor Activity		
			I	II	III
1.	Preparation of Client	2	1	1	1
2.	Preparation of trolley and tray	2	1	1	1
3.	Precautions observed	2	1	1	1
4.	Proper sequence and procedure	8	4	4	4
5.	Finishing	2	1	1	1
6.	Time taken	2	1	1	1
7.	Outcome of performance/client satisfaction	2	1	1	1
		20	10	10	10
	<b>Viva = 10 (4+2+2+2)</b>	4	2	2	2

## **Hand and Foot Care (642)**

### **List of Major Activities:**

1. Undertake and show the method of a regular Manicure.
2. Undertake and show the method of a simple Pedicure.
3. Client preparation and undertaking of French Manicure.
4. Client preparation and undertaking of French Pedicure.
5. Client preparation and undertaking of Oil Manicure.
6. Client preparation and undertaking of Paraffin Manicure.
7. Client preparation and undertaking of Paraffin Pedicure.
8. Client preparation and undertaking of Oil Pedicure.
9. Demonstrate Marble nail art on a client with long nails.
10. Client preparation and undertaking of Bullion bead nail art on a client with long nails
11. Undertake Foil nail art on a client with long nails.
12. Show the procedure of applying Free hand 2D nail art on a client with short nails.

### **List of Minor Activities:**

1. Observing the necessary precautions, show the removal of dead skin of feet.
2. Demonstrate cuticle removal and nail cutting of client's hands.
3. Show the procedure of shaping of nails of hands.
4. Demonstrate the procedure of Hand massage you would adopt as a part of a Manicure.
5. Demonstrate the procedure of foot massage you would adopt as a part of a Pedicure.
6. Demonstrate the procedure of scrubbing of hands and feet.
7. Apply nail enamel on the client's nails neatly, observing necessary precautions.
8. Demonstrate the procedure of buffing and filing of nails.
9. Prepare client and trolley for manicure.
10. Prepare client and trolley for pedicure.
11. Demonstrate procedure of applying and cleaning of mud mask spa.
12. Demonstrate procedure of salt and sugar spa of hands and feet.
13. Demonstrate procedure of Stone spa.
14. Demonstrate procedure of Flower petal spa.
15. Demonstrate the method of communication you will adopt while interacting with a client of different culture and language.

## **Hand and Foot Care (642)**

### **Sample Question Paper**

**Time: 3 hrs**

**Max. Marks: 70**

- 1. Perform any one of the following: 20 marks**  
Prepare the client, trolley and demonstrate Bullion bead nail art on a client with long nails.  

or

Prepare the client and demonstrate French Pedicure.
- 2. Perform any 3 activities out of the following: 3 X 10 = 30 marks**
  - i. Demonstrate the massage procedure undertaken in a pedicure.
  - ii. Prepare the client and trolley for manicure.
  - iii. Apply nail enamel on client nails neatly, observing all necessary precautions.
  - iv. Demonstrate procedure of applying and cleaning of mud mask spa.
  - v. Perform Scrubbing of hands and feet of the client as per the correct procedure.
- 3. Practical Record 10 marks**
- 4. Viva Voce 10 marks**

## GUIDELINES FOR PRACTICAL EXAMINATIONS

### AYURVEDA ASSISTANT (665)

Max. Marks: 100

Time: 3.00 hrs.

Pass Criteria: 50

#### Marking Schemes:

Activities	Marks Allotted	Remarks
Practical Activities – any two	40 (20x2)	
Spotting (10 spots)	30 (10x3)	
Project work/ Report on the work during attachment with concerned centre	20	
Viva- Voce	10	
<b>Total Marks</b>	<b>100</b>	

#### Breakup of Practical Activities:

• To understand the Aim	-	02
• Correct selection of Tools/ equipment/Materials Required	-	05
• Procedure	-	07
• Result/ Observation	-	03
• Benefits	-	03
<b>Total</b>	<b>-</b>	<b>20</b>

#### Guidelines for Practical Examiner

- Four practical activities should be given to the students from the list and they have the option to perform only two activities.
- All the required material (Tools, Equipments etc.) should be available at the Centre of examiner.
- Different sets of the practical activities can be given to the different examinees.

#### Paper- Ayurveda Assistant

##### Spotting:

**30 Marks (10x3)**

1. Identification of any 5 Rasas with closed eyes and its functions (Two marks for each Rasa)
2. Identification of any five Medicinal plants and its use (Two marks for each plants)

##### Practical Activities

**40 Marks (20x2)**

- a. Assess the Agni for 3 persons irrespective of gender to control his vitiated Doshas and record the observation.

- b. Assess the type of Dosha vitiated in at least 2 individuals who are unhealthy or under treatment for any disease and record the observations.
- c. Assess the Prakriti of at least 5 individuals and submit the interpretation and observation.
- d. Perform Abhyangam on an individual on whole body and report its observation and conclusion.
- e. Apply Anjana/ Collyrium on at least 2 individual and record its observation.
- f. Perform Pratimarsha Nasya on an individual having hair related problems or suffering from headache/ stiffness of neck and record its observation and conclusion.
- g. Perform Gandusha(Oil Pulling)/ Kavalagraha(Gargling) on an individual by using medicated decoction.
- h. Plan diet with different food items and lifestyle with respect to Grishma Ritu (Mid-May to Mid-July).
- i. Plan diet with different food items and lifestyle with respect to Hemant Ritu (Winter Season). Mention specific contraindication if any.
- j. Plan diet with different food items and lifestyle with respect to Varsha Ritu (Rainy Season).
- k. Prepare a 24 hour dietary regime for a healthy adult person by following the type of Food Preparation, Intake of Water and Rules to be followed for that particular diet.
- l. Preparation of Swaras Kalpana described in Ayurveda and applies by giving 10 to 20 ml of Tulasi Swarasa thrice a day in divided doses to at least 3 persons suffering from kasa and record your observations before and after usage.
- m. Preparation of Churna/ Kalka Kalpana described in Ayurveda and records its observation.
- n. Preparation of Hima Kalpana and observe the result.
- o. Preparation of Kshira Paka for the purpose of keeping the heart healthy described in Ayurveda
- p. Preparation of Peya Kalpana and its application to available patient.
- q. Preparation of kashaya Kalpana and mention its uses in Ayurveda.
- r. Preparation of Krishara Kalpana for improving the strength of a person and mention its benefits.
- s. Preparation of Takra for a piles diseased person and record your observation & remarks.

## GUIDELINES FOR PRACTICAL EXAMINATIONS

### PANCHAKARMA ASSISTANT (666)

**Max. Marks: 100**

**Time: 3.00 hrs.**

**Pass Criteria: 50**

#### Marking Schemes:

Activities	Marks Allotted	Remarks
Practical Activities – any two	40 (20x2)	
Spotting (10 spots)	30 (10x3)	
Project work/ Report on the work during attachment with concerned centre	20	
Viva- Voce	10	
<b>Total Marks</b>	<b>100</b>	

#### Breakup of Practical Activities:

• To understand the Aim	- 02
• Correct selection of Tools/ equipment/Materials Required	- 05
• Procedure	- 07
• Observation	- 03
• Result	- 03
<b>Total</b>	<b>- 20</b>

#### Guidelines for Practical Examiner

- Four practical activities should be given to the students from the list (2 from Part A & 2 from Part B) and they have the option to perform only two activities.
- All the required material (Tools, Equipments etc.) should be available at the centre of examiner.
- Different sets of the practical activities can be given to the different examinees.

#### Paper- Panchakarma Assistant

##### Spotting:

**30 Marks (10x3)**

- Any five equipments used in Panchakarma and their functions (Two marks for each equipment)
- Identification of any five plants and its use in Panchakarma (Two marks for each plants)

##### Practical Activities

**40 Marks (20x2)**

##### Part A (List of Long Activities)

- Perform Nasya Karma following on the patient eligible for the treatment and record its observation & conclusion.

- Perform Raktamokshana by applying the leech on the patient suffering from severe joint pains along with swelling & redness and record your observations.
- Perform the procedure of Sarvang Dhara (Pizhichil) under the supervision of an Ayurvedic Physician and record its observation.
- Perform the procedure of Sneha Abhyanga in different positions following the preparation of Patient.
- Perform Shirodhara with any given liquid depending on the patient and record its observation and conclusion.
- Prepare the Patra Pottali and perform Patra Pottali Sweda (Elakizhi) suffering from pain and swelling in knee joints.
- Prepare the Jambira pinda and perform Jambira pinda Sweda (Lime fomentation) on the patient suffering from pain & stiffness in the neck
- Prepare Shashtika Shali Pinda and perform Shashtika Shali Pinda Sweda(Navara Kizhi) and record its observations
- Prepare the medical paste and apply Upanaha on the patient suffering from pain and swelling in knee joints and record the observation.

**Part B (List of Short Activities)**

- Perform Shiro Abhayanga with specific strokes and record its observation.
- Apply the Shiropichu and record your observations.
- Perform Udwartan by using medicated herbs and record your observations.
- Perform Akshi Tarpan on a healthy person who wear glasses and record your observations.
- Perform Shiro Basti for the purpose of mental calmness using medicated oil and record your observations
- Perform Greeva Basti on a person suffering from pain and stiffness in cervical region and record your observations.
- Perform Kati Basti on a person suffering from pain and stiffness in low back region and record your observations.
- Prepare the churna pinda sweda and perform Sweda (Podi kizhi) on a person suffering from cervical spondylitis and observe the signs & symptoms.
- Perform the procedure of Avagaha Sweda on a person suffering from piles (not bleeding piles) and record your observations.
- Apply the herbal paste (Mukhlepa) on a person who is having pigmentation patches on the face and record your observations.
- Perform Kavala in a patient suffering from either mouth ulcers or gum diseases and record the observation as Redness of tongue, no.of ulcers, Redness of lips etc.
- Perform Gandusha on 2 healthy person and record the effects of gandusha in persons own language.

## GUIDELINES FOR PRACTICAL EXAMINATIONS

### Diploma in Medical Imaging Technology (471-473)

**Max. Marks: 75**

**Time: 3.00 hrs.**

**Pass Criteria: 30**

#### Marking Schemes:

Activities	Marks Allotted	Remarks
Practical Activities – any two	60 (30x2)	
Spotting (5 spots)	15 (5x3)	
<b>Total Marks</b>	<b>75</b>	

#### Breakup of Practical Activities:

• To understand the Aim	-	05
• Correct selection of Tools/ equipment/Materials Required	-	05
• Procedure	-	10
• Result	-	05
• Observation	-	05
<b>Total</b>	-	<b>30</b>

#### Guidelines for Practical Examiner

- Four practical activities should be given to the students from the list and they have the option to perform only two activities.
- All the required material (Tools, Equipments etc.) should be available at the Centre of examiner.
- Different sets of the practical activities can be given to the different examinees.

#### Paper- Diploma in Medical Imaging Technology (471-473)

##### Spotting:

**15 Marks (5x3)**

1. Identification of various Investigation/Procedure
2. Identification of dark room equipments- X-Ray films, X-Ray cassette, Fixer & Fixing Solutions and rapid fixer etc.
3. Identification of Regional Radiographs- Wrist, Chest, Abdomen, Facial Bones, Joints, Spine & skull projection etc.

##### Practical Activities

**30 Marks (15x2)**

1. Labeled 5 Diagram of different organs and bones- Bones of Human body, Respiratory organs, Circulatory organs, digestive organs
2. To check the consistency of mA loading station

3. To check congruence between radiation field and optical field using optical and radiation field alignment test tool
4. To check the perpendicularity of X-Ray beam to image receptor
5. To check the accuracy of exposure time X-ray unit using digital k-V meter.
6. To check radiation protection level of diagnostic fluoroscopic installation and record its observation.
7. To measure the effective focal spot size of the X-ray unit for deficiency in radiation safety.
8. To check radiation protection level of diagnostic fluoroscopic installation.
9. Evaluate the speed and contrast of film and record its observation.
10. Test the safeness of safe light in Dark room and record the observation
11. Evaluate the day light for dark room and record its result & observation
12. Demonstrate the procedure of radiographs of Abdomen – AP (Erect); AP(supine) Lat and record its observation
13. Demonstrate the procedure of taking radiographs of Cervical spine – AP, Lat, open mouth projection and record its observation
14. Demonstrate the procedure of taking radiographs of Sternoclavicular joints- PA, oblique and record its observation
15. Demonstrate the procedure of taking radiographs of Abdomen – AP (Erect); AP(supine) Lat and record its observation
16. Demonstrate the procedure of taking radiographs of Hips- AP, Frog's view and record its observation
17. Demonstrate the procedure of taking radiographs of Mastoids- lateral oblique, Town's view, stenver's view schuller projection and record its observation
18. Demonstrate ultrasound of gall stones, renal stones and record its observations
19. Demonstrate procedure of angiography and record its observations & result
20. Demonstrate Barium studies- Ba swallow, Ba meal upper GI study, B enema (single and double contrast) and record its observations
21. Demonstrate HSG, RGU, MCU, T-Tube Cholaniography and record its observations & result.
22. Demonstrate the procedure of IVU series and record its observations

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