

*Appendix-B*

# **Guidelines for Centre Superintendents for Practical Examinations**

**(March-April, 2025)**

**Bye-Laws Governing Examination and  
Certification-2012**

**(Revised and Amended as on 1<sup>st</sup> August, 2024)**



**National Institute of Open Schooling**

(An Autonomous Institution Under Ministry of Education, Govt. of India)

A-24-25, Institutional Area, Sector-62, Noida-201309 (UP)

**Guidelines  
for  
Centre Superintendents  
for Practical Examinations  
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## **TO BE NOTED BY THE CENTRE SUPERINTENDENTS/ COORDINATORS OF AIs**

All the Examination Centre Superintendents/ Coordinators of AIs should note that:

- ❖ W.e.f. October 2012, the centre for practical examination shall be the AI where the candidate has been enrolled. The Coordinator of AI must inform the candidates who have been **enrolled** with the AI in this regard.
- ❖ The system of Practical Examinations for the learners taken admission under Stream-I, Block-I i.e. w.e.f. 16<sup>th</sup> March-2015 (eligible for the 1<sup>st</sup> examination to be held in March-May 2016) and afterwards Public Examinations has been changed. The Practical Examinations for these learner will consist of two part i.e. formative assessment and summative assessment. 50% of weightage will be awarded for the practical marks formative assessment (for activities conducted in the five practical PCP) and 50% Practical Marks for summative assessment which is to be conducted at the end of the session in the external examinations.
- ❖ The assessment for the rest of the learners (All learners of Stream-II & learners taken admission prior to 16<sup>th</sup> March 2015) would be taken on summative assessment process and assessed out of 100% Marks allotted for the particular subject for the Practical Examinations. The award slip has therefore to be prepared accordingly and the same will be send to concerned AI/Practical Exam. Centre.
- ❖ A detailed process for conduct of both formative assessment and summative assessment has been brought out in details in the relevant subject available in the Hand Book for Guidelines for Centre Superintendent for Practical Examinations from page no (12) to (100)
- ❖ The Coordinators of AIs shall act as Centre Superintendents for the practical examinations to be conducted at their respective AIs.
- ❖ For each subject of practical examination there shall be two examiners, an internal examiner from the AI and an external examiner to be appointed by the concerned **Regional Director** of NIOS.
- ❖ No candidate shall be allowed to appear in the practical examination in an AI other than the AI where he/she has been **enrolled** unless permitted by the NIOS/Regional Centre concerned. If a candidate changes the practical examination centre without the permission of NIOS/Regional Centre his/her result will be withheld and it will be treated as a case of use of **unfair means**.
- ❖ A copy of the 'Instructions for Examiners' for Practical Examination should be provided to all the Examiners appointed for Practical Examination at the AI. A certificate should be obtained from all the Examiners stating that no near relative is appearing in the Examination from that centre.
- ❖ The answer sheets for practical examination shall be supplied by the NIOS. The written work concerned with the practical examination shall be done by the candidates in the answer sheet only.
- ❖ The candidate has to fill in all the columns of Practical Examination Answer Book and no column is to be left blank. The Examiner should be instructed to sign the Answer Book after verifying the roll number and photograph from the Identity card of the candidates issued by the NIOS.
- ❖ The Centre Superintendent must ensure that the candidate has properly recorded the Answer Book No. and signed against his/her name, in attendance sheet. All unfair means cases are processed strictly as per Guidelines. The examiners and the Centre Superintendents/ Coordinators of the AIs must complete and sign the UFM proforma even if the candidate is caught by OSD/Flying Squad.
- ❖ No Candidate who is late by more than 30 minutes should be allowed to take the examination.
- ❖ No candidate is allowed to leave the examination hall or take away the question paper before the expiry of half of the time allotted to a particular paper.

- ❖ If a candidate does not have Intimation Letter, he/she may be allowed to appear in the examination on production of identity card provided his/her name appears in the list of candidates attendance sheet of the concerned subject sent by NIOS or made available online by NIOS.
- ❖ The Centre Superintendent should maintain a complete account of Blank Answer Books supplied by the NIOS for practical examination. The bill of centre supdt. will be cleared only after he/she renders a complete account of answer books and returns the unused answer books to concerned Regional Centre.
- ❖ For the conduct of practical examinations, the NIOS fixes dates in the date sheet along with theory papers. All the practical examinations should be completed as per the date sheet of practical examinations. The marks obtained by the candidates in practical examinations should be filled in the computerized award lists available online and send to the Regional Director concerned duly verified & signed by both Examiners (Internal & External) /Centre Superintendents of the NIOS immediately after the practical examinations are over.
- ❖ Laxity of any type observed in the conduct of practical examination shall be viewed seriously.



# IMPORTANT CHECK POINTS

## (SUMMATIVE EXAMINATION)

The National Institute of Open Schooling conducts two full-fledged examinations every year. Conduct of Examination is a very important activity in which all constituents of the NIOS contribute whether they are at the Headquarter, Regional Centres or at the Accredited Institutions. The Centre Superintendent/Dy. Superintendents take all precautions to ensure smooth and fair conduct of examination at their Examination Centre. However, there is need to check all the details before the commencement of Examination. For the sake of uniformity, the NIOS has laid down detailed Guidelines for Centre Superintendents for Practical Examinations. Before moving on to various aspects of the conduct of practical examination, here are some important instructions/points, which may strictly be adhered to. **All persons concerned with practical examinations should read carefully the Guidelines for Centre Superintendents for the commencement of examination.**

### 1.1 BEFORE THE EXAMINATION

#### 1.1.1 Ensure that effective arrangements for the practical examination have been made.

- i. The laboratories for the conduct of the practical examination should be ready.
- ii. Apparatuses, instruments, chemicals etc. required for the practical examination are available and the apparatuses are operational.
- iii. The question papers for practical examinations have been developed taking into consideration the number of candidates appearing.

#### 1.1.2 Facilities for the candidates

- i. Display date-sheets, group of the candidates and Instructions for the Candidates on the notice board.
- ii. Make suitable arrangement for white/ruled papers and stencils in advance for Typewriting paper for the purpose of Practicals. Guidelines for the Practical Examiners may please be seen for details.



### **1.1.3 Instructions to Lab Assistants/Lab Attendants**

- i. Ensure that the Lab Assistant/Lab Attendant is available for the Practical Examination. Necessary instructions should be given to the Lab Assistant/Lab Attendant for the smooth conduct of the practical examination.

### **1.1.4 Eligibility of the candidates to appear in Examination**

- i. Only those candidates, whose names appear in the list of eligible candidates and subjectwise attendance sheet of examiners made available online on Examination Centre panel on NIOS website or those who have been got written permission from the Regional Centre/National Institute of Open Schooling Headquarters, be allowed to appear for practical examinations at your AI. Please do not allow other candidates to appear in the practical examinations.
- ii. If any candidate approach the allotted Examination Centre with Intimation Card of the current examination showing eligible subjects and dates, he/she may be allowed even if his/her name is omitted from the list of candidates due to some error after verifying the details of Intimation Letter from NIOS website and the concerned subject from his/her identity card on provisional basis and after obtaining an undertaking subject to his/her being eligible otherwise.

## **1.2 DURING THE PRACTICAL EXAMINATION**

### **1.2.1 Checking the Candidates before Entry in the Laboratories**

- i. Frisking of the candidates may be done thoroughly at the entrance gate itself before they are allowed to enter the Lab.
- ii. Do not permit the candidates to bring books, papers or reference material of any kind in connection with the examination in the Lab.
- iii. Ensure that no candidate brings any electronic equipment like Calculators, Tape Recorders, Cellular Phones, Pager, Ear Phone, Bluetooth etc. in the Lab. Wrist watches with additional provisions other than time should also not be allowed.
- iv. However, the candidates are permitted to bring with them the requisite material as allowed by the concerned practical examiners.

### **1.2.2 Handling Attendance Sheet**

- i. On the opening day examination the Centre Superintendent may download and print subject wise attendance sheet.
- ii. Ensure that Attendance Sheets are correctly filled in and signed by the candidates.
- iii. Encircle the Roll Numbers of absent candidates in Red Ink and mark them ABSENT in place of their signatures in Attendance Sheets.

- iv. Mark 'UFM' in case of candidates who have been booked under use of unfair means.
- v. Ensure that the Attendance Sheets bear the signatures with rubber stamp of the Centre Superintendent and OSD (Observer) deputed by the RC (NIOS) before these are sent to the concerned Regional Centres.
- vi. Add the names of additional/authorised candidates such as centre change cases (permitted by NIOS Headquarters) on the computerized attendance sheet for obtaining their signatures.

### **1.2.3 Handling the Answer Books for Practical examination**

- i. **Please use the current sessions Practical Examination Answer Book only.**
- ii. Use of previous sessions Practical Examination Answer Book is not permitted.
- iii. Please affix the facsimile stamp of the signature of the Centre Superintendent on Answer Books before the same are distributed to the candidates.
- iv. **Please fill the criteria of assessment, marks allotted and marks awarded in the table given in the first page of the Practical Examination Answer Book.**
- v. Maintain a proper account of all the used and unused Answer Books for practical examination and send a copy of the same duly verified by the Centre Supdt./OSD (Observer) of NIOS along with the Attendance Sheets and sealed answer books to the R.C. One copy may be retained by the Centre Supdt. in his records which would be open for Inspection and for physical verification of unused answer books by OSDs, Observers or Flying Squad Members or any other persons deputed by the NIOS.
- vi. Additional answer book shall not be provided.

### **1.2.4 Handling of Unfair Means Cases**

- Please ensure that the unfair means cases detected during the course of practical examination are properly recorded and packed in a separate envelope and sent to the concerned Regional Centre with requisite statements and documents as per procedure laid down. Please send this packet along with the packet containing the Answer Books for the day of practical examination.
- A candidate found guilty of any of the following offences shall be deemed to have used unfair means and his/her examination result shall be withheld:
  - (i) Writing name, roll number or putting signature or any other mark in the answer book which may disclose, in any way, the identity of the candidate. Name and/or roll No. is to be written only in the space provided for it and nowhere else.

- (ii) Appearing in the Practical Exam. at an AI other than his/her own AI (study centre) without the permission of NIOS.
- (iii) Having in possession of book(s), notes, papers or any other material other than that allowed for the practical examination.
- (iv) Receiving or giving assistance in copying or in any form during the course of the practical examination.
- (v) Smuggling in or out of the Lab of the question paper, answer books etc. and tearing leaf/leaves from the question papers or answer books or tampering with the practical answers book in any way.
- (vi) Using abusive/derogatory language orally or in the practical answer book against the Centre Superintendents/Examiner/Lab Assistant or threatening/using violence towards invigilators or Centre Superintendents.
- (vii) Impersonation i.e. sending some other person to take the practical examination on her/his behalf.
- (viii) Communicating with the Examiner or any other person connected with the practical examination with the objective of unduly influencing him/her in any way.
- (ix) Any other type of misconduct or a deliberate previous arrangement to indulge in unfair practice the practical examination.
- (x) Writing questions or answers on any paper other than the Answer Book.
- (xi) Wrong statement in the application for admission such as tempering with the certificate/statement of marks etc. or forging a signature.
- (xii) Possessing cell phone, ear phone, Bluetooth or any other electronic during the practical examination.
- (xiii) Any other unethical and unlawful activities by the candidate.

The decision of the UFM Committee in imposing penalty for the offence committed by him/her shall be final and binding on him/her.

### **1.3 DISPATCH OF ANSWER BOOKS**

- i. The Answer Scripts/Attendance Sheets/Award Lists and other related material pertaining to Practical Examinations will be dispatched to the concerned Regional Centre or to specified places as per the details given in **Chapter 4**.



## ENGAGEMENT OF STAFF AND NORMS FOR PAYMENT (SUMMATIVE EXAMINATION)

In order to conduct the National Institute of Open Schooling (NIOS) practical examination, NIOS allows the Centre Superintendent to engage the staff from his/her AI or other nearby institutions as per following norms.

### 2.1 NORMS FOR ENGAGING STAFF ON DUTY

- 2.1.1 **Centre Superintendent:** The Coordinator of the AI shall perform the duties of Centre Superintendent for the conduct of Practical Examination.
- 2.1.2 **Practical Examiner:** There should be two practical examiners for every subject of practical examination. One internal examiner and one external examiner. The internal examiner should be from the staff of AI. For Secondary subject practical examination, the examiner must be a T.G.T. in the concerned subject with atleast three years of teaching experience in a school (affiliated to CBSE or to a State Board). Similarly, for Sr. Secondary practical examination, the examiner must be a P.G.T of the Subject concerned with a teaching experience of minimum 3 years in a school (affiliated to CBSE or to a State Board Examination).
- 2.1.3 **Laboratory Assistant:** - There is no need of Lab. Assistant in the practical examination of Geography, Typewriting, Secretarial Practice and Stenography. In all the other subjects one Lab. Assistant may be provided except in Science practicals (Secondary Examinations) where two Lab. Assistants may have to be provided in case separate Labs. are used.
- 2.1.4 **Peons/Waterman:** - As per given scale.
- 2.1.5 **Chowkidar/Sweeper:** - As per given scale.

## 2.2 SCALE OF DEPLOYMENT OF STAFF

S.No.	Staff	Scale
1.	Centre Superintendent	01
2.	Practical Examiner	02 for each subject
3.	Laboratory Assistant	01 for each Laboratory used (except Geography, Typewriting, Secretarial Practical, Stenography)
		For Science & Technology upto 02 Laboratory Assistant in case separate laboratory is used
4.	Peon	01 upto 249 candidates 02 for more than 249 candidates (on Specific days of practical examination)
5.	Waterman	01 upto 249 candidates 02 for more than 249 candidates (on Specific days of practical examination)
6.	Chowkidar	01 per day
7.	Sweeper	01 per day

## 2.3 GUIDELINES FOR PAYMENTS

- 2.3.1** Immediately after the practical examinations are over the Centre Superintendents are required to submit complete account of used and unused practical answer books and then send their consolidated claim in the prescribed proformas to the concerned Regional Director.
- 2.3.2** Proforma should be filled up neatly and clearly and cutting, erasing and over writings should be avoided.
- 2.3.3** Details of each activity may be written over the back of the Proforma wherever required.
- 2.3.4** It should be clearly mentioned in the forwarding letter, in whose name the cheque for the amount claimed is to be prepared and sent, by intimating the complete address.
- 2.3.5** Following **details should be enclosed with the application:**
- Duly filled up proforma and signed by the Centre Superintendent mentioning the name of the centre with office seal for claim of the exam centre payment.
  - All the enclosures/ proformas must be duly signed by the Centre Supdt.
  - A proper account of practical answer books used daily during practical examination on the prescribed proforma.

## 2.4 RATES OF VARIOUS ACTIVITIES

F. 3-4/2024/NIOS/EVAL/Conf. /1158

24<sup>th</sup> July, 2024

### Notification 36 / 2024

In pursuance of the recommendations of the Evaluation Committee in its 21<sup>st</sup> Meeting held on 22/10/2021, Finance Committee in its 70<sup>th</sup> and 73<sup>rd</sup> Meeting held on 04/05/2022 and 28/03/2022 and subsequent approval of Executive Board of NIOS in its 88<sup>th</sup> meeting held on 22/12/2023, the rates of remuneration in respect of various activities related to various examination for Secondary, Sr. Secondary, Vocational and On Demand Examination of NIOS have been revised as per the following given in the notification.

### CONDUCT OF PRACTICAL EXAMINATIONS

S.N.	Description	Revised Rates Remuneration	Revised Rates Conveyance
<b>PRACTICAL CENTRE CHARGES</b>			
1.	Centre Superintendent	Rs. 750/- per day	N.A.
2.	Practical examiner for Secondary level	Rs. 20/-per candidate (minimum of Rs. 400/- per session)	N.A.
3.	Practical examiner for Senior Secondary level	Rs. 22/- per candidate (minimum of Rs. 400/- per session)	N.A.
4.	Practical examiner Senior Secondary & Secondary level Vocational courses	Rs. 22/- per candidate (minimum of Rs. 400/- per session)	N.A.
5.	External Practical Examiner	Rs.500/- per session	Local conveyance Rs. 500/- for 'A' class city. Rs. 400/- for 'B' class city. Rs. 350/- for 'C' class city.
6.	Laboratory Assistant	Rs. 300/- per day	N.A.
7.	Peon	Rs. 225/- per day	N.A.
8.	Waterman	Rs. 225/- per day	N.A.
9.	Chowkidar/Watchman	Rs. 225/- per day	N.A.
10.	Cleaning Staff	Rs. 225/- per day	N.A.
<b>LAB CHARGES</b>			
11.	<b>For Secondary level</b>		N.A.
	(a) Data Entry Operation, Painting & Academic Vocational courses	Rs. 35/- per learner	
	(b) Any other academic subject having practical component	Rs. 25/- per learner	
12.	<b>For Senior Secondary level</b>		N.A.
	(a) Biology	Rs. 40/- per learner	
	(b) Data Entry Operation & Painting	Rs. 35/- per learner	
	(c) Chemistry & Home Science	Rs. 25/- per learner	
	(d) Any other academic subject having practical component	Rs. 20/- per learner	
13.	<b>For Vocational courses</b>		N.A.
	(a) Stenography (Senior Secondary)	Rs. 20/- per learner	
	(b) Type-Writing (Secondary & Sr. Secondary)	Rs. 25/- per learner	
	(c) Any other Vocational Course having practical component	Rs. 35/- per learner	

<b>Officer on Special Duty/Flying Squad Charges</b> (These charges will be applicable for both Theory and Practical Examinations)			
1.	Non-NIOS member for OSD/Flying Squad duty Full Time	<b>Local Duty</b> Rs. 750/- per day <b>Out Station Duty</b> Rs. 950/- per day	Rs.500/- for 'A' class city. Rs.400/- for 'B' class city. Rs.350/- for 'C' class city
2.	Non-NIOS local member is called to the NIOS Headquarter/ Regional Centre for deputing for flying squad duty.	<b>Local Duty</b> Rs. 750/- per day <b>Out Station Duty</b> Rs. 950/- per day	Actual TA, as per NIOS norms subject to minimum of Rs. 300/- per day to attend Headquarter or Regional Centres
3.	Special Flying Squad Team Member (Appointed by NIOS HQs.)	<b>Local Duty</b> Rs. 1200/- per day <b>Out Station Duty</b> Rs.1500/- per day	Conveyance as per NIOS norms  TA and DA as per NIOS norms
4.	Flying Squad Team Member for NIOS staff	<b>Local Duty</b> Rs. 500/- per day <b>Out Station Duty</b> Rs. 700/- per day	Vehicle to be provided by NIOS  TA and DA as per NIOS norms
<p>Note: ➤ The Conveyance and Travelling Allowance is only applicable when and where the <b>vehicle has not been provided</b> by NIOS.</p> <p>➤ The <b>scale of deployment</b> will be as given in the <b>guidelines</b> for Centre Superintendents. Payment will be applicable <b>only for staff deployed as per scale</b>.</p> <p>➤ For the NIOS staff the duty in NOIDA, Ghaziabad and Delhi will be considered as <b>local duty</b>.</p>			

**2.4.1 Postage Charges:** *Actual postage charges* are payable subject to production of receipts.

**2.4.2 Packing Cloth:** *Actual cost of packing cloth* to centres located outside Delhi/townships of respective Regional Centres will be paid on production of cash memo. Delhi Centres and Centres located at the township of Regional Centres will be issued safety bags for despatch of answer books by NIOS/RC on loan basis. They will be required to deposit the same with the NIOS/RC on the last day of Examination.



# INSTRUCTIONS FOR PRACTICAL EXAMINERS

## (SUMMATIVE EXAMINATION)

### 3.1 TO BE NOTED BY EACH PRACTICAL EXAMINER

- 3.1.1 **Each Examiner is required to give a Certificate to the Centre Superintendent/Coordinator of the AI to the effect that none of his/her relative/student is appearing** in the Examination at the Centre and that none of the candidates appearing at the Centre has received private coaching from him/her.
- 3.1.2 **Both Examiners are under the control of Centre Superintendent/Coordinator of the AI** during the period they are on such duty. They should not leave the examination centre without the permission of the Centre Supdt.
- 3.1.3 **They should report at the centre at least 35 minutes before the time** fixed for the commencement of practical examination.
- 3.1.4 **No candidate suffering from any infectious disease like small-pox, mumps be allowed** to appear in the practical with other candidates. If such case is suspected, it should be reported to the Centre Supdt./ Coordinator of the AI immediately.
- 3.1.5 **Practical Examiners should note that under no circumstances he/she should help the candidate for using unfair means** and if such a case is found, strict action will be taken against the practical examiners which may debar him/her from any kind of payment/further duties at NIOS examinations, besides the disciplinary or penal action. The cases of Unfair means should be reported to Centre Superintendent immediately for further necessary action.





# GENERAL GUIDELINES FOR PRACTICAL EXAMINATION

(SUMMATIVE EXAMINATION)

## 4.1 DATES FOR PRACTICAL EXAMINATION

- i. The practical examination will be conducted in the same AI with which the learner is enrolled are as indicated in the practical hall ticket on the days and dates as decided by the NIOS in the date sheet.
- ii. Enrollment number wise details of batches for the practical examination in respect of each subject should be displayed on Notice Board of the AI immediately on receiving the information about the same from the NIOS. The display of schedule of batches of practical examination should be on the main gate of the school prominently.
- iii. Please stick to the schedule so fixed for practical examination to help NIOS declare the results in time. Delay in receiving the practical awards may result in non-declaration of the results of such candidates along with the results of all the other candidates.
- iv. The Coordinators of AIs are advised to visit on the NIOS Website [www.nios.ac.in](http://www.nios.ac.in) for the schedule of Practical Examination

## 4.2 APPOINTMENT OF PRACTICAL EXAMINERS

- i. The Practical Examinations in each subject will be conducted by two examiners an internal Examiner available with the institution and an external examiner. The external examiner will be appointed by the NIOS.
- ii. Internal Examiner will be appointed by the Centre Supdt./ Coordinator of the AI under intimation to the concerned Regional Director. The Practical examiners may be requested to go through these guidelines carefully.
- iii. Examiners will be paid remunerations as per the rates given in the guidelines. In addition to the remunerations External Examiners will also be paid conveyance charges for the conduct of Practical Examination as per his/her entitlement.

## 4.3 SUBJECT-WISE MAXIMUM MARKS FOR PRACTICAL EXAMINATION

- i. The maximum marks for practicals in all the subjects of Senior Secondary level (except Painting, Data Entry Operations and Computer Science) are 20.

- ii. The maximum marks in Painting are 70. In Data Entry Operation, the maximum marks are 60. In Computer Science, the maximum marks are 40.
- iii. In the case of Secondary Examination, the Practical Marks are **15 except Painting Data Entry Operations**. In Painting, the maximum marks are 70 and in Data Entry Operations, the maximum marks are 60.

#### **4.4 ATTENDANCE OF THE CANDIDATES**

- i. The Attendance of the candidates appearing in practical examination must be taken. The attendance sheet and Award Lists of each practical examination is available online. A copy of attendance sheet and Award List be retained by Centre Superintendent for their records.
- ii. However, the answer scripts of practical examination may be sent separately by hand/Regd. Insured Post to the Regional Director concerned

#### **4.5 CONDUCT OF PRACTICAL EXAMINATION**

- i. The practical examinations will be taken in batches-maximum 3 batches a day as per the following schedule:
 

1 <sup>st</sup> batch	-	9.00 a.m.
2 <sup>nd</sup> batch	-	12.00 noon
3 <sup>rd</sup> batch	-	2.30 p.m.
- ii. No. of students in a batch will vary from batch to batch according to the capacity of the Laboratory and the total no. of students to be examined on the scheduled dates.
- iii. Even if there are more than 2 sessions a day, the payments to the Lab. Asstt., Peon, Waterman, Chowkidar and Sweeper will be restricted to 2 sessions a day.

#### **IV. ONLINE PROCEDURE**

A panel (with AI user name and password) will be made available to practical exam. centre and also to parent AI.

**PRACTICAL EXAM. CENTRE** in its panel shall online record the marks obtained by learner during the days of Practical (Summative part) exam.

**Parent AI (for merged centres)** can record the marks of formative Assessment in this panel.

- v. **PRINTING OF AWARD LIST:** The practical exam. centre after filling/recording marks online; shall freeze marks and print the Award List. Then the signature of Internal and External examiner shall be made and countersigned by Centre Superintendent.

#### **4.6 PRACTICAL AWARD LISTS-PREPARATION & SUBMISSION**

- i. The total marks obtained by each candidate in practical examination should be entered carefully in the computerized awards lists sent by the NIOS for each practical subject.
- ii. The absentee must be filled/recorded clearly ‘AB’ in the on-line award list. All the award lists and attendance sheet must be signed by the practical Examiners and countersigned by the Centre Supdt. and Observer appointed for the purpose on each day.

- iii. **The Examiners will submit the awards to the Centre Supdt./ Coordinator of the practical examination centre for uploading the Awards through online mode and sending to concerned Regional Centre. No offline data will be accepted.** The Examiner/Centre Supdt. will also ensure that the printed awards along with the practical answer books are sent to the concerned Regional Centre on the same day.
- iv. The Practical Award Lists along with attendance sheets are to be dispatched to the concerned Regional Director by Speed Post immediately after each practical examination. **However, care may be taken that answer books of practical examination may be dispatched separately by Registered Insured Post to the Regional Director concerned. A copy of Award List and Attendance Sheet be retained by Centre Superintendent for records.**

#### **4.7 ASSESSMENT CRITERIA FOR PRACTICAL EXAMINATION**

The Practical examination has two components, namely Formative and Summative for learners of Stream 1. For learners of streams 2, 3 and 4, only Summative Assessment is applicable. The weightage of Formative and Summative Assessment Awards and Schedule can be referred from the Prospectus of the Academic Courses. The Formative Assessment marks of Practical PCP shall be awarded by the AI who conducted the PCP of the learner. The Practical Examination (Summative Assessment) shall be conducted at the allotted AI or at the Practical Examination Centre as assigned by NIOS.

The Practical Examination (Summative Assessment) shall be conducted on the dates as decided by NIOS in the Date Sheet. The Practical Examination Centre for the Summative Assessment shall be the same AI having minimum twenty learners for organizing Practical Examinations except for the non-functional/black listed/disaccredited AIs otherwise it will be shifted to a nearby Centre. All SAIED AIs shall be considered as Self Centre for Practical Examinations. In case of non-availability of AI, with the approval of the Director (Evaluation), nearest AI of NIOS or Examination Centre of NIOS or any school deemed fit may be fixed for Practical Examination as a special case. The Practical Centre allocation shall be done online based on the above parameters and shall be approved by the Director (Evaluation) before conduct of the practical examinations.

#### **4.8 PRACTICAL EXAMINATION FOR VOCATIONAL SUBJECTS**

The Practical examination for each Vocational subject under academic stream will be conducted at the respective study centre (AVI). The candidates may approach their respective Study Centre for details of Practical Examination.

#### **4.9 RATES FOR CONDUCTING THE PRACTICAL EXAMINATIONS**

- i. The rates for conducting the practical examinations are given in **Chapter-3** of these Guidelines.



## Secondary Level MATHEMATICS (211) Practical Examination

### 1. Objectives:

Mathematics is considered as a base of human civilisation and Practical is an inseparable part of Mathematics Curriculum at School level. Participation in Mathematics practical leads to problem solving skills, reduced fear of Mathematics and raised interest in learning Mathematics among the learners. The main objective of doing practical in Mathematics is to develop Mathematical skills among the learners so that they understand the mathematical tools such as Models, Scales, Graphs, and techniques like- Paper folding, Paper cutting and verification.

The purpose of introducing Formative and Summative assessments in Practical PCP is to ensure learners' involvement and active participation in PCP classes as well as continuous assessment which leads to learning.

### 2. Implementation:

There are 30 activities listed in the Practical Manual of Secondary Course in Mathematics (211). These activities are to be conducted in 5 PCPs as given below. These will be assessed through Formative (Continuous) assessment at the Study Centre. The Sixth PCP is reserved for final examination that will be assessed through summative (Final) assessment at the Study Centre. The dates for the practical examination (Final) will be notified by NIOS in the examination date sheet. 50% weightage is for each of Formative (Continuous) and Summative (Final) assessments. The maximum mark for Practical in Mathematics is 15. The *distribution of activities in 05 PCPs* is as follows:

#### **First PCP Practical:**

- (i) Orientation of the learners about distribution of activities to be performed and allocation of Marks for both the Formative (Continuous) and Summative (Final) assessments.
- (ii) Orientation of learners about different algebraic identities, equivalent fractions and concept of linear equations
- (iii) Learners have to choose **any two activities** to be performed from Algebra part ( S. No. 1 to 4 and 28 of the Practical Manual) as:

- Verification of the Identify  $(a+b)^2 = a^2+2ab+b^2$
- Verification of the identify  $(a-b)^2 = a^2-2ab+b^2$
- Verification of the identify  $a^2-b^2 = (a+b) (a-b)$
- Verification of the identify  $(a+b)^3 = a^3+ 3a^2+3ab^2+b^3$
- Verify the identify  $a^3-b^3 = (a-b) (a^2+ab+b^2)$

### **Second PCP Practical:**

- Orientation of learners about Fractions and concept of Linear and Quadratic equations.
- Learners have to choose **any two activities** to be performed from Algebra part ( S.No. 5 to 9 of Practical Manual) as:
  - To find H.C.F of two given numbers by division method
  - Demonstration of the concept of Equivalent Fractions
  - To verify that a linear equation in two variables has infinite number of solutions
  - To find the condition for consistency of a system of linear equations in two variables
  - To verify the relation between roots and coefficients of a quadratic equation

### **Third PCP Practical:**

- Orientation of learners about Polynomial and Arithmetic Progressions (A.P)
- Learners have to choose **any two activities** to be performed from Algebra part (S.No. 10 to 14 of Practical Manual) as:
  - ◆ To verify graphically that a quadratic polynomial can have at most two zeroes
  - ◆ To verify that a given sequence is an A.P.
  - ◆ To find the sum of first n odd natural numbers
  - ◆ To find the sum of first n natural numbers
  - ◆ To find the sum of first n terms of an Arithmetic Progression

### **Fourth PCP Practical:**

- Orientation of learners about concept and properties of a triangle, Cyclic Quadrilateral and Circle.
- Learners have to choose **any two activities** to be performed from Geometry part ( S.No. 15 to 23 of Practical Manual) as:
  - ❖ To verify that the sum of the angles of a triangle is  $180^\circ$
  - ❖ To verify that the angles opposite to equal sides of a triangle are equal
  - ❖ To verify the Mid-Point theorem
  - ❖ To verify basic proportionality theorem
  - ❖ To verify Pythagoras theorem
  - ❖ To verify the relation between the ratio of areas of two similar triangles and their sides

- ❖ To find the area of a circle
- ❖ To demonstrate that the opposite angles of a cyclic quadrilateral are supplementary
- ❖ To verify that equal chords of congruent circles subtend equal angles at the centre

### **Fifth PCP Practical:**

- i. Orientation of learners about concept of Cube, Cuboid, Cylinder, Cone, Parallelogram and Trapezium
- ii. Learners have to choose **any two activities** to be performed from Mensuration part (S.No. 24 to 27 and 29-30 of Practical Manual) as:
  - To find the area of a trapezium
  - To find the total surface area of a cube
  - To find the formula for the curved surface area of a cone
  - To find the relationship among the volumes of a right circular cylinder, right circular cone and a hemisphere of same radius and same heights
  - To draw a triangle equal in area to a parallelogram
  - To find the in centre of different types of triangles

### **3. Scheme of Practical Examination:**

The following scheme of practical examinations to be followed is as per the details given below:

- The conduct of practical examinations is mainly linked with practical PCP. There are 06 practical sessions which are compulsory.
- The initial five (05) PCP practicals have to be assessed through Formative (Continuous) Assessment and will be utilized for learning.
- The final (6<sup>th</sup> PCP) practicals will be utilized for Summative (Final) Assessment for practical examination.
- A weightage of 50% of the marks will be awarded for Formative (05 practical classes) Assessment and 50% marks for the 6<sup>th</sup> practical classes for Summative Assessment.

### I. Marks Distribution in Formative Assessment (05 PCP Sessions):

S. No.	Criteria for Assessment	Marks	Remarks
1.	Regular Participation in 05 PCP Classes	1½	The five boxes under formative assessment in the award list will be filled up based on these 05 criteria.
2.	Activities Performed in 05 PCP Classes	1½	
3.	Practical Record maintained in 05 PCP Classes	1½	
4.	Use of practical instruments/equipments	1½	
5.	Participation with Peer-Group and Tutor	1½	
	<b>Total</b>	<b>7½</b>	

### II. Marks Distribution in Summative Assessment (6<sup>th</sup> Final PCP Class):

S. No.	Criteria for Assessment	Marks	Remarks
1.	Assessment of activity performed (Two activities out of given three activities)	$2 \times 2\frac{1}{2} = 5$	Time of 2½ hours will be allowed for final examination.
2.	Viva-Voce based on the activities	2½	
	<b>Total</b>	<b>7½</b>	

**Note:** The total (Formative and Summative Assessment) weightage is 15 marks. In award list the marks obtained by the learner, both in Formative and Summative Assessment are to be mentioned clearly and the final figure is the sum of the marks of Formative and Summative assessment.

#### 4. Preparations for PCP Practical Sessions:

- i. The Centre Superintendent and Tutor must read the instructions mentioned in the Guidelines for practical PCPs.
- ii. Check and arrange the materials, tools, equipments, etc. that will be needed in the Practical PCP sessions in advance.
- iii. Learners are informed about the schedule of Practical PCP sessions. Practicals may be arranged in groups of learners.
- iv. The attendance sheet must be properly maintained in each Practical PCP class.
- v. The award list must be filled up, as per the given assessment criteria.
- vi. The techniques of group work may be followed in Practical PCP sessions.
- vii. Learner shall be asked to bring the practical record books in each class. Each learner is expected to maintain it as per the instructions given in the practical manual.

## 5. Precautions (DO's and DONT's)

Discuss the following points with learners, regarding preparing the practical record book:

- (i) Throughout the practical note book, the learner should follow the same style. Ask them to use a good fountain pen and a sharp black pencil. It is recommended that the right hand page should be written in blue ink and the left hand page with a black pencil.

The recommended style of writing is shown below:

Left hand page	Right hand page
Scale, Projections, Calculations	Title of the exercise, Date
Graph, Diagram and Figures,	Exercise No. Interpretation and conclusion

- (ii) Each experiment should start from a new page.
- (iii) A neat and proportionate Scale, Projections, Graph and Diagrams should be used.
- (iv) Mistakes should be crossed out with a single line so that it can still be read, the correct statement rewritten in its place.
- (v) No page should be tornoff from the practical record book.
- (vi) Before going to take the Practical Examination, get all the exercises of Practical Record Book signed by your tutors.

## 6. List of Activities:

There are 30 activities in the Mathematics Practical Manual. These 30 activities are distributed under three sections as:

### 6.1 Section-A (Algebra)

1. Verification of the Identify  $(a+b)^2 = a^2+2ab+b^2$
2. Verification of the identify  $(a-b)^2 = a^2-2ab+b^2$
3. Verification of the identify  $a^2-b^2 = (a+b) (a-b)$
4. Verification of the identify  $(a+b)^3 = a^3+ 3a^2+3ab^2+b^3$
5. To verify the identify  $a^3-b^3 = (a-b) (a^2+ab+b^2)$
6. To find H.C.F of two given numbers by division method.
7. Demonstration of the concept of Equivalent Fractions.
8. To verify that a linear equation in two variables has infinite number of solutions.
9. To find the condition for consistency of a system of linear equations in two variables.
10. To verify the relation between roots and coefficients of a quadratic equation.



11. To verify graphically that a quadratic polynomial can have at most two zeroes.
12. To verify that a given sequence is an A.P.
13. To find the sum of first  $n$  odd natural numbers.
14. To find the sum of first  $n$  natural numbers.
15. To find the sum of first  $n$  terms of an Arithmetic Progression.

## 6.2 Section-B (Geometry)

1. To verify that the sum of the angles of a triangle is  $180^\circ$
2. To verify that the angles opposite to equal sides of a triangle are equal.
3. To verify the midpoint theorem.
4. To verify basic proportionality theorem.
5. To verify Pythagoras theorem.
6. To verify the relation between the ratio of areas of two similar triangles and their sides
7. To find the area of a circle.
8. To demonstrate that the opposite angles of a cyclic quadrilateral are supplementary.
9. To verify that equal chords of congruent circles subtend equal angles at the centre.

## 6.3 Section- C (Mensuration)

1. To find the area of a trapezium.
2. To find the total surface area of a cube.
3. To find the formula for the curved surface area of a cone.
4. To find the relationship among the volumes of a right circular cylinder, right circular cone and a hemisphere of same radius and same heights.
5. To draw a triangle equal in area to a parallelogram.
6. To find the in centre of different types of triangles.

**Note:** Material for practical examination will be provided by the centre superintendent at the practical examination centre, as per requirement of the activities.



**Secondary Level**  
**SCIENCE AND TECHNOLOGY (212)**  
**Practical Examination**

**1. Objectives:**

Science and Technology is a subject which can be learnt better by doing. The experiments inside or outside the laboratory give the learner an opportunity to understand the laws and principles of science. In fact, the experiments form an integral part of science learning. These help in developing a scientific attitude and certain well-defined skills. While doing the experiments in a science laboratory, you will get a chance to handle scientific equipment and apparatus, chemicals, etc. The learner will have to plan their work, make observations and draw conclusions. This process will help in developing a scientific attitude, the habit of systematic work and logical thinking. The purpose of introducing Formative and Summative Assessments in Practical PCP is to ensure learners' involvement and active participation in PCP classes as well as continuous assessment which leads to learning.

**2. Implementation:**

There are 30 activities listed in the Practical Manual of Secondary Course in Science and Technology (212). These activities are to be conducted in 5 PCP sessions as given below, at the study centre. These will be assessed through Formative (Continuous) Assessment. The Sixth PCP is reserved for the final examination that will be assessed through Summative (Final) Assessment at the Study Centre. The dates for the practical examination (Final) will be notified by NIOS in the examination date sheet. 50% weightage is for each of Formative (Continuous) and Summative (Final) Assessments. The maximum mark for Practical in Science and Technology is 15. The *distribution of* activities in 05 PCPs is as follows:

**First PCP Practical:**

- i. Orientation of the learners about distribution of activities to be performed and allocation of Marks for both the Formative (Continuous) and Summative (Final) Assessment
- ii. Orientation of learners about the handling of scientific equipment and apparatus, chemicals, etc.

iii. Learners have to choose **any two activities** to be performed from following experiments (S. No. 1, 12 and 21 of Practical Manual) as:

- Separation of Mixtures
- To determine the Density of the Material of a given Solid using a Spring Balance and a Measuring Cylinder
- To Prepare a Temporary Stained Mount of (i) Onion Peel: observe under the Microscope and Record Observations

Or

- To Prepare a Temporary Stained Mount of Human Cheek Cells: observe under the Microscope and Record Observations.

### **Second PCP Practical:**

- i. Orientation of learners about Mounting of slides and Scientific principles
- ii. Learners have to choose **any two activities** to be performed out of the following activities. ( S. No. 3, 13 and 22 of Practical Manual) as:

- To Differentiate between a Chemical and a Physical Change in a given process
- To Observe and Compare the Pressure Exerted by a Solid Iron Cuboid placed on Fine Sand/Wheat Flour while resting on its three different Faces and calculate the Pressure Exerted in the three different cases
- To Study and Draw Different Types of Plant and Animal Tissues with the help of Permanent Slides : Plant tissues: Parenchyma and Sclerenchyma; Animal tissues: Blood, Striped muscle fibres and Nerve cells

### **Third PCP Practical:**

- (i) Orientation of learners about the interpretation of the data and conclusions of experiments
- (ii) Learners have to choose **any two activities** to be performed. ( S.No. 4, 5, 14, 15, 16, 23 and 24 of Practical Manual) as:
  - To Test the Presence of Water Vapours in Air
  - To Test the Presence of Carbon Dioxide (CO<sub>2</sub>) in Air
  - To find out the Approximate Percentage of Oxygen in Air
  - To Verify the Third Law of Motion using Two Spring Balances
  - To Determine the Melting Point of Ice
  - To Study the Process of Osmosis through a Semi-permeable Membrane
  - To Test the Presence of Starch in Green Leaves exposed to Sunlight

#### **Fourth PCP Practical:**

- i. Orientation of learners about the concept of laws of Motion, photosynthesis and Respiration
- ii. Learners have to choose **any two activities** to be performed from the following experiments ( S. No. 17, 7 and 25, 26, 27 of Practical Manual) as:
  - To Test the acidic/basic nature of a solution with the help of pH paper.
  - To Study the Change in the Size and Position of Image formed by a Convex Lens by hanging an Object (Candle). Placed in front of it
  - To Observe that Oxygen is released during the Process of Photosynthesis
  - To Show that CO<sub>2</sub> is given out during Respiration
  - To Test the Presence of Starch and Fat in given Food Samples
  - To test the presence of Adulterants in (a) Milk and (b) Metanil yellow in pulse.

#### **Fifth PCP Practical:**

- i. Orientation of learners about the concept of Chemical reaction, Chemical equations, estimation of the levels of Pollution and Food Chains and their Trophic levels.
- ii. Learners have to choose **any two activities** to be performed from the given experiments. (S. No. 8, 20 and 28 to 30 of Practical Manual) as:
  - ❖ To Carry out Chemical Reactions of Different Types
  - ❖ To Study the Change in Current through a Resistor by Changing Potential Difference across it. Determine the Resistance of the Resistor by Plotting a Graph between Potential Difference and Current
  - ❖ To Estimate the Level of Pollution in Terms of Particulate Matter by Comparing Leaf Samples Collected from Different Areas
  - ❖ To Observe Organisms from Given Pictures or Specimens or in the Surroundings (e.g. Crop Field, a Garden, or A Nearby Pond). Classify them as Producers and Consumers, and Construct their Food Chains and Indicate their Trophic Levels
  - ❖ To Study External Structural Adaptations in any Two Organisms out of Cockroach, Fish, Frog, Lizard and Pigeon

### **3. Scheme of Practical Examination:**

The following scheme of practical examinations to be followed is as per the details given below:

- The conduct of practical examinations is mainly linked with practical PCP. There are 06 practical sessions which are compulsory.
- The initial five (05) PCP practicals have to be assessed through Formative (Continuous) Assessment and will be utilized for learning.
- The final (6<sup>th</sup> PCP) practical will be for Summative (Final) Assessment for practical examination.
- A weightage of 50% of the marks will be awarded for Formative (05 practical classes) Assessment and 50% marks for the 6<sup>th</sup> practical classes for Summative Assessment.

### III. Marks Distribution in Formative Assessment (05 PCP Sessions):

S.No.	Criteria for Assessment	Marks	Remarks
1.	Regular Participation in 05 PCP Classes	1½	The five boxes under formative assessment in the award list will be filled up based on these 05 criteria.
2.	Activities Performed in 05 PCP Classes	1½	
3.	Practical Record maintained in 05 PCP Classes	1½	
4.	Use of practical instruments/ equipments	1½	
5.	Participation with Peer-Group and Tutor	1½	
	<b>Total</b>	<b>7½</b>	

### IV. Marks Distribution in Summative Assessment (6<sup>th</sup> Final PCP Class):

S. No.	Criteria for Assessment	Marks	Remarks
1.	Assessment of activity performed (Two activities out of given three activities)	2 × 2½ = 5	Time of 2½ hours will be allowed for the final examination.
2.	Viva-Voce based on the activities	2½	
	<b>Total</b>	<b>7½</b>	

**Note:** The total (Formative and Summative Assessments) weightage is 15 marks. In award list, the marks obtained by the learner, both in Formative and Summative Assessments are to be mentioned clearly and the final figure is the sum of the marks of Formative and Summative Assessments.

#### 4. Preparations for PCP Practical Sessions:

- (i) The Centre Superintendent and Tutor must read the instructions mentioned in the Guidelines for practical PCPs.

- (ii) Check and arrange the materials, tools, equipments etc. that will be needed in the Practical PCP sessions in advance.
- (iii) Learners are informed about the schedule of Practical PCP sessions. Practicals may be arranged in groups of learners.
- (iv) The attendance sheet must be properly maintained in each Practical PCP class.
- (v) The award list must be filled up, as per the given assessment criteria.
- (vi) The techniques of group work may be followed in Practical PCP sessions.
- (vii) Learners shall be asked to bring the practical record book in each class. Each learner is expected to maintain it, as per the instructions given in the practical manual.

## 5. Precautions (DOs and DON'Ts)

Discuss the following points with learners regarding preparing the practical record book:

- (i) Throughout the practical note book, the learner should follow the same style. Ask them to use a good fountain pen and a sharp black pencil. It is recommended that the right hand page should be written in blue ink and the left hand page with a black pencil.

The recommended style of writing is shown below:

### Left hand page

Scale, Projections, Calculations. Graph, Diagram, Figures

### Right hand page

Title of the exercise, Date, Exercise No, Interpretation and conclusion

- (ii) Each experiment should start from a new page.
- (iii) A neat and proportionate Scale, Projections, Graphs and Diagrams should be used.
- (iv) Mistakes should be crossed out with a single line so that it can still be read, the correct statement rewritten in its place.
- (v) No page should be turn-off from the practical record book.
- (vi) Before going to take Practical Examination, get all the exercises of Practical Record Book signed by the tutors.

## 6. List of Activities:

There are 30 activities in the Science and Technology Practical Manual. These 30 activities are distributed under three sections as:

### Physical Sciences

1. To Determine the Density of the Material of a given solid using a Spring Balance and a Measuring Cylinder

2. To Find the Average Speed of an individual, as one walks/runs, to and fro between two points
3. To Observe and Compare the Pressure Exerted by a Solid Iron Cuboid placed on Fine Sand/Wheat Flour while resting on its three different Faces and Calculate the Pressure Exerted in the three different Cases
4. To Verify the Third Law of Motion Using Two Spring Balances
5. To Determine the Melting Point of Ice
6. To Study the Laws of Reflection of Light Using a Plane Mirror
7. To Study the Change in the Size, and Position of Image formed by a Convex Lens by changing the Position of an Object (Candle) placed in front of it
8. To Study the Change in Current through a Resistor by Changing Potential Difference across it. Determine the Resistance of the Resistor by Plotting a Graph between Potential Difference and Current
9. To Assemble a Household Circuit Comprising Two Bulbs (3 Volt each), Two Turn On-Off Switches, a Fuse and Two Dry Cells as Source of Power
10. To Determine the Speed of a Pulse Propagated through a Stretched String

### **Chemical Sciences**

1. To Prepare an Aqueous Solution of Common Salt of a given Composition
2. Separation of Mixtures
3. To Differentiate between a Chemical and Physical Change in a given Process
4. To Test the Presence of Water Vapours in Air
5. To Test the Presence of Carbon Dioxide (CO<sub>2</sub>) in Air
6. To find out the Approximate Percentage of Oxygen in Air
7. To Test the Acidic/Basic Nature of a Solution with the help of pH Paper
8. To find the pH of Fruit/Vegetables Juices with the help of pH Paper
9. To Identify Washing Soda and Baking Soda out of the Samples of two White Powders
10. To Carry out Chemical Reactions of Different Types

### **Biological Sciences**

- 1) (i) To Prepare a Temporary Stained Mount of an Onion Peel; Observe it Under the Microscope and Record Observations

- (ii) To Prepare a Temporary Stained Mount of Human Cheek Cells; Observe it under the microscope and Record Observations
- 2) To Study and Draw Different Types of Plant and Animal Tissues with the Help of Permanent Slides : Plant tissues: Parenchyma and Sclerenchyma; Animal tissues: Blood, Striped muscle fibers and Nerve cells
- 3) To Study the Process of Osmosis through a Semi-permeable Membrane
- 4) To Test the Presence of Starch in Green Leaves Exposed to Sunlight
- 5) To Observe that Oxygen is Released during the Process of Photosynthesis
- 6) To Show that CO<sub>2</sub> is given out during Respiration.
- 7) (i) To Test the Presence of Starch and Fat in Given Food Samples.  
(ii) To Test the Presence of Adulterants in (a) Milk and (b) Metanil Yellow in Pulse.
- 8) To Estimate the Level of Pollution in Terms of Particulate Matter by Comparing Leaf Samples Collected from Different Areas.
- 9) To Observe Organisms from Given Pictures or Specimens or in the Surroundings (e.g. Crop Field, a Garden, or a nearby Pond) Classify Them as Producers and Consumers, and Construct Their Food Chains and Indicate their Trophic Levels.
- 10) To Study External Structural Adaptations in any two Organisms out of Cockroach, Fish, Frog, Lizard and Pigeon.





## Secondary Level

# HOME SCIENCE (216)

## Practical Examination

### 1. Objectives:

Home Science is a dynamic subject. It encompasses different modules like our food; our clothes; our home; our resources; growth and development and our rights and responsibilities. All aspects are essentially practiced in our lives. Hence, practical classes through PCP (personal contact programme) in Home Science will reinforce the learning and inculcate the practical skills among learners. The purpose of introducing Formative and Summative Assessments in Practical PCP is to encourage the learners' involvement and active participation in PCP classes. Participation in 6 PCPs (5+1) by all learners is mandatory.

### 2. Implementation:

There are 17 activities listed in the practical manual in Book 2 of the Home Science (216). These activities will be conducted in **5 PCP sessions** at the Study Centre. These will be assessed through Formative (Continuous) assessment. The **Sixth PCP** is reserved for the final examination that will be assessed through the Summative (Final) Assessment at the Study Centre. The dates for the practical examination (Final) will be notified by NIOS in the examination date sheet. 50% weightage is for each of Formative (Continuous) and Summative (Final) Assessments. The maximum mark for Practical in Home Science is 15. The distribution of activities in 05 PCPs is as follows:

#### First PCP Practical:

- (i) Orientation of the learners about the distribution of activities to be performed and allocation of marks for both the Formative (Continuous) and Summative (Final) Assessments
- (ii) Orientation of learners about the activities to be done in the class for the unit “**Our Food**” i.e. different foods to be cooked using different methods of cooking; classification of food into food groups and planning of foods for different age groups (practical no. 1, 9, and 10 in the practical manual) as:
  - ❖ **Practical 1:** Observe and record the results of cooking any two cereals and two vegetables cooked by different methods

- ❖ **Practical 9:** To observe the items eaten, from the given menu. To classify each item into an appropriate food group. To suggest items to be included in the food group not covered in the meal.
- ❖ **Practical 10:** To adjust the given meal for a family, keeping in mind the sex, age and activity level of the family members

**Second PCP Practical:**

- (i) Orientation of learners about the identification of fabric; making a sample of plain weave; removing stains from cotton fabric and washing and finishing of a garment as per the unit, **“Our Clothes”**, ( practical no. 2, 11, 12, 13 and 14 in the practical manual) as:

- ❖ Practical 2: To identify fabrics through visual inspection
- ❖ Practical 11: To identify fibres, using the burning test

OR

- ❖ \*To indentify the given fabrics by touching and feeling the texture
- ❖ Practical 12: To make graphic illustration or sample of plain weave by using strips of paper
- ❖ Practical 13: To remove the stains from the given white cotton fabrics in the labs.

OR

- ❖ \*Write the appropriate procedure in the column provided in the given table to remove the given stains.
- ❖ Practical 14: a) To wash and finish a Cotton Dupatta /Saree/ Shirt, b) To wash and finish a woollen shawl/cardigan and c) To wash and finish a silk scarf/blouse/Dupatta

**Third PCP Practical:**

- i) Orientation of learners about the ways to identify the safety hazards in the home, preparation of a first-aid kit and ways to clean different surfaces in the home given in the unit, **“Our Home”**, ( practical no. 3, 8, 15 of the practical manual) as:

- ◆ Practical 3: To prepare a first-aid kit
- ◆ Practical 8: To survey the home for safety hazards and suggest remedies regarding the same
- ◆ Practical 15: To clean different surfaces available in the laboratory such as plastic, metal, tiles, wood etc.

OR

\*State appropriate cleansing agents and method of cleaning to clean different surfaces available in the laboratory such as plastic, metal, tiles, wood etc.

**Fourth PCP Practical:**

- i) Orientation of learners about the significance of the management process; making a time plan and a spending plan and how to record it as per the unit, **“Our Resources”**, (practical no. 4, 5, 6, of the practical manual) as:

- Practical 4: To record and study the weekly spending plan of your family
- Practical 5: To record the steps in the process of management while arranging a family function
- Practical 6: To make a time plan for a homemaker with two school going kids, for a typical evening from 4:00 PM to 8:00 PM.

### **Fifth PCP Practical:**

(i) Orientation of learners about quality marks on a product and the making of the same; observation of children and the making of a toy, as in two units, “**Growth and Development**”, and “**Our Rights and Responsibilities**”, of consumer education (practical no. 7, 16 and 17 of the practical manual) as:

- ❖ Practical 7: To prepare a label for a product with given quality marks

OR

\*Select a product from amongst the following quality marks and give information on which should be included in the given label.

- ❖ Practical 16: To observe the communication skills of four children in given age groups
- ❖ Practical 17: To make a low cost toy/game for children, using household materials

### **3. Scheme of Practical Examination:**

The scheme of practical examinations is to be followed as per the details given below:

- ❖ The conduct of the practical examinations is mainly linked with practical PCP. There are 06 practical sessions which are made compulsory.
- ❖ The initial five (05) PCP practicals have to be assessed through Formative (Continuous) Assessment and will be utilized for learning.
- ❖ The final (6<sup>th</sup> PCP) practical will be utilized for Summative (Final) Assessment for practical examination.
- ❖ A weightage of 50% of the marks will be awarded for Formative (05 practical classes) Assessment and 50% marks for the 6<sup>th</sup> practical classes for Summative Assessment.

#### **1. Marks Distribution in Formative Assessment (05 PCP Classes) :**

	<b>Criteria for Assessment</b>	<b>Marks</b>	<b>Remarks</b>
1.	Regular Participation in 05 PCP Classes	1½	Five boxes under formative assessment in the award list will be filled up based on these 05 criteria.
2.	Activities Performed in 05 PCP Classes	1½	
3.	Practical Record maintained in 05 PCP Classes	1½	
4.	Observation (in the given practical)	1½	
5.	Observation (Group participation with peers)	1½	
	<b>Total</b>	<b>7½</b>	

## 2. Marks Distribution in Summative Assessment (6<sup>th</sup> Final PCP Class):

S. No.	Criteria for Assessment	Marks	Remarks
1.	Assessment of activity performed (Two activities out of given three activities)	$2 \times 2\frac{1}{2} = 5$	Time of $2\frac{1}{2}$ hours will be allowed for the final examination.
2.	Viva-Voce based on the activities	$2\frac{1}{2}$	
	<b>Total</b>	<b><math>7\frac{1}{2}</math></b>	

**Note:** The total (Formative and Summative Assessment) weightage is 5 marks. In the award slip, the mark obtained by the learner both in Formative and Summative Assessments are to be mentioned clearly and the final figure is the sum of the marks of Formative and Summative Assessment.

### Preparations and precautions for PCP Practical Sessions:

- (i) The Centre Superintendent and the tutor must read the instructions mentioned in the Guidelines for practical PCPs.
- (ii) The attendance sheet must be properly maintained in each Practical PCP class.
- (iii) The award list must be filled up, as per the given assessment criteria.
- (iv) The Tutor as well as the learner must read the instructions given in the practical manual.
- (v) The Tutor must check and arrange the materials, tools, equipments etc. that will be needed in the Practical PCP sessions in advance.
- (vi) The techniques of group work may be followed in Practical PCP sessions. One group can do one practical and another group another practical, then turn wise.
- (vii) Learners are informed about the schedule of Practical PCP sessions in advance.
- (viii) Learners can be asked to bring certain material, like a dupatta for washing, to the class.
- (ix) Learners shall be asked to bring the practical record book in each class. Each learner is expected to maintain it as per the instructions given in the practical manual. It will be used in the final examination.
- (x) They should be told to maintain cleanliness and follow safety measures when using fire, gas, chemicals, etc.
- (xi) Learners should be asked to clean the articles after use.
- (xii) Before going for Practical Examination, get all the exercises (17 practicals) of Practical Record Book signed by tutors.



## Secondary Level PAINTING (225) Practical Examination

### 1. Objectives:

Painting is a powerful way of self expression. This makes people more sensitive to their environment and develops a creative attitude. It helps in developing the aesthetic sense, skill and knowledge of learners. It is a medium to express their thoughts and feelings to others. The objective of this document is to provide a clear vision and concept of the subject to the learner of the course. Step wise exercises in the prescribed course curriculum will help the learner to draw and paint with original innovative thinking. After understanding about colours, space, harmony and perspective, the learner will develop artistic skills and his/her observation will become stronger. The purpose of introducing Formative and Summative Assessment in Practical PCPs is learners' involvement and active participation in PCP classes as well as continuous assessment which leads to learning.

### 2. Implementation:

There are 12 activities listed in the Practical Manual of Secondary level Course in Painting (225). These activities are to be conducted in 5 PCP sessions as given below, at the study centre. These will be assessed through Formative (Continuous) Assessment. The Sixth PCP is reserved for the final examination that will be assessed through Summative (Final) Assessment at the Study Centre. The dates for the practical examination (Final) will be notified by NIOS in the examination date sheet. 50% weightage is for each of Formative (Continuous) and Summative (Final) Assessments. The maximum mark for Practical in Painting is 70. The *distribution of* activities in 05 PCPs is as follows:

#### **First PCP Practical**

Attendance of all learners is mandatory. In the PCP, the learner is introduced to the course to sensitize the learner about:

**PENCILS** – HB stands for Hard and Black (50:50) and one should use **Soft** Range of pencils - starting from 2B to 10B onwards. These pencils are easy to handle, soft to use and one can create a range of tonal values from light to dark.

**PAPER** - major difference between cartridge, newsprint, handmade and ivory paper, how to gauge the correct side (rough side) of cartridge sheet before drawing

**Tutor must ensure that the learners place a newsprint sheet underneath the actual drawing sheet.** (To avoid transferring of any drawing board texture)

Learners are introduced to the elements of Drawing (line –strength and fluency, thick and thin lines, rhythm ,texture, shape, etc.) and its importance through practice based exercises without the use of ~~car~~

### **Second PCP Practical**

**Object Drawing** (two objects from the basic geometrical forms)

Aim of this PCP is to focus on quality of line drawing

Placement of the paper (portrait or landscape), arrange and draw the given objects within the space, keeping in mind division of background, middle ground and foreground

Measuring of objects from distance with the help of pencil. To measure, close one of your eyes, hold a pencil at arm’s length (always keep your arm straight).

Understanding of relative study of objects and usage of negative – positive space

### **Third PCP Practical**

**Nature Study in pencil and colours**

Composition of outdoor Nature Study, using a view finder

Differentiate between the right proportion, balance and rhythm, when viewing the vastness of natural things. Before starting the colours, learners should be given 10-15 minutes to study different colour values, shadows reflections and highlights of the nature.

Sometimes the treatment of the background helps to define a natural object more clearly.

### **Fourth PCP Practical**

**Human Figure Drawing**

Study and Understanding of Human figures from to day to day life and gradually arranging visual elements around human figures to form a painting, using different colour mediums or mixed mediums. Examples: fighting with your younger brother, weekly haat/bazaar near your house and so on in the syllabus. More examples: Playing with your pets, a man walking with two dogs, a running horse cart near your house and so on.

Effective communication and expression of the idea/concept/emotions to the viewer through colours and perspective

Individual innovation, creativity and originality should be much encouraged and appreciated.

**Animal Figure Drawing**

Study and Understanding of Animal figures: your pets, a child walking with two dogs, a running horse, and so on in the syllabus.

Effective communication and expression of the idea/concept/emotions to the viewer through colours and individual innovation, creativity and originality should be much encouraged and appreciated.

## **Fifth PCP Practical**

### **Composition**

Create a Painting on the given subject keeping in mind the principles of composition. Communication and expression of the idea/concept/emotions to the viewer through colours and perspective

Free hand drawing directly from life and nature would give a sense of all the elements of a composition, starting with basic design and various experiments to understand the forms. Use of different colours will bring the sense of composition.

Topics suggested by the tutor, for example, are- Mela, Haat, Bazaar, At the Café, Beggars, mother cooking, Story telling by grandparents, Playing in the rain and so on.

Learners must focus on the concept of perspective introduced in the fourth PCP.

Composition should be creative, original and different; reference is allowed but not copying.

The tutor should talk about masters and contemporary artists and their artworks.

Introducing the learners to Primary, Secondary, Cool, Warm, complementary, and contrast colours

Learning about various colour mediums, difference between poster and tube water colours (opaque and transparent) and their application techniques.

### **Sixth Final PCP Class**

- i. Examiner should arrange any two or three objects from the following:  
commonly available objects (such as water bottle/glass/ spectacles/ hardbound book/ladies' bag/ jugs/mugs/cup/earthen pots, etc.
- ii. Create a Composition that would give a sense of all the elements being part of a composition. Start with a basic design and various experiments to understand the forms Use of different colours.  
Individual innovation, creativity and originality should be encouraged and appreciated and use of different colours will bring the sense of illustration.

### **3. Scheme of Practical Examination:**

The following scheme of practical examinations to be followed, as per the details given below:

- ◆ The conduct of practical examinations is mainly linked with practical PCP. There are 06 practical sessions which are made compulsory.
- ◆ The initial five (05) PCP practicals have to be assessed through Formative (Continuous) Assessment and will be utilized for learning.
- ◆ The final (6<sup>th</sup> PCP) practical will be utilized for Summative (Final) Assessment for practical examination.
- ◆ A weightage of 50% of the marks will be awarded for Formative (05 practical classes) Assessment and 50% marks of the 6<sup>th</sup> practical class for Summative Assessment.

### Marks Distribution in Formative Assessment (05 PCP Sessions):

S.No.	Criteria for Assessment	Marks	Remarks
1.	Regular Participation in 05 PCP Classes	7	The five boxes under formative assessment in the award list will be filled up based on these 05 criteria.
2.	Activities Performed in 05 PCP Classes	7	
3.	Practical Record maintained in 05 PCP Classes	7	
4.	Use of practical instruments/ equipments	7	
5.	Participation with Peer-Group and Tutor.	7	
	<b>Total</b>	<b>35</b>	

### Marks Distribution in Summative Assessment (6<sup>th</sup> Final PCP Class):

S. No.	Criteria for Assessment	Marks	Remarks
1.	Assessment of activity performed (Two activities out of given 05 activities)	25	Time of 04 hours will be allowed for the final examination.
2.	Portfolio submission	10	
	<b>Total</b>	<b>35</b>	

**Note:** The total (Formative and Summative Assessment) weightage is 70 marks. In award list, the marks obtained by the learner, both in Formative and Summative Assessment are to be mentioned clearly and the final figure is the sum of the marks of Formative and Summative Assessments.

#### 4. Preparations for PCP Practical Sessions:

- (i) The Centre Superintendent and Tutor must read the instructions mentioned in the Guidelines for practical PCPs.
- (ii) Check and arrange the materials, tools, equipments etc. that will be needed in the Practical PCP sessions in advance.
- (iii) Learners are informed about the schedule of Practical PCP sessions.
- (iv) The attendance sheet must be properly maintained in each Practical PCP class.
- (v) The award list must be filled up, as per the given assessment criteria.
- (vi) The techniques of group work may be followed in Practical PCP sessions.
- (vii) Learners shall be asked to bring the practical record book in each class. Each learner is expected to maintain it as per the instructions given in the practical manual.



## 5. Precautions (DOs and DON'Ts)

Discuss the following points with the learners regarding writing the practical record book:

- ◆ All three objects should be of different sizes and shapes.
- ◆ All the three objects should not be placed in a straight line.
- ◆ Tutor/ Examiner should select objects preferably of different colours.
- ◆ The objects should not be placed above or below the learners' eye level.

## 6. List of Activities:

There are 12 activities in the Painting Practical Manual and One Portfolio submission along with one sketch book. These 12 activities are distributed under three sections as given below:

### 6.1 Section –A (Port-folio Submission)

Learners need to submit portfolios with minimum eight own works, which includes dating, mounting and maintaining of each work.

Part 1 Object and Nature study (Minimum three works)

$\frac{1}{4}$  imperial size paper

- One in pencil line drawing
- One in colours
- One in Pen and ink (Gel Pen, Sketch pen or ball pen)

Part 2 Human and animal figure study – (Minimum three works)

$\frac{1}{4}$  imperial size paper

- One in pencil line drawing for both (human and animal)
- One with tone in pencil for the both (human and animal)
- One in colour drawing for the both (human and animal)

Part 3 Composition – (Minimum four works)

$\frac{1}{2}$  imperial size paper

- One composition with line and colours (Poster or water colour)
- One in collage.
- One in pastel colour
- One in pencil or pen and ink

### 6.2 Section- B (Object and Nature Study)

Since the outline cannot bring the solidity of the object, application of light and shade is required.

While depicting light and shade and depth. Three other distinction highlight, reflected light and cast shadow should also be forced.

Learner should create tonal values from light to dark using 2B to 10B pencils.

To avoid smudging of shading learner should keep white paper under his/her palm.

**DO NOT USE ERASER WHILE SHADING.**

### **6.3 Section-C (Composition in Mixed Medium)**

Free hand drawing directly from life and Nature would give a sense of all the elements of a composition; starting with basic design and various experiments to understand the forms. Use of different colour will bring the sense of composition. The making of collages will be very helpful to understand the textural quality of a composition. With the help of the knowledge of previous lessons compositions are to be created with the geometrical shapes in animate and inanimate forms, taking care of rhythm, balance, space, colours and harmony.

Collage to be created with the help of coloured cut out papers, picture from magazine or any easily available materials and taking care of all the elements of composition.

#### **Materials required for all the activities**

Half Imperial sized or (15"×22") Cartridge sheets.

Newsprint or A3 sheets

Rubber, Sharpener/mount cutter

2B,4B, 6B and 8B Drawing Pencils

Half Imperial sized drawing file

Colours- pencil colours, oil pastels colours, water colours, Poster colours etc.

Paint Brushes (round and flat No. 2, 4, 6, 8,and 10)

Colour Palette, container for water and rag (Old piece of cotton cloth)

Sketchbook (size-8" × 11" or minimum 30 sheets)

Butter Paper/ white kite paper( guddi paper)

Different Shapes and sized objects like pots, flower vases, Bottles, etc. (material required by the tutors for object drawing sessions.)

Drapery -preferably khadi cotton fabric of minimum size 1 meter colour- Prussian blue, red, orange, yellow, green (**material required by the tutors for object drawing sessions**).



**Secondary Level**  
**DATA ENTRY OPERATIONS (229)**  
**PRACTICAL EXAMINATION**

1. **Objectives:** Data Entry Operations is a practical oriented subject. PCP (Personal Contact Programme) will inculcate the practical skills in Data Entry Operations among learners. Participation in PCP (5+1) by all learners is mandatory.

2. **Implementation:**

The practical activities are to be conducted in 5 PCP sessions as given below, at the study centre. These will be assessed through Formative (Continuous) Assessment. The Sixth PCP is reserved for the final examination that will be assessed through Summative (Final) Assessment at the Study Centre. The dates for the practical examination (Final) will be notified by NIOS in the examination date sheet. 50% weightage is for each of Formative (Continuous) and Summative (Final) Assessments. The maximum mark for Practical in Data Entry Operations is 60. The *distribution of activities in 05 PCPs* is as follows:

**First PCP includes**

- (iii) Orientation of the learners about distribution of activities to be performed and allocation of Marks for both the Formative (Continuous) and Summative (Final) Assessment

Practical 1:

Enter the following details in your Word documents Arial, font size 14 and save this file with name, 'First\_Document', in My Documents.

S.No	Registration Form	
(i)	Name of Candidate	
(ii)	Father's Name	
(iii)	Mother's Name	
(iv)	Date of Birth	
(v)	Postal Address	

(vi)	Sex	
(vii)	Nationality	
(viii)	Educational Qualification	
(ix)	Work Experience	
(x)	Mobile No	

Perform the following activity on the above table:

- (iv) Apply the style.



Practical 2:

Open the file, “First\_Document”, and perform the following activities:

- Make the headings from serial no. (i) to (viii) bold.
- Change the Text Highlight Color as “Yellow” at the entry at serial no. (v),
- Make the entry at serial no. (iii) italics.
- Select the whole document and decrease its font size by 3 points.
- Make the line spacing 1.5 (whole document).
- Apply the Center alignment for the whole table

**Second PCP:**

Practical 1:

Type a document of at least 1 page on any topic with the following specifications:

- Page size A5
- Include at least one numbered list and one bulleted list.
- Line spacing 2
- Footer should include Page number and your name.
- Left margin: 1.5", Right margin: 0.5", Top margin: 1", Bottom Margin: 1"
- Insert any picture in your document.

Practical 2:

With the help of Mail Merge facility, send your birthday invitation letter to five of your friends. Design a sample Data Source (in Excel) for this purpose. The data source should have at least 5 fields: First name, Last name, Address, City, Pin code. Take a print out of this Merged Document (invitation letter).

**Third PCP**

Practical 1:

Enter the following data in your worksheet. Insert two Pie Charts (one for Matches won and the other for Percentage of Matches won)

## Sports Department ABC School

		Coach Played	Matches Won	Matches	Highest	% of Matches Level	Remarks
1	Basket Ball ( J)	Neelam	10	8	State	80.00%	
2	Basket Ball( S)	Indrash	15	10	State	66.67%	
3	Volley Ball(J)	Archita	12	9	State	75.00%	
4	Volley Ball(S)	M. Pal	18	15	National	83.33%	
5	Cricket (J)	Narendra	10	7	Zonal	70.00%	

### Practical 2:

Enter the following data in your worksheet.

	A	B	C	D	E	F	G
1	Name	Class	Mark 1	Mark 2	Mark 3	Total	Average
2	Swati	10	80	70	92		
3	Puneet	10	98	67	46		
4	Manoj	10	54	78	59		
5	vipin	10	86	73	78		
6	Vidya	10	72	69	91		
7							
8							

- Insert one row on the top of the Worksheet and type “Student Mark sheet”. Merge the columns, A1 to G1.
- Find the total and average marks of each student.
- Make the first row BOLD and Underline.
- Select Total Column and fill blue color.

### **Fourth PCP.**

#### Practical 1:

Create a PowerPoint presentation on “Water Conservation”.

- What is water conservation?
- Insert a relevant picture in your Presentation.
- How to conserve water
- Insert slide number and date in your presentation.

Practical 2:

Create a PowerPoint presentation on “Good Habits”.

- (i) Introduction to Good Habits
- (ii) Insert a relevant picture in your Presentation.
- (iii) Apply animation to our slides.
- (iv) Print your presentation - 2 slides per page.

**Fifth PCP**

Practical 1:

Create a report on the Computer Lab(s) in your class. The report must at least include the following information:

- (i) Number of computers in your class
- (ii) Configuration of at least 2 computers in your school
- (iii) Names of various Operating Systems being used
- (iv) Names of various software installed

Practical 2:

Enter the following data in your Worksheet

Class X (2015-16) – Computer Science					
S.No.	NAME	Internal	External	Total	Signature
1	Renu	20	78		
2	Yashika	14	59		
3	Pankaj	11.	62		
4	Anita	18	36		
5	Priyanka	18	89		
6	Kapil	10	45		
7	Amit	11	47		
8	Ajay	12	56		
9	Aman	3	88		
10	Yogesh	8	79		

You have to use the following features to create this worksheet:

- AutoSum
- Merge Cells
- Formatting (Bold, Centre align, etc.)
- Column Chart (To display marks obtained in Worksheet)
- Chart Title, Axis Title
- Change the sheet 1 (worksheet name) as “Mark sheet”

### 3. Scheme of Practical Examination:

The following scheme of practical examinations to be followed as per the details given below:

- ❖ The conduct of practical examinations is mainly linked with practical PCP. There are 06 practical sessions which are made compulsory.
- ❖ The initial five (05) PCP practicals have to be assessed through Formative (Continuous) Assessment and will be utilized for learning.
- ❖ The final (6<sup>th</sup> PCP) practical will be utilized for Summative (Final) Assessment for practical examination.
- ❖ A weightage of 50% of the marks will be awarded for Formative (05 practical classes) Assessment and 50% marks for the 6<sup>th</sup> practical classes of Summative Assessment.

### V. Marks Distribution in Formative Assessment (05 PCP Sessions):

S. No.	Criteria for Assessment	Marks	Remarks
1.	Regular Participation in 05 PCP Classes	10	The five boxes under the formative assessment in the award list will be filled up based on these 04 criteria.
2.	Activities Performed in 05 PCP Classes	10	
3.	Practical Record maintained in 05 PCP Classes	5	
4.	Participation with Peer-Group and Tuto.	5	
	<b>Total</b>	<b>30</b>	

### VI. Marks Distribution in Summative Assessment (6<sup>th</sup> Final PCP Class):

S. No.	Criteria for Assessment	Marks	Remarks
1.	Assessment of activity performed (For Two activities)	20	Time of 2 hours will be allowed for the final examination.
2.	For taking the print outs of the output	5	
3.	Viva-Voce based on the activities	5	
	<b>Total</b>	<b>30</b>	

**Note:** The total (Formative and Summative Assessment) weightage is 60 marks. In award list, the marks obtained by the learner, both in Formative and Summative Assessment are to be mentioned clearly and the final figure is the sum of the marks of Formative and Summative Assessments.

### 4. Preparations for PCP Practical Sessions:

- (i) The Centre Superintendent and Tutor must read the instructions mentioned in the Guidelines for practical PCPs.
- (ii) Check and arrange the materials, tools, equipments etc that will be needed in the Practical PCP sessions in advance.

- (iii) Learners are informed about the schedule of Practical PCP sessions. Practicals may be arranged in groups of learners.
- (iv) The attendance sheet must be properly maintained in each Practical PCP class.
- (v) The award list must be filled up as per the given assessment criteria.
- (vi) The techniques of group work may be followed in Practical PCP sessions.
- (vii) Learners shall be asked to bring the practical record book in each class. Each learner is expected to maintain it as per the instructions given in the practical manual.

### 5. Precautions (DOs and DON'Ts)

Discuss the following points with the learners regarding writing the practical record book:

- (i) Throughout the practical note book, the learner should follow the same style. Ask them to use a good fountain pen and a sharp black pencil. It is recommended that the right hand page should be written in blue ink and the left hand page with a black pencil.

The recommended style of writing is shown below:

#### Left hand page

Table, Chart and print out of the output screen

#### Right hand page

Title of the exercise, Date

Exercise No.

Interpretation and conclusion

- (ii) Each experiment should start from a new page.
- (iii) Mistakes should be crossed out with a single line so that it can still be read; the correct statement rewritten in its place.
- (iv) No page should be torn-off from the practical record book.
- (v) Before going to take Practical Examination, get all the exercises of Practical Record Book signed by your tutors.

#### Computer Lab Rules (Do's and Don'ts)

- ❖ The computers in the lab are to be used for academic purposes only.
- ❖ Uploading or downloading software without permission is strictly prohibited
- ❖ Do not make any changes to the desktop or to installed software.
- ❖ Playing computer games is strictly prohibited.
- ❖ Report any problems to the instructor.
- ❖ Please Logoff when you leave.

**Note:** Material for the practical examination will be provided by the centre superintendent at the practical examination centre, as per requirement of the activities.





**Secondary Level**  
**INDIAN SIGN LANGUAGE (230)**  
**PRACTICAL EXAMINATION**

**1. Objectives:**

Indian Sign Language is a hands-on subject. The goal of implementing formative and summative assessments in practical PCP classes is to encourage learners' involvement and active participation in PCP classes, as well as continuous assessment, which leads to learning.

**2. Implementation:**

The lab should have adequate number of computer with multimedia features as per the enrolled learners at the study centre. In all the computers required hardware and software for video recording and internet connection must be installed. One working network printer should be there in the lab.

The practical activities are to be conducted in 5 PCP sessions, at the study centre. These will be assessed through Formative (Continuous) Assessment. The Sixth PCP session is reserved for final examination that will be assessed through Summative (Final) assessment which will be notified by NIOS in the examination date sheet. 50% weightage is for each of Formative (Continuous) and Summative (Final) Assessment. The maximum mark for Practical in Indian Sign Language is 60. The distribution of activities in 05 PCPs is as follows:

**First PCP Practical:**

- Orientation of the learners about the distribution of activities to be performed and the allocation of marks for both the Formative and Summative Assessment.
- The tutor will introduce and apprise the practical mentioned in the following list categorised as “**Language Description**”, and learners have to select and complete any three practical activities from the following list-
  - Compare linguistics features of signed languages and spoken (written) languages
  - React to a set of given statements about sign languages and distinguish facts from myths in these statements
  - Identify features of Indian Sign Language in comparison with other sign languages.
  - Identify features of Indian deaf communities in comparison with other deaf communities.
  - Assign a given set of ISL signs to different time periods to distinguish older from more recently evolved signs.

**Second PCP Practical:** The tutor will introduce and apprise the practical mentioned in the following list categorised as “**Language Context**”, and learners have to select and complete any three practical activities from the following list-

- Identify and discuss different sub-groups in the ISI community.
- Comparison of ISL across different areas of the country.
- RPwD Act 2016 and discuss points related to deaf community and the linguistic rights of ISL users in India
- Language skills of sign language interpreters in India
- Cultural aspects of using deaf teachers and Indian Sign Language in education

**Third PCP Practical:** The tutor will introduce and apprise the practical mentioned in the following list categorised as “**ISL grammar and usage**”, and learners have to select and complete any four practical activities from the following list-

- Distinguish between Correct and Incorrect Sample of given sign
- Use language resources to search for ISL materials
- ISL grammar and usage-
  - Non-manual components of ISI.
  - Sentence types: Simple statements, questions, negatives
  - Describing people and objects (Adjectives and Opposites)
  - Pronouns and kinship terms
  - Expression of time, numbers and measures
  - Verbs and uses of the sign space
  - Possession (Having and not having)

**Fourth PCP Practical:** The tutor will introduce and apprise the practical mentioned in the following list categorised as “**Creative language production**”, and learners have to select and complete practical activities on any two topics from the following list –

- Narrative texts and stories
- Jokes and anecdotes
- Poems and drama/skits
- Expository and factual texts
- Descriptive and procedural texts
- Formal presentations
- News reading in sign language

**Fifth PCP Practical:** The tutor will introduce and apprise the practical mentioned in the following list categorised as “**Language Production/Interpersonal Communicative Skills**”, and learners have to select and complete any four practical activities from the following list -

- Personal diary in ISL about examples of sign language
- Meet a CODA (Child of Deaf Adult) or SODA (Sibling of Deaf Adult) and interview them.
- How to give a presentation in ISL in Live Programme?
- Use ISL in a mock interview situation
- Use an online chat application to have a conversation with another ISL user via sign language video
- Sign the same story to a child and to an adult. Adjust your signing style to suit the child/adult.

**Sixth PCP:** This PCP will be the final practical examination.

### **3. Scheme of Practical Examination:**

The following scheme of practical examination is to be followed as per the details given below;

- The conduct of practical examination is mainly linked with practical PCP sessions and there are six (06) practical sessions which are compulsory.
- The initial five (05) PCP practical are assessed through formative (Continuous)
- Assessment and will be utilise for learning.
- The final (6) PCP practical will be utilised for summative (Final) Assessment of the practical examination/
- A weightage of 50% of the marks will be awarded for Formative Assessment (05 practical classes) and 50% marks for the 6 practical class for Summative Assessment.

#### **1. Marks Distribution in Formative Assessment (05 PCP Session)**

<b>S.No.</b>	<b>Criteria for Assessment</b>	<b>Marks</b>	<b>Remarks</b>
<b>1.</b>	Regular participation in 05 PCP classes	10	The five boxes under Formative Assessment in the award list will be filled up based on theses criteria
<b>2.</b>	Activities performed in 05 PCP classes	10	
<b>3.</b>	Practical record maintained in 05 PCP classes	5	
<b>4.</b>	Participation with peer group and tutor	5	
	<b>Total</b>	<b>30</b>	

## II. Marks Distribution in Summative Assessment (06- Final PCP Session)

S.No.	Criteria for Assessment	Marks	Remarks
1.	Assessment of activities performed (for three activities)	$8 \times 3 = 24$	Time of 3 hours will be allowed for the final examination. (Additional time will be provided in accordance with NIOS examination guidelines)
2.	Vivo-voce (in ISL medium) based on the activities	06	
	<b>Total</b>	<b>30</b>	

**Note:** The total (Formative and Summative Assessments) weightage is 60 marks. In the award list, the marks obtained by the candidate, both in Formative and Summative Assessments are to be mentioned clearly and final figure is the sum of the marks of Formative and Summative Assessments.

### 4. Preparations for PCP Practical Sessions:

- (i) The Centre Superintendent and Tutor must read the instructions mentioned in the guidelines for practical PCPs.
- (ii) Check and arrange the materials, tools, equipment etc. that will be needed in the Practical PCP sessions in advance.
- (iii) Learners are informed about the schedule of Practical PCP sessions.
- (iv) The attendance sheet must be properly maintained in each Practical PCP class.
- (v) The award list must be filled up, as per the given assessment criteria.
- (vi) The techniques of group work may be followed in Practical PCP.
- (vii) Learners will be asked to bring the practical record book in each class. Each learner is expected to maintain it as per the instruction given in the practical manual.



**Secondary Level**  
**HINDUSTANI SANGEET (242)**  
**PRACTICAL EXAMINATION**

1. **Objectives:** Music is an important part of our life as it is a way of expressing our feelings as well as emotions. It's an art form. Training in classical and semi classical music develops our brain and the abilities associated with it. Music stimulates our emotional and cognitive abilities. It's meditative, stress reliever, fights depression, enhances memory, encourages creativity and it gives happiness and joy. By learning this subject they can be self employed with their accumulated knowledge in the subject.
2. **Implementation:** There are 7 activities listed in the Practical Manual of Secondary Level Course in Hindustani Music (242). These activities are to be conducted in 5 PCP sessions as given below at the study Centre. The dates for the Practical Examination (Final) will be notified by NIOS in the examination date sheet, 50% weightage is for each of Formative (continuous) and Summative (final) Assessments. The maximum mark for Practical in Music course is 60. The distribution of activities is 05 PCP's is as follows:

**First PCP Practical**

Attendance of all learners is mandatory. In the PCP, the learner is introduced the course to sensitize and understand the subject.

- Swara's and Alankara
- Tall and Laya  
(Dadra, Kaharva and Teental)
- Practical knowledge of scales and importance of practice of Swaras.
- Introduction of Raga Bhoopali  
Raga Bhoopali (Alaap and Taan)
- Raga Bhoopali (Dhrupad) in Dugun speed.
- Patriotic Song
- Folk Song

**Second PCP Practical**

Introduction of Raag Yaman

- Bandish of Raga Yaman
- (Aroha – Avrohaa, Pakad, Vadi, Samvadi, Time, Jaati etc.)
- Tan and Alaap of Raga Yaman
- Identify Jhaptala and Ektala for Yaman Raga
- Dhrupad (Yaman)  
Dugun of Dhrupad
- Any one Folk Song from syllabus or their choice.  
(Learn and Practice)
- Any one Patriotic Song from syllabus or their choice.  
(Learn and Practice)

### **Third PCP Practical**

Introduction of Raag Alhaiya Bilawal and Dhamar:

- Raga Alhaiya Bilwal (Bandish)  
(Aroha-Avroha, Pakad, Vadi, Samvadi, Time, Jati etc.)
- Taan and Aalap  
(Raga Alhaiya Bilawal)
- Dhamar Taal  
(Practice the bole)
- Dhamar (Bandish)

In Dugun speed of Dhamar

- Any one Folk Song from syllabus or their choice.  
(Learn and Practice)
- Any one Patriotic Song from syllabus or their choice  
(Learn and Practice)

### **Fourth PCP Practical**

Introduction of Raga Bhairav

- Parichay of Raga Bhairav  
(Aroha – Avroha, Pakad, Vadi, Samvadi, Time, Jati)
- Raga Bhairav (Bandish)
- Aalap and Taan of Raga Bhairav
- Dhrupad in Raga Bhairav
- Recitation of Tala  
Ektala

- Any one Folk Song from syllabus or their choice.  
(Learn and Practice)
- Any one Patriotic Song from syllabus or their choice  
(Learn and Practice)

### **Fifth PCP Practical**

#### Introduction of Raga Kafi

- Parichay of Raga Kafi  
(Aaroh – Avroh, Pakad, Vadi – Samvadi, Time, Jati etc.)
- Bandish (Kafi)
- Aalap and Taan
- Recitation of Thekas of Tala- Ektal
- Dhrupad in Raga Kafi
- In Dugun speed of Dhrupad (Kafi)
- Any one Folk Song from syllabus or their choice.  
(Learn and Practice)
- Any one Patriotic Song from syllabus or their choice  
(Learn and Practice)

### **Sixth, final PCP Sessions**

- 1) Revision of all the previous 5 PCP Sessions to be done.
- 2) Learner’s difficulties to be solved.
- 3) The presentation method to be demonstrated by them.

### **3. Marks Distribution in Formative Assessment (5 PCP Session)**

<b>Formative Assessment</b>	<b>Marks</b>	<b>Remarks</b>
Regular Participation in PCP 5 sessions	10	Assessment in the award list will be filled up based on these five PCPs.
Activities presented in 5 PCP sessions	10	
Presentation of Practiced lessons	10	

### **Marks Distribution in Summative Assessment (6 PCP Final Session)**

<b>Summative Assessment</b>	<b>Marks</b>	<b>Remarks</b>
Assessment of at least two activities performed	15	Time of assessment will be held in 1½ hour for the final Examination.

Maintaining Record of the musical aspects learnt in the form of Writing and preserving	05	
Interaction of the learner with the tutor	10	

**Note:** The total (Formative and Summative Assessment) weightage are 60 marks in award list, the marks obtained by the learner, both in Formative and Summative Assessment are to be mentioned clearly and the final figure is the sum of the marks of Formative and Summative Assessments.

#### 4. Preparative For PCP Practical Sessions:

- (1) The center superintendent and Tutor must read the instruction mentioned in the Guidelines for practical PCP's.
- (2) The center should provide Harmonium/Tanpura/Electronic Tanpura during PCP classes and also for conducting the final Practical Examination.
- (3) Tabla and Tabla player should be provided by the center.
- (4) Learners should be informed about the schedule of Practical PCP sessions.
- (5) The Attendance sheet has to be maintained by the PCP Tutor.
- (6) The award must be filled up as per the given assessment criteria.
- (7) The technique of group presentation should be encouraged by the PCP tutor.
- (8) Learner shall be asked to bring the practical record book in each class. Each learner is expected to maintain it as per the instruction given in the practical material.

#### 5. Precaution (Do's and Don'ts)

1. The candidate should be encouraged to attend music concert available. Through AIR, Television and various other platforms.
2. Attendance register of such activities has to be maintained and monitored by the Tutor.
3. To retain the interest of the candidate, the Tutor should teach the subject in a manner in which the candidate understands it easily.
4. Encouraging the active participation from the candidates is to be made regularly.

#### 6. Marks Distribution in details

Choice Raga (Chhota Khayal) from the listed Raga in the Syllabus	<b>15</b>
(a) Raga Parichay (Vadi, Samvadi, Time, Jati, etc.)	2
(b) Aaroh – Araroh	2
(c) Bandish	6



(d) Aalap	3
(e) Taan	2
Rendition of Dhrupad/Dhamar from the listed Raga in the syllabus	<b>15</b>
(a) Raga Parichay (Vadi, Samvadi, Time, Jati, etc.)	2
(b) Aaroh – Araroh	2
(c) Dhrupad/Dhamar	6
(d) Reciting the thekas of Taal of Dhrupad and Dhamar	2
(e) Dugun	3
<b>Folk Song</b>	<b>10</b>
Any one song from the CD/ provided by the NIOS or any other song of their own choice.	
(a) Accuracy of Swara, Tala and Pronunciation	2+2+2
(b) Presentation of the Folk Song	4
<b>Patriotic Song</b>	<b>10</b>
Any one song from the CD/curriculum provided by the NIOS or any other song of their own choice.	
(a) Accuracy of Swara, Tala and pronunciation	2+2+2
(b) Presentation of the Patriotic Song	4
<b>Tala and Alankars</b>	<b>10</b>
(a) Any one Tala, Identify and Recite with the Theka (Matra, Bol, Vibhag and Laya)	1+1+1+2
Any one Alankar from the CD provided by the NIOS/curriculum or any of the choices of learner. Aaroh and Avroh	
(b) Accuracy of Swara and Laya	3+2



**Secondary Level**  
**CARNATIC SANGEET (243)**  
**PRACTICAL EXAMINATION**

**1. Objectives**

Music is a subject of joy and self realisation. This makes the student feel more relaxed and broad minded and controls the negative attitudes of the singer and also soothes negative emotions of the listeners. Since the Carnatic Music content is of devotional type and also a medium through which they will be able to express their inner feelings to others. The regular practitioner of music derives a self satisfaction in all aspects quickly and thrives to achieve only the best. By learning this subject they can be self employed with their accumulated knowledge in the subject.

**2. Implementation**

There are two activities mentioned in the Practical manual of Secondary Course in Carnatic Music. These activities can be divided into 6 PCP sessions of 3 hrs each day for minimum 3 days at the Study Centre. These can be a revision of all the earlier PCP activities and doubts or any queries of the candidate can be clarified These will be assessed through continuous Assessment. The last PCP is reserved for final examination.

**First PCP Practical**

Attendance of all learners is compulsory, since the learner is introduced to the course details.

**SRUTI:** How to tune the instrument according to the pitch suitable for them if it is vocal music and how to tune the instrument can be taught.

All **Sarali Varisai** (enlisted in the syllabus) can be taught in first speed and also explain the basic importance of Talas used in Carnatic Music and also the details of the Composer who formatted it.

Demonstrating the above and asking the learners to repeat will be done in this session.

The aim is to introduce the classical music to the candidate, and its difference from other system of music.

### Second PCP Practical

Teaching of **Sapta Tala Alankaras** in two speeds and describing the various varieties of Tala used in Alankaras. At least two **Pillari Gitam** and one **Sanchari Gitam** can be taught since they are being introduced to the lyrics for the first time in different Ragas and Talas.

The aim is to introduce the different aspects of classical music.

### Third PCP Practical

Teaching the **Varnam, Jatiswara and Swarajatis** comparatively needs the attention of the learners more serious and sincere. They are introduced to the **Gamakas** employed in Carnatic Music along with Swaras, Sahitya and Mathematical patterns.

To learn a Varnam learner will need minimum three sessions if possible.

### Fourth PCP Practical

**Kriti** is a very aesthetic and perfect musical form to be taught and then presentation purpose for a learner in an exam and presentation of it in public needs to be guided.

### Fifth PCP Practical

Teach **Kirtana, Sankirtanas, Padas, Tarangam and Bhajan**. Composer of popular Kirtanas in different South Indian languages and how these are different from classical music, voice-modulation for effective singing has to be taught.

### Sixth PCP Practical

Revision of all previous 5 PCPs.

Learner difficulties to be solved.

The presentation method to be demonstrated by them.

### 3. Marks Distribution in Formative Assessment (5 PCP sessions)

Formative Assessment	Marks	Page 5
Regular Participation in 05 PCP sessions.	10	Assessment in the award list will be filled up based on these 05 PCP sessions
Activities presented in PCP sessions	10	
Presentation of Practical lessons	10	
<b>Total</b>	<b>30</b>	

### Marks Distribution in Summative Assessment (6<sup>th</sup> Final PCP session)

Summative Assessment	Marks	Remarks
Assessment of at least two activities performed	15	Time of assessment will be held for 1 ½ hrs for the final examination
A Maintain records of the musical aspects learnt in the form of writing and preserving.	05	
Interaction of the candidate with the tutor	10	
<b>Total</b>	<b>30</b>	

**Note:** The total (Formative and Summative Assessment) weightage are 60 Marks in award list, the marks obtained by the learner, both in Formative and Summative Assessment are to be mentioned clearly and the final figure is the sum of the marks of Formative and Summative Assessments.

#### 4. Preparation For PCP Practical Session

- 1) The Centre Superintendent and Tutor must read the instruction mentioned in the Guidelines for Practical PCPs.
- 2) Electronic Tanpura/ Harmonium/ Taripura to be provided for conducting the classes and practice exams by the Centre.
- 3) Learners should be informed about the schedule of practical sessions.
- 4) The attendance sheet has to be maintained by the PCP Tutor.
- 5) The award list must be filled up as per the given assessment criteria
- 6) The technique of group presentation should be encouraged by the PCP Tutor.
- 7) Learners shall be asked to bring the practical record book in each class. Each learner is expected to maintain it as per the instruction given in the practical material.

#### 5. Precautions (Do's and Don'ts)

- 1) The candidates should be encouraged to listen and attend music concert available through AIR, Television and various Occasions or Festivals.
- 2) Attendance Registers of such activities have to be maintained and monitored by the Tutor.
- 3) Tutor should teach the subject in a manner in which the candidates understand it easily.
- 4) Encouraging the active participation from the candidates is to be made regular.

#### 6. Mark Distribution

- 1) Rendering of any one of the following in two speeds 10 Marks  
Sarali, Janata, Dhatu, Taggu and Hechchu Sthayi Varisa  
along with Alankaras.

2)	Rendering of any two terms from the following Pillari, Sanchari Gita, Jatiswaram or Swarajit.	10 Marks
3)	Rendering of one Varnam from the syllabus or Candidate's choice in two speeds.	10 Marks
4)	Rendering any one Kriti with Raga details.	10 Marks
5)	Rendering of any one term from the following Utsava or Divyanama Kirtana or Sankirtanas of Annamacharyas or Purandara Dasa Padas or Bhajan.	12 Marks
6)	Raga and Tala details based questions of the above items	8 Marks
<b>Total</b>		<b>60 Marks</b>

### **Instruction for the Marks distribution in details**

Examiner for the final Examination/ Summative Assessment

1)	(a) The examiner can select the Janta or Dhatu Varisai of their Choice to render in two speeds.	6 Marks
	(b) Asking the Angas of the Tala of the Alankaras chosen (either by the candidates or by the examiner) along with Alankaras of the chosen form.	6 Marks
2)	Any one candidate's choice of Pillari Gitam or Jatiswaram and Swarajatis to be performed. State the difference between Pillari and Sanchari Gitam.	6 Marks
Or		
	Difference between Jatisvaram and Swarajatis can be asked	6 Marks
3)	Varnam of candidate's choice in two degrees of speed.	8 Marks
	Details of the Raga grammar of the Varnam can be examined.	4 Marks
		} 12 Marks
4)	Rendering of a Kriti of the candidate's choice.	7 Marks
	State the Raga details of the chosen Raga.	4 Marks

	Details of the Tala and Composers may be asked. .	5 Marks
5	Any one item from the following: Divyanama, Utsava Sampruadaya and Kirtana of Annamacharya or Padas of Purandara Dasa	5 Marks
	The composers details and voice modulation can be examined	3 Marks
	<b>Total</b>	<b>60 Marks</b>



**Secondary Level**  
**FOLK ART (244)**  
**PRACTICAL EXAMINATION**

**Objectives:**

Folk art has continued generations after generations through informal learning without any systematic, academic and artistic training. Education and training facilities are absent for the artist. Therefore, folk art is gradually losing its importance and failing to attract people to popularize it further and make it lively. So, it has been felt to start a course in folk arts which will keep our traditions alive. This course will inspire the learners to develop folk art skills and further perpetuate the tradition. It will serve as a motivational force for the learners in particular and the public, in general, to love and use articles developed by the folk artists to satisfy their aesthetic sense. In addition, this course will increase the art skills and help people economically, as this folk art has a huge potential in India and abroad. The purpose of introducing Formative and Summative assessment in Practical PCP is learners' involvement and active participation in PCP classes as well as continuous assessment which leads to learning.

**Implementation:**

There are 12 activities listed in the Practical Manual of Secondary level Course in Folk Art (244). These activities are to be conducted in 5 PCP as given below, at the study centre these will be assessed through Formative (Continuous) assessment. The Sixth PCP is reserved for final examination that will be assessed through summative (Final) assessment at the Study Centre. The dates for the practical examination (Final) will be notified by NIOS in examination date sheet. 50% weightage is for each of Formative (Continuous) and Summative (Final) assessment. The maximum mark for Practical in Folk Art is 60. The *distribution of* activities in 05 PCPs are as follows:

**First PCP Practical**

In the PCP, attendance of all learners is mandatory and an introduction about the course to sensitize the learner about:

**PENCILS** – HB stands for Hard and Black (50:50) and one should use Soft/Range of pencils - starting from 2B to 10B onwards. As these pencils are easy to handle, soft to use and one can create a range of tonal values from light to dark.

**PAPER**- major differences between cartridge, newsprint, handmade and ivory paper. Learn how to gauge the correct side (rough side) of cartridge sheet before drawing.

**Tutor must ensure that the learner place a newsprint sheet underneath the actual drawing-sheet.**

(To avoid transferring of any drawing board texture)

Learners are introduced to the elements of Drawing (line –strength and fluency, thick and thin lines, rhythmic, texture, shape, etc) and its importance through **practice based exercises without the use of eraser. Content is to be covered familiarizing them with.**

### **Second PCP Practical**

**Wall Painting** - (one work from the basic geometrical form and one work done with motifs done in paper)

Aim of this PCP is to focus on quality of drawing.

- Placement of the paper (portrait or landscape), arrange and draw beautiful design and motifs keeping in mind division of background, middle ground and foreground.
- Decorate their art work with different forms, materials and mediums etc. to create a happy and beautiful festive atmosphere.
- Understanding of relative study of work and usage of negative – positive space.

### **Third PCP Practical**

**Floor Painting with materials** - different regions have different floor design usually associated with the season of festivals.

Adopt circles, square, triangles and lines as the basic motif .

Differentiate the right proportion, balance and rhythm, when viewing the vastness of designs. Before starting the colours learners should be given 10-15 minutes to study different colour values, shadows reflections and highlights of the decoration.

Sometimes the treatment of the background helps to define more clearly.

Introducing the learners to Primary, Secondary, Cool, Warm, complementary, and contrast colours.

### **Fourth PCP Practical**

**Painting on Cloth/Clay** - create a new form of art mediums. Cloth art forms among them, cloth, clay are famous. These art forms have an entertainment value as well as an aesthetic value.

Individual innovation, creativity and originality will be much encouraged and appreciated. These works should be creative, original and different, reference is allowed but not copying.

### **Fifth PCP Practical**

**Painting on Wood / Puppet** - create a new form of art mediums. Among them woods are famous.

The art form has an entertainment value as well as an aesthetic value.

Individual innovation, creativity and originality will be much encouraged and appreciated.

Free hand drawing directly from life and nature would give a sense of all the elements of the painting, starting with basic design.



The tutor should talk about masters and contemporary artists and their artworks.

Introducing the learners to Primary, Secondary, Cool, Warm, complementary, and contrast colours.

Learning about various colour mediums, difference between poster and tube water colours (opaque and transparent) and their application techniques.

### **Scheme of Practical Examination:**

The following scheme of practical examinations to be followed as per the details given below:

- ◆ The conduct of practical examinations mainly linked with practical PCP and there are 06 practical sessions which are made compulsory.
- ◆ The initial five (05) PCP practical have assessed through Formative (Continuous) and will be utilized for learning.
- ◆ The final (6<sup>th</sup> PCP) practical will be utilized for Summative (Final) Assessment for practical examination.
- ◆ A weightage of 50% of the marks will be awarded for formative (05 practical classes) and 50% marks for the 6<sup>th</sup> practical classes for Summative Assessment.

#### **I. Marks Distribution in Formative Assessment (05 PCP Sessions):**

S. No.	Criteria for Assessment	Marks	Remarks
1.	Regular Participation in 05 PCP Classes	6	The Five boxes under formative assessment in the award list will be filled up based on these 05 criterions.
2.	Activities Performed in 05 PCP Classes	6	
3.	Practical Record maintained in 05 PCP Classes	6	
4.	Use of practical instruments/materials	6	
5.	Participation with Peer-Group and Tutor.	6	
<b>Total</b>		<b>30</b>	

#### **II. Marks Distribution in Summative Assessment (6<sup>th</sup> Final PCP Class):**

S. No.	Criteria for Assessment	Marks	Remarks
1.	Assessment of activity performed (Two activities out of given 05 activities)	30	Time 04 hours allowed for final examination.
<b>Total</b>		<b>30</b>	

**Note:** The total (Formative and Summative assessment) weightage = 60 marks. In award list the marks obtained by the learner, both in formative and summative assessment are to be mentioned clearly and the final figure is sum of the marks of formative and summative assessment.

### **Preparations for PCP Practical Sessions:**

- i. The Centre Superintendent and Tutor must read the instructions mentioned in the Guidelines for practical PCPs.
- ii. Check and arrange the materials, tools, equipments, etc that will be needed in the Practical PCP sessions in advance.
- iii. Learners are informed about the schedule of Practical PCP sessions.
- iv. The attendance sheet must be properly maintained in each Practical PCP classes.
- v. The award list must be filled up as per the given assessment criterions.
- vi. The techniques of group work may be followed in Practical PCP sessions.
- vii. Learner shall be asked bring to practical record book in each class. Each learner is expected to maintain it as per the instructions given in the practical manual.

### **Precautions (Dos and Don'ts)**

Discuss the following points with learners regarding writing the practical record book:

All three objects should be of different sizes and shapes.

All the three objects should not be placed in a straight line.

Tutor/ Examiner should select objects of preferably of different colours.

The objects should not be placed above or below the learners' eye level.

### **List of Activities:**

There are 12 activities in the Folk Art Practical Manual. These 12 activities are distributed under three sections as:

#### **Section –A (Wall Painting)**

Tutor should describe the theme of any special occasion or festivals learner will illustrate on the given pages.

Learner should create aesthetic figure, motifs and designs to create a beautiful composition.

These different themes of art depict the life, society and human feelings of their region and time.

Learner should keep white paper under his/her palm.

Do not use eraser while drawing.

#### **Section-B (Floor Painting)**

Tutor should describe the theme of any special occasion or festivals learner will illustrate on the given pages.

Learner should create aesthetic figure, motifs and designs to create a beautiful composition.

These different themes of art depict the life, society and human feelings of their region or other and time.

Learner should keep white paper under his/her palm.

Do not use eraser while drawing.

### **Section-C (Other Mediums of Painting)**

- Free hand drawing directly from life and Nature would give a sense of all the elements of a composition. Starting with basic design and various experiments to understand the forms. Use of different colour will bring the sense of composition.
- The making of collages will be very helpful to understand the textural quality of a composition. With the help of the knowledge of previous lessons compositions are to be created with the Geometrical shapes, taking care of rhythm, balance, space, colours and harmony.
- Create a design would give a sense of all the elements of a composition. Starting with basic design and various experiments to understand the forms and use of different colours.
- Individual innovation, creativity and originality will be much encouraged and appreciated and use of different colour will bring the sense of illustration.



**Secondary Level**  
**NATYAKALA (285)**  
**Practical Examination**

### 1. Objectives

‘Indian Knowledge Tradition’ has a glorious tradition. The history of India has been rich in the creation of knowledge in both philosophical and practical aspects of life. Indian philosophers and scientists have contributed to almost all spheres of life ranging from politics, economy, commerce, astronomy, shipbuilding to art, music, drama, dance etc.

According to Indian tradition, Prajapati himself is considered to be the original creator of drama and the art of theatre has been given special respect by calling Natyashastra as Natyaveda. On the basis of History, Purana, Natya, classical texts and other literary creations and historical evidence, it has been said that the art of theatre had developed in India many centuries before Christ, which was passed down from generation to generation by people like Nata, dancers, Charana etc. through singing and playing, dance etc. were transferred through dramatic presentations.

In the present times, it is essential to introduce the present generation to the sublime elements of our ancient knowledge tradition and to preserve and promote this stream of knowledge.

In this module, fourfold acting – Angika, Vachika, Aharya and Satvika Abhinaya have been discussed in detail. Under this, special attention has been paid to the practical aspect of acting. also, the technique of theatre has been explained, as well as the experimental aspect of drama has been explained through the experimental/practical aspect of Prabodhchandrodaya play.

The goal of implementing formative and summative assessments in practical PCP classes is to encourage learners’ involvement and active participation in PCP classes, as well as continuous assessment, which leads to learning.

### 2. Implementation

There are two activities mentioned in the Practical manual of Secondary Course in Natyakala. These activities are divided into 6 PCP sessions of 3 hrs each day for minimum 3 days at the Study Centre. These can be a revision of all the earlier PCP activities and doubts or any queries of the candidate can be clarified. These will be assessed through continuous Assessment. The last PCP is reserved for final examination.

### **First PCP Practical**

- (i) Attendance of all learners is compulsory, since the learner is introduced to the course details.
- (ii) Orientation of learners about distribution of activities to be performed and allocation of Marks for both Formative (Continuous) and Summative (Final) assessment.
- (iii) Learners may be introduced to the practical syllabus and patterns of practical examination in Natyakala at Secondary level.
- (iv) In this PCP, the learners may be given a brief idea about the practical aspects of the following:
  - Introduction of Angika enactment
  - Mukhaja enactment
  - Sharirabhinaya
  - Cheshtakriyabhinaya
  - Samanyabhinaya
  - Abhayantrabhinaya
  - Abhayantrabhinaya.
- (v) Teaching of practical aspects of the angika enactment needs the attention of the learners more serious and sincere.

### **Second PCP Practical**

- (i) In this PCP, the learners may be given a brief idea about the practical aspects of the following:
  - General introduction of Vachika Enactment.
  - General introduction about the Swara, Varna, Kaku, Alankara and Angasa.
  - Vachikabhinaya in Chitrabhinaya and Samanyabhinaya.
- (ii) Teaching of practical aspects of the vachika enactment needs the attention of the learners more serious and sincere.

### **Third PCP Practical**

- (i) In this PCP, the learners may be given a brief idea about the practical aspects of the following:
  - Introduction of Aharya enactment.
  - Methods of Aharya enactment.

- Pustarachana
  - Different methods of alankarana.
  - Angarachana and Sanyukta varnas.
  - Creation of Sanjeeva
  - Importance of in the performance of drama.
- (ii) Teaching of practical aspects of the Aharya enactment needs the attention of the learners more serious and sincere.

#### **Fourth PCP Practical**

- (i) In this PCP, the learners may be given a brief idea about the practical aspects of the following:
- Introduction of enactment.
  - Introduction of rasas.
  - Introduction of bhavas (emotions).
  - Introduction of sattva in enactment.
- (ii) Teaching of practical aspects of the Satvika enactment needs the attention of the learners more serious and sincere.

#### **Fifth PCP Practical**

- (i) In this PCP, the learners may be given a brief idea about the practical aspects of the following:
- Introduction to theater techniques.
  - Methods of theater techniques.
  - Introduction of modern techniques of theater techniques.
  - Stage decoration in dramatic performance.
  - Introduction of light and sound in drama staging.
  - Importance of light and sound in theatrical presentation.
  - Different types of light and sound presentation.
  - Enactment of **Prabodha Chandrodaya** Drama.

- (ii) Teaching of practical aspects of the theater techniques needs the attention of the learners more serious and sincere.

### Sixth PCP Practical

- Revision of all previous 5 PCPs.
- Learner's difficulties to be solved.
- The enactments to be demonstrated by Learners.

### 3. Marks Distribution in Formative Assessment (5 PCP sessions)

Formative Assessment	Marks	Remarks
Regular Participation in sessions. 05 PCP	5	Assessment in the award list will be filled up based on these 05 PCP sessions
Activities presented in PCP sessions	5	
Presentation of Practical lessons	10	
<b>Total</b>	<b>20 Marks</b>	

### Distribution in Summative Assessment (6th Final PCP session)

Summative Assessment	Marks	Remarks
Assessment of at least two activities performed	5	Time of assessment will be held for 3 hours for the final examination
A Maintain records of the theatrical aspects learnt in the form of writing and preserving	5	
Interaction of the learner with the tutor	10	
<b>Total</b>	<b>20</b>	

**Note:** The total (Formative and Summative Assessment) weightage are 60 Marks in award list, the marks obtained by the learner, both in Formative and Summative Assessment are to be mentioned clearly and the final figure is the sum of the marks of Formative and Summative Assessments.

### 4. Preparation For PCP Practical Session

- 1) The Centre Superintendent and Tutor must read the instruction mentioned in the Guidelines for Practical PCPs.
- 2) All equipments if needed by learner to be provided for conducting the classes and practice exams by the Centre.

- 3) Learners should be informed about the schedule of practical sessions.
- 4) The attendance sheet has to be maintained by the PCP Tutor.
- 5) The award list must be filled up as per the given assessment criteria
- 6) The technique of group presentation should be encouraged by the PCP Tutor.
- 7) Learners shall be asked to bring the practical record book in each class. Each learner is expected to maintain it as per the instruction given in the practical material.

### 5. Precautions (Do's and Don'ts)

- 1) The candidates should be encouraged to watch drama, theater, folk drama etc. on various occasions or festivals.
- 2) Attendance Registers of such activities have to be maintained and monitored by the Tutor.
- 3) Tutor should teach the subject in a manner in which the candidates understand it easily.
- 4) Encouraging the active participation from the candidates is to be made regular.

### 6. Mark Distribution

#### Instruction for the Marks distribution in details

Examiner for the final Examination/ Summative Assessment

S.No.	Module Name	Module Detail	Name of Lesson	Total Marks
1.	Different Types of Enactment: Theoretical Applications	In this module, fourfold acting – Angika, Vachika, Aharya and Satvika Abhinaya have been discussed in detail. Under this, special attention has been paid to the practical aspect of acting.	1. Angika Enactment	25
			2. Vachika Enactment	
			3. Aharya Enactment	
			4. Satvika Enactment	
1.	Theoretical Applications of Theatre	In this module, the technique of theatre has been explained, as well as the experimental aspect of drama has been explained through the experimental/ practical aspect of Prabodhchandrodya play.	5. Theater Techniques: An Introduction	15
			6. Prabodhchandroya	





**Senior Secondary Level**  
**PHYSICS (312)**  
**Practical Examination**

1. **Objectives**

Like any other science subject, Physics is a subject which can be learnt better by doing. In fact, the experiments form an integral part of the Physics course at the senior secondary stage. Practicals, being an inseparable part of Physics Curriculum, are to be done with sincerity and evaluated as precisely as possible. In any practical course, the learner handles a number of instruments. In later career the learner you may be involved in scientific research, or in an industry. This guideline covers the procedure to be adopted by the NIOS learners for dealing with the practical examination. It focuses on developing practical skills and prepares learners for cultivating scientific attitude and scientific temper. The purpose of introducing Formative and Summative Assessments in Practical PCP is to increase learners' involvement and active participation in PCP classes as well as continuous assessment which leads to learning.

2. **Implementation**

To inculcate the necessary practical skills, 29 experiments have been identified which are listed in 03 sections. (The list covers the major aspects of the practical Physics curriculum. These activities are to be conducted in 5 PCP sessions, as given below, at the study centre. These will be assessed through Formative (Continuous) Assessment. The Sixth PCP is reserved for the final examination that will be assessed through Summative (Final) Assessment at the Study Centre. The dates for the practical examination (Final) will be notified by NIOS in the examination date sheet. 50% weightage is for each of Formative (Continuous) and Summative (Final) Assessments. The maximum mark for Practical in Physics is 20. The *distribution of activities in 05 PCPs* is as follows:

**First PCP Practical:**

- i) Orientation of the learners about the distribution of activities to be performed and allocation of marks for both the Formative (Continuous) and Summative (Final) Assessments.
- ii) Orientation of learners about the handling of scientific equipment and apparatus, chemicals, etc.
- iii) Learners have to choose **any two activities** to be performed from following experiments (S. No. Section A (1-5) of Practical Manual) as:

- To determine the internal diameter and depth of a cylindrical container (like tin can, calorimeter) using a Vernier callipers and find its capacity. Verify the result using a graduated cylinder.
- To determine the diameter of a given wire, using a screw gauge
- To determine the radius of curvature of a concave mirror, using a spherometer
- To find the time period of a simple pendulum for small amplitudes and draw the graph of length of the pendulum against square of the time period. Use the graph to find the length of the second's pendulum.
- To find the weight of a given body, using law of parallelogram of vectors

### **Second PCP Practical:**

- i) Orientation of learners about plotting of graphs, determination of specific heat etc. and its scientific principles
- ii) Learners have to choose **any two activities** to be performed out of the following activities. (S. No. Section A (6-9) of Practical Manual) as:
  - To study the Newton's law of cooling by plotting a graph between cooling time and temperature difference between calorimeter and surroundings
  - To determine the specific heat of a solid, using the method of mixtures
  - To measure extensions in the length of a helical spring with increasing load. Find the spring constant from the load extension graph.
  - To find the time required to empty a burette, filled with water to  $\frac{1}{2}$  of its volume, to  $\frac{1}{4}$  of its volume, to  $\frac{1}{8}$  of its volume and so on. Then, plot a graph between volume of water in the burette and time. Thus, verify that the fractional rate of flow is same (analogy to radio-active decay).

### **Third PCP Practical:**

- i) Orientation of learners about the interpretation of the data and conclusions of experiments
- ii) Learners have to choose **any two activities** to be performed. (S. No. From Section B (10-13) of Practical Manual) as:
  - To determine the wavelength of sound produced (i) in an air column and (ii) the velocity of sound in air at room temperature, using a resonance column and a tuning fork
  - To compare the frequencies of two tuning forks by finding the first and second resonance positions in a resonance tube
  - To establish graphically, the relation between the tension and resonating length of a string of a sonometer wire vibrating in its fundamental mode with a given tuning fork. Use the graph to determine the mass per unit length of the string.
  - To find the value of  $v$  for different values of  $u$  for a concave mirror and find its focal length ( $f$ ) by plotting graph between  $1/u$  and  $1/v$ .

### **Fourth PCP Practical:**

- (i) Orientation of learners about the concept of determination of focal length ( $f$ ) convex lens, concave lens, convex mirror, concave mirror and plotting of graphs.
- (ii) Learners have to choose **any two activities** to be performed from the following experiments. (S. No. Section B 14 to 17 of Practical Manual) as:
  - ◆ To find the focal length ( $f$ ) of a convex lens by plotting graph between  $1/u$  and  $1/v$
  - ◆ To find the focal length ( $f$ ) of a convex mirror, using a convex lens
  - ◆ Determine the focal length of a concave lens by combining it with a suitable convex lens.
  - ◆ To draw a graph between the angle of incidence ( $i$ ) and angle of deviation ( $D$ ) for a glass prism and to determine the refractive index of the glass of the prism using the graph.

### **Fifth PCP Practical:**

- (i) Orientation of learners about the working principles of ammeter, voltmeter, potentiometer, meter bridge for determination of e.m.f., specific resistance etc. for a given wire.
- (ii) Learners have to choose **any two activities** to be performed from the given exercises. (S. No. Section C 20-24 of Practical Manual) as:
  - ❖ To verify the law of combination (series and parallel) of resistances, using ammeter-voltmeter method and coils of known resistances
  - ❖ To compare the e.m.f.'s of two given primary cells by using a potentiometer
  - ❖ To determine the specific resistance of the material of a given wire using a metre bridge
  - ❖ To determine the internal resistance of a primary cell, using a potentiometer

### **3. Scheme of Practical Examination:**

The following scheme of practical examinations is to be followed as per the details given below:

- ◆ The conduct of practical examinations is mainly linked with practical PCP. There are 06 practical sessions which are made compulsory.
- ◆ The initial five (05) PCP practical sessions have to be assessed through Formative (Continuous) Assessment and will be utilized for learning.
- ◆ The final (6<sup>th</sup> PCP) practical session will be utilized for Summative (Final) Assessment for practical examination.
- ◆ A weightage of 50% of the marks will be awarded for Formative (05 practical classes) Assessment and 50% marks for the 6<sup>th</sup> practical class for Summative Assessment.

#### **I. Marks Distribution in Formative Assessment (05 PCP Sessions):**

<b>S.No.</b>	<b>Criteria for Assessment</b>	<b>Marks</b>	<b>Remarks</b>
1.	Regular Participation in 05 PCP Classes	2	The five boxes under formative assessment in the award list will
2.	Activities Performed in 05 PCP Classes	2	

3.	Practical Record maintained in 05 PCP Classes	2	be filled up based on these 05 criteria.
4.	Use of practical instruments/equipment	2	
5.	Participation with Peer-Group and Tutor	2	
<b>Total</b>		<b>10</b>	

## II. Marks Distribution in Summative Assessment (6<sup>th</sup> Final PCP Class):

S. No.	Criteria for Assessment	Marks	Remarks
1.	Assessment of activity performed (Two activities out of given three activities)	$2 \times 3\frac{1}{2} = 7$	Time of 3 hours will be allowed for the final examination.
2.	Viva-Voce based on the activities	3	
<b>Total</b>		<b>10</b>	

**Note:** The total (Formative and Summative assessment) weightage is 20 marks. In the award list, the marks obtained by the learner, both in Formative and Summative Assessments are to be mentioned clearly and the final figure is the sum of the marks of Formative and Summative Assessments.

### 3. Preparations for PCP Practical Sessions:

- (i) The Centre Superintendent and Tutor must read the instructions mentioned in the Guidelines for practical PCPs.
- (ii) Check and arrange the materials, tools, equipment etc. that will be needed in the Practical PCP sessions in advance.
- (iii) Learners are informed about the schedule of Practical PCP sessions. Practicals may be arranged in groups of learners.
- (iv) The attendance sheet must be properly maintained in each Practical PCP class.
- (v) The award list must be filled up as per the given assessment criteria.
- (vi) The techniques of group work may be followed in Practical PCP sessions.
- (vii) Learners shall be asked to bring the practical record book in each class. Each learner is expected to maintain it as per the instructions given in the practical manual.

### 4. Precautions (DOs and DON'Ts)

Discuss the following points with learners regarding writing the practical record book:

- (i) Throughout the practical note book, the learners should follow the same style. Ask them to use a good fountain pen and a sharp black pencil. It is recommended that the right hand page should be written in blue ink and the left hand page with a black pencil.

The recommended style of writing is shown below:

Left hand page	Right hand page
Scale, Projections, Calculations. Graph, Diagram, Figures	Title of the Exercise, Date, Exercise No, Interpretation and Conclusion

- (ii) Each experiment should start from a new page.
- (iii) Graphs and diagrams should be drawn neatly in a proportionate scale.
- (iv) Mistakes should be crossed out with a single line so that they can still be read. The correct statement should be written in its place.
- (v) No page should be torn-off from the practical record book.
- (vi) Before going to take Practical Examination, get all the exercises of Practical Record Book signed by your tutor.

## 5. List of Practicals

Experiments which a learner may perform during PCPs are listed below under three sections A, B and C:

### Section-A

- To determine the internal diameter and depth of a cylindrical container (like tin can, calorimeter) using a Vernier callipers and find its capacity. Verify the result using a graduated cylinder.
- To determine the diameter of a given wire, using a screw gauge
- To determine the radius of curvature of a concave mirror, using a spherometer
- To find the time period of a simple pendulum for small amplitudes and draw the graph of length of the pendulum against square of the time period. Use the graph to find the length of the second's pendulum.
- To find the weight of a given body, using law of parallelogram of vectors
- To study the Newton's law of cooling by plotting a graph between cooling time and temperature difference between calorimeter and surroundings
- To determine the specific heat of a solid, using the method of mixtures
- To measure extensions in the length of a helical spring with increasing load. Find the spring constant from the load extension graph.
- To find the time required to empty a burette filled with water to  $\frac{1}{2}$  of its volume, to  $\frac{1}{4}$  of its volume, to  $\frac{1}{8}$  of its volume and so on. Then, plot a graph between volume of water in the burette and time. Thus, verify that the fractional rate of flow of water is same (analogy to radio-active decay).

## Section-B

10. To determine the wavelength of sound produced (i) in an air column and (ii) the velocity of sound in air at room temperature, using a resonance column and a tuning fork
11. To compare the frequencies of two tuning forks by finding first and second resonance positions in a resonance tube.
12. To establish graphically the relation between the tension and resonating length of a string of a sonometer wire vibrating in its fundamental mode with a given tuning fork. Use the graph to determine the mass per unit length of the string.
13. To find the value of  $v$  for different values of  $u$  for a concave mirror and find its focal length ( $f$ ) by plotting graph between  $1/u$  and  $1/v$
14. To find the focal length ( $f$ ) of a convex lens by plotting graph between  $1/u$  and  $1/v$
15. To find the focal length ( $f$ ) of a convex mirror, using a convex lens
16. Determine the focal length of a concave lens by combining it with a suitable convex lens
17. To draw a graph between the angle of incidence ( $i$ ) and angle of deviation ( $D$ ) for a glass prism and to determine the refractive index of the glass of the prism, using the graph
18. To compare the refractive indices of two transparent liquids, using a concave mirror and a single pin
19. To set up an astronomical telescope and find its magnifying power

## Section-C

20. To verify the law of combination (series and parallel) of resistances, using ammeter and voltmeter and coils of known resistances.
21. To compare the e.m.f's of two given primary cells by using a potentiometer
22. To determine the specific resistance of the material of a given wire, using a metre bridge
23. To determine the internal resistance of a primary cell using a potentiometer
24. To determine the inductance and resistance of a given coil (inductor) using a suitable series resistance and an AC voltmeter
25. To study decay of current in a R.C. circuit while charging the capacitor, using a galvanometer and find the time constant of the circuit
26. To draw the characteristic curve of a forward biased  $pn$  junction diode and to determine the static and dynamic resistance of the diode
27. To draw the characteristics of an  $npn$  transistor in common emitter mode. From the characteristics, find out (i) the current gain ( $\beta$ ) of the transistor and (ii) the voltage gain  $A_1$  with a load resistance of  $1\text{ k}\Omega$ .
28. To draw the lines of force due to a bar magnet, keeping (i) N-pole pointing to north (ii) N-pole pointing to South. Locate the neutral points.
29. To determine the internal resistance of a moving coil galvanometer by half deflection method and to convert it into a voltmeter of a given range, say (0-3V), and verify it.



## Senior Secondary Level CHEMISTRY (313) Practical Examination

### 1. Objectives

The purpose of teaching Chemistry at the Senior Secondary level is not only to acquaint the learner with chemical terms, facts, concepts and principles but also to prepare him/her to understand these concepts by doing practicals related to them. Self experience not only eliminates doubts and misconceptions in one's mind but also generates an interest in the subject. The present practical course, thus, considers practical work as an integral part of the Chemistry curriculum at the Senior Secondary stage. This guideline covers the procedure to be adopted by the NIOS learners for dealing with the practical examination. It focuses on developing practical skills and prepares learners for cultivating a scientific attitude and a scientific temper. The purpose of introducing Formative and Summative Assessments in Practical PCP is to encourage learners' involvement and active participation in PCP classes as well as continuous assessment which leads to learning.

### 2. Implementation:

There are 17 practicals listed in the Practical Manual of the Senior Secondary Course in Chemistry (313). These activities are to be conducted in 5 PCP sessions, at the study centre. These will be assessed through Formative (Continuous) Assessment. The sixth PCP is reserved for the final examination that will be assessed through Summative (Final) Assessment at the Study Centre during the public examination. The dates for the practical examination (Final) will be notified by NIOS in the examination date sheet. 50% weightage is for each of Formative (Continuous) and Summative (Final) Assessments. The maximum marks for Practical in Chemistry is 20. The *distribution of practicals* in 05 PCPs is as follows:

#### **First PCP Practical:**

- (i) Orientation of the learners about the distribution of activities to be performed and allocation of Marks for both the Formative (Continuous) and Summative (Final) Assessments
- (ii) Orientation of learners about the handling of scientific equipment, apparatus, chemicals and safety measures in the chemistry laboratory.

(iii) Learners have to perform this experiment (Sl. No. 1 of Chemistry Practical Manual) as:

**(i) Acquaintance with Chemistry laboratory and basic laboratory techniques**

- Cutting, bending and boring of glass tubes
- Filtration
- Distillation
- Crystallisation
- Calibration, cleaning of glass apparatus and use of burner
- Measurement of volume, length, mass and density

**Second PCP Practical:**

- (i) Orientation of learners about the scientific principles and techniques related to preparation, interpretation of the data and conclusions, pH and electrochemistry
- (ii) Learners have to choose **any two activities** to be performed out of the following activities. (Sl. No. Practical 2 to 9 of Practical Manual) as:

**Characterization of Chemical substances**

- Determination of melting point of a solid organic compound of low melting point (below 100°C) by glass capillary tube method (Paraffin oil may be used as bath).

- **Preparation of dilute solutions**

Preparation of dilute solutions of known concentration of sulphuric acid, hydrochloric acid and nitric acid from their stock solution

- **Experiment related to pH change**

Determination of pH of following substances by using a universal indicator solution or pH papers

1(i) Salt solution (ii) Acids and bases of different dilutions (iii) Vegetable and fruit juices

2. Study of pH change by common-ion effect in case of weak acids and weak bases by above method (Specific examples of  $\text{CH}_3\text{COOH}$  and  $\text{CH}_3\text{COONa}$ ; and  $\text{NH}_4\text{OH}$  and  $\text{NH}_4\text{Cl}$  may be taken.)

- **Surface Chemistry**

Preparation of lyophilic and lyophobic sol

1. Lyophilic sol - starch.

2. Lyophobic sol - aluminium hydroxide and ferric hydroxide



- **Electrochemistry**

Determination of Variation of cell potential in  $Zn/Zn^{2+} || Cu^{2+}/Cu$  with change in concentration of electrolytes ( $CuSO_4$  or  $ZnSO_4$ ) at room temperature

- **Thermo Chemistry**

Any one of the following experiments

1. To determine the enthalpy of dissolution of copper sulphate or potassium nitrate
2. To determine the enthalpy of neutralization of strong acid (HCl) with strong base (NaOH)

- **Chemical Equilibrium**

1. Study of the shift in equilibrium of the reaction between ferric ions and thiocyanate ions by increasing/decreasing the concentration of these ions

- **Chemical Kinetics**

1. Study of the effect of concentration on the rate of reaction between sodium thiosulphate and hydrochloric acid
2. Study of the effect of temperature on the rate of reaction between sodium thiosulphate and hydrochloric acid

**Third PCP Practical:**

- i. Orientation of learners about the Preparation of Inorganic and Organic Compounds Chromatography, Detection of Elements, Characteristic Tests for carbohydrates, fats and proteins and their detection
- ii. Learners have to choose **any two activities** to be performed. (S. No. practical 10 to 14 of Practical Manual) as:

- **Preparation of Inorganic Compounds**

- a) Preparation of double salt of ferrous ammonium sulphate or potash alum
- b) Preparation of potassium ferric oxalate ferric oxalate III

- **Preparation of Organic Compounds**

Preparation of any one of the following compounds

1. Acetanilide
2. Iodoform

- **Chromatography**

Separation of coloured substances by paper chromatography and the comparison of their Retention Factor (RF) values for a mixture of red and blue ink or a black ink.

OR

Separation of coloured substances by paper chromatography and the comparison of their R<sub>F</sub> values for juice of a flower or grass

- **Detection of Elements**

Detection of nitrogen, sulphur, chlorine, bromine and iodine in an organic compound (combinations of halogens to be avoided). Not more than two of the above elements should be present in the given organic compound.

- **Characteristic Tests for carbohydrates, fats and proteins and their detection**

Study of simple reactions of carbohydrates, fats and proteins in pure form and detection of their presence in given food stuffs

#### **Fourth PCP Practical:**

- (i) Orientation of learners about the concept of Redox titration
- (ii) Learners have to perform **any two** experiments from the following experiments. (Sl. No. practical 15, Practical Manual) as:

- **Volumetric Analysis (Quantitative analysis)**

1. To find out the Molarity of given NaOH solution by titrating against standard solution of oxalic acid. Both the solutions to be provided.
2. To find out the Molarity and strength of given potassium permanganate solution by titrating against M/50 Mohr's salt (Ferrous ammonium sulphate) solution. Both the solutions to be provided
3. To find out the Molarity and strength of given potassium permanganate solution by titrating against M/10 oxalic acid solution. Both the solutions to be provided

#### **Fifth PCP Practical:**

- (i) Orientation of learners about the concept of Qualitative Analysis and Tests for the functional groups present in organic compounds
- (ii) Learners have to perform **two practicals** from the given practical. (S. No. Exercises 16 and 17 of Practical Manual) as:

- **Qualitative Analysis**

Elementary qualitative analysis of a salt involving detection of one cationic and one anionic species from the following groups. (Salts insoluble in hydrochloric acid excluded)

**Cations:**

Pb<sup>2+</sup>, Cu<sup>2+</sup>, As<sup>3+</sup>, Al<sup>3+</sup>, Fe<sup>3+</sup>, Mn<sup>2+</sup>, Ni<sup>2+</sup>, Zn<sup>2+</sup>, Co<sup>2+</sup>, Ca<sup>2+</sup>, Sr<sup>2+</sup>, Ba<sup>2+</sup>, Mg<sup>2+</sup>, NH<sub>4</sub><sup>+</sup>

**Anions:**

CO<sub>3</sub><sup>2-</sup>, S<sup>2-</sup>, SO<sub>3</sub><sup>2-</sup>, SO<sub>4</sub><sup>2-</sup>, NO<sup>2-</sup>, NO<sub>3</sub><sup>3-</sup>, Cl<sup>-</sup>, Br<sup>-</sup>, I<sup>-</sup>, PO<sub>4</sub><sup>3-</sup>, C<sub>2</sub>O<sub>4</sub><sup>2-</sup>, CH<sub>3</sub>COO<sup>-</sup>

- **Tests for the functional groups present in organic compounds**

Test of functional groups present in given unknown organic compounds

- (i) Test of unsaturation
- (ii) Test for carboxylic, phenolic, aldehydic and ketonic groups

### 3. Scheme of Practical Examination:

The following scheme of practical examinations is to be followed, as per the details given below:

- ◆ The conduct of practical examinations is mainly linked with practical PCP. There are 06 practical sessions which are made compulsory.
- ◆ The initial five (05) PCP practical sessions have to be assessed through Formative (Continuous) Assessment and will be utilized for learning.
- ◆ The final (6<sup>th</sup> PCP) practical session will be utilized for Summative (Final) Assessment for practical examination.
- ◆ A weightage of 50% of the marks will be awarded for Formative (05 practical classes) Assessment and 50% marks for the 6<sup>th</sup> practical class for Summative Assessment.

#### I. Marks Distribution in Formative Assessment (05 PCP Sessions):

S.No.	Criteria for Assessment	Marks	Remarks
1.	Regular Participation in 05 PCP Classes	2	The five boxes under Formative Assessment in the award list will be filled up based on these 05 criteria.
2.	Activities Performed in 05 PCP Classes	2	
3.	Practical Record maintained in 05 PCP Classes	2	
4.	Use of practical instruments/equipment	2	
5.	Participation with Peer-Group and Tutor	2	
	<b>Total</b>	<b>10</b>	

#### II. Marks Distribution in Summative Assessment (6<sup>th</sup> Final PCP Class):

S.No.	Criteria for Assessment	Marks	Remarks
1.	Assessment of activity performed (Two activities out of given three activities)	2×3½ = 7	Time of 3 hours will be allowed for the final examination.
2.	Viva-Voce based on the activities	3	
	<b>Total</b>	<b>10</b>	

**Note:** The total (Formative and Summative Assessment) weightage is 20 marks. In the award list, the marks obtained by the learner, both in Formative and Summative Assessments are to be mentioned clearly and the final figure is the sum of the marks of Formative and Summative Assessments.

### 3. Preparations for PCP Practical Sessions:

- (i) The Centre Superintendent and Tutor must read the instructions mentioned in the Guidelines for practical PCPs.
- (ii) Check and arrange the materials, tools, equipment etc. that will be needed in the Practical PCP sessions in advance.

- (iii) Learners are informed about the schedule of Practical PCP sessions. Practicals may be arranged in groups of learners.
- (iv) The attendance sheet must be properly maintained in each Practical PCP class.
- (v) The award list must be filled up, as per the given assessment criteria.
- (vi) The techniques of group work may be followed in Practical PCP sessions.
- (vii) Learner shall be asked to bring the practical record book in each class. Each learner is expected to maintain it, as per the instructions given in the practical manual.

#### 4. Precautions (DOs and DON'Ts)

Discuss the following points with the learners, regarding preparing the practical record book:

- (i) Throughout the practical note book, the learners should follow the same style. Ask them to use a good fountain pen and a sharp black pencil. It is recommended that the right hand page should be written in blue ink and the left hand page with a black pencil.

The recommended style of writing is shown below:

Left hand page	Right hand page
Scale, Projections, Calculations. Graph, Diagram, Figures	Title of the Exercise, Date, Exercise No, Interpretation and Conclusion

- (ii) Each experiment should start from a new page.
- (iii) Graphs diagrams, projectors etc. should be drawn neatly in a proportionate scale.
- (iv) Mistakes should be crossed out with a single line so that they can still be read; the correct statement rewritten in its place.
- (v) No page should be torn-off from the practical record book.
- (vi) Before going to take Practical Examination, get all the exercises of the Practical Record Book signed by your tutor.

#### 4. List of Practicals:

There are 17 Practicals in the Chemistry Practical Manual. These 17 activities are distributed as:

##### 1. Basic Laboratory Techniques

- (i) Acquaintance with Chemistry laboratory and basic laboratory techniques (cutting, bending and boring of glass tubes, sealing of apparatus, filtration, distillation, crystallisation, preparation, calibration, cleaning of glass apparatus and use of burner etc.)
- (ii) Measurement of volume, length, mass and density.

##### 2. Characterization of Chemical substances

- (i) Determination of melting point of a solid organic compound of low melting point (below 100°C) by glass capillary tube method (Paraffin oil may be used as bath).

### 3. Preparation of dilute solutions

- (i) Preparation of dilute solutions of known concentration of sulphuric acid, hydrochloric acid and nitric acid from their stock solution.

### 4. Experiment related to pH change

- (a) Determination of pH of following substances by using a universal indicator solution or pH papers.
  - (i) Salt solution
  - (ii) Acids and bases of different dilutions
  - (iii) Vegetable and fruit juices
- (b) Study of pH change by common-ion effect in case of weak acids and weak bases by above method (specific examples of CH<sub>3</sub>COOH and CH<sub>3</sub>COONa; and NH<sub>4</sub>OH and NH<sub>4</sub>Cl may be taken).

### 5. Surface Chemistry

Preparation of lyophilic and lyophobic sol.

- (a) Lyophilic sol - starch.
- (b) Lyophobic sol - aluminium hydroxide and ferric hydroxide.

### 6. Electrochemistry

Variation of cell potential in Zn/Zn<sup>2+</sup> || Cu<sup>2+</sup>/Cu with change in concentration of electrolytes (CuSO<sub>4</sub> or ZnSO<sub>4</sub>) at room temperature.

### 7. Thermo Chemistry

Any one of the following experiments

- (i) To determine the enthalpy of dissolution of copper sulphate or potassium nitrate.
- (ii) To determine the enthalpy of neutralization of strong acid (HCl) with strong base (NaOH)

### 8. Chemical Equilibrium

Study of the shift in equilibrium of the reaction between ferric ions and thiocyanate ions by increasing/decreasing the concentration of these ions.

### 9. Chemical Kinetics

- (a) Study of the effect of concentration on the rate of reaction between sodium thiosulphate and hydrochloric acid.
- (b) Study of the effect of temperature on the rate of reaction between sodium thiosulphate and hydrochloric acid.

### 10. Preparation of Inorganic Compounds

- (i) Preparation of double salt of ferrous ammonium sulphate or potash alum.
- (ii) Preparation of potassium ferric oxalate ferric oxalate III.

### 11. Preparation of Organic Compounds

Preparation of any one of the following compounds

- (i) Acetanilide
- (ii) Iodoform.

## 12. Chromatography

- (a) Separation of coloured substances by paper chromatography and comparison of their R<sub>f</sub> values for a mixture of red and blue ink or a black ink.

OR

- (b) Separation of coloured substances by paper chromatography and comparison of their R<sub>f</sub> values for juice of a flower or grass.

## 13. Detection of Elements

Detection of nitrogen, sulphur, chlorine, bromine and iodine in an organic compound (combinations of halogens to be avoided). Not more than two of the above elements should be present in the given organic compound.

## 14. Characteristic Tests for carbohydrates; fats and proteins and their detection

Study of simple reactions of carbohydrates fats and proteins in pure form and detection of their presence in given food stuffs.

## 15. Volumetric Analysis (Quantitative analysis)

- (a) preparation of solution of oxalic acid and ferrous ammonium sulphate of known molarity by weighing (non-evaluative). Use of chemical balance to be demonstrated.
- (b) A study of acid-base titration (single titration only)
- (i) To find out the Molarity of given NaOH solution by titrating against standard solution of oxalic acid. Both the solutions to be provided
- (c) A study of redox titrations (single titration only)
- (i) To find out the Molarity and strength of given potassium permanganate solution by titrating against M/50 Mohr's salt (Ferrous ammonium sulphate) solution. Both the solutions to be provided.
- (ii) To find out the Molarity and strength of given potassium permanganate solution by titrating against M/10 oxalic acid solution. Both the solutions to be provided.

## 16. Qualitative Analysis

Elementary qualitative analysis of a salt involving detection of one cationic and one anionic species from the following groups. (Salts insoluble in hydrochloric acid excluded).

### Cations:

Pb<sup>2+</sup>, Cu<sup>2+</sup>, As<sup>3+</sup>, Al<sup>3+</sup>, Fe<sup>3+</sup>, Mn<sup>2+</sup>, Ni<sup>2+</sup>, Zn<sup>2+</sup>, Co<sup>2+</sup>, Ca<sup>2+</sup>, Sr<sup>2+</sup>, Ba<sup>2+</sup>, Mg<sup>2+</sup>, NH

### Anions:

CO<sub>3</sub><sup>2-</sup>, S<sup>2-</sup>, SO<sub>3</sub><sup>2-</sup>, SO<sub>4</sub><sup>2-</sup>, NO<sup>2-</sup>, NO<sup>3-</sup>, Cl<sup>-</sup>, Br<sup>-</sup>, I<sup>-</sup>, PO<sub>4</sub><sup>3-</sup>, C<sub>2</sub>O<sub>4</sub><sup>2-</sup>, CH<sub>3</sub>COO<sup>-</sup>

## 17. Tests for the functional groups present in organic compounds

Test of functional groups present in given unknown organic compounds

- (i) Test of unsaturation
- (ii) Test for carboxylic, phenolic, aldehydic and ketonic groups.



## Senior Secondary Level **BIOLOGY (314)** Practical Examination

### 1. Objectives

As in any other science subject practicals have an important role in Biology too. The purpose of teaching Biology is not only to acquaint the learner with biological terms, facts, concepts and principles but also to prepare him/her to understand these concepts by doing exercises related to them. Self experience not only eliminates doubts and misconceptions in one's mind but also generates an interest in the subject. The present practical course, thus, considers practical work as an integral part of the Biology curriculum at the Senior Secondary stage. This guideline covers the procedure to be adopted by the NIOS learners for dealing with practical examination. It focuses on developing practical skills and prepares learners for cultivating scientific attitude and scientific temper. The purpose of introducing Formative and Summative Assessments in Practical PCP is to encourage the learners' involvement and active participation in PCP classes as well as continuous assessment which leads to learning.

### 2. Implementation:

There are 15 exercises listed in the Practical Manual of the Senior Secondary Course in Biology (314). These activities are to be conducted in 5 PCP sessions at the study centre. These will be assessed through Formative (Continuous) Assessment. The Sixth PCP session is reserved for the final examination that will be assessed through Summative (Final) Assessment at the study centre. The dates for the practical examination (Final) will be notified by NIOS in the examination date sheet. 50% weightage is for each of Formative (Continuous) and Summative (Final) Assessments. The maximum mark for Practical in Biology is 20. The *distribution of activities* in 05 PCPs is as follows:

#### **First PCP Practical:**

- (i) Orientation of the learners about the distribution of activities to be performed and allocation of Marks for both the Formative (Continuous) and Summative (Final) Assessments
- (ii) Orientation of learners about the handling of scientific equipment and apparatus, chemicals etc.

(iii) Learners have to choose **any two activities** to be performed from the following experiments ( S. No. Exercise 2 of Practical Manual) as:

- Some common instruments
- Preparation of temporary mount of onion peel to observe and study epidermal cells
- Preparation of temporary stained mount of human cheek cells
- Preparation of temporary mount of leaf epidermis to study the structure of stomata

**Second PCP Practical:**

(i) Orientation of the learners about mounting of slides and scientific principles

(ii) Learners have to choose **any two activities** to be performed out of the following activities (S. No. Exercise 3 to 5 of Practical Manual) as:

- Study of morphological modifications of plant parts like root, stem and leaf
- To study the T.S. of dicot and monocot stems and roots from permanent slide
- Study of the microscopic anatomy (histology) of mammalian tissues and organs
- One project on one of the exercises mentioned below for project work, completely recorded and signed by tutor, to be submitted at the commencement of SA at the 6<sup>th</sup> PCP
- Project Exercises: (1) to study the special adaptive features in some plants and animals
  - ( 2) (a) To study the physical properties of different soil samples
  - (b) To study the water holding capacity of different soil samples

**Third PCP Practical:**

i. Orientation of the learners about the interpretation of the data and conclusions of experiments

ii. Learners have to choose **any two activities** to be performed (S. No. Exercise 11, 12 and 8 of Practical Manual) as:

- Demonstration of osmosis by potato osmometer
- Determine the rate of photosynthesis in an aquatic plant (*Hydrilla* or *Elodea*)
- To study about the action of salivary amylase on starch
- Preparation of a slide of onion root tip for observation of stages of mitosis

**Fourth PCP Practical:**

i. Orientation of the learners about the concept of striated muscle fibers in a cockroach and different features of animals and the structure and the different parts of a flower

ii. Learners have to choose **any two activities** to be performed from the following experiments (S.No. 6 , Ex.2.5 and 7 of Practical Manual) as:

- To study the structure and function of different parts of flowers (*China rose* and *Petunia*)
- Temporary stained preparation and study of striated muscle fibers in a cockroach



- Study of animal specimens and their classification to identify the characteristic features of sponge, earthworm, butterfly, apple snail, starfish, dogfish (*Scoliodon*) bonyfish (Rohu), toad, house lizard, pigeon and bat.

### **Fifth PCP Practical:**

- Orientation of learners about the concept of the adaptive features of animals and xylem and phloem of plants
- Learners have to choose **any two activities** to be performed from the given exercises. (S. No. Exercises 2.4, 9 and 14 of Practical Manual) as:
  - ◆ To study the special adaptive features in some plants and animals
  - ◆ Preparation and study of xylem and phloem from *cucurbita* stem
  - ◆ To demonstrate the release of CO<sub>2</sub> during germination of seeds

### **3. Scheme of Practical Examination:**

The following scheme of practical examinations to be followed as per the details given below:

- ◆ The conduct of practical examinations is mainly linked with practical PCP. There are 06 practical sessions which are made compulsory.
- ◆ The initial five (05) PCP practical sessions have to be assessed through Formative (Continuous) Assessment and will be utilized for learning.
- ◆ The final (6<sup>th</sup> PCP) practical session will be utilized for Summative (Final) Assessment for the practical examination.
- ◆ A weightage of 50% of the marks will be awarded for Formative (05 practical classes) Assessment and 50% marks for the 6<sup>th</sup> practical class for Summative Assessment.

#### **I. Marks Distribution in Formative Assessment (05 PCP Sessions):**

<b>S. No.</b>	<b>Criteria for Assessment</b>	<b>Marks</b>	<b>Remarks</b>
<b>1.</b>	Regular Participation in 05 PCP Classes	2	The five boxes under Formative Assessment in the award list will be filled up based on these 05 criteria.
<b>2.</b>	Activities Performed in 05 PCP Classes	2	
<b>3.</b>	Practical Record maintained in 05 PCP Classes	2	
<b>4.</b>	Use of practical instruments/equipment	2	
<b>5.</b>	Participation with Peer-Group and Tutor	2	
	<b>Total</b>	<b>10</b>	

## II. Marks Distribution in Summative Assessment (6<sup>th</sup> Final PCP Class):

S. No.	Criteria for Assessment	Marks	Remarks
1.	Assessment of activity performed (Two activities out of given three activities)	$2 \times 3\frac{1}{2} = 7$	Time of 3 hours will be allowed for the final examination.
2.	Viva-Voce based on the activities	3	
<b>Total</b>		<b>10</b>	

**Note:** The total (Formative and Summative Assessments) weightage is 20 marks. In the award list, the marks obtained by the learner, both in Formative and Summative Assessments are to be mentioned clearly and the final figure is the sum of the marks of Formative and Summative Assessments.

### 4. Preparations for PCP Practical Sessions:

- (i) The Centre Superintendent and Tutor must read the instructions mentioned in the Guidelines for practical PCPs.
- (ii) Check and arrange the materials, tools, equipment etc that will be needed in the Practical PCP sessions in advance.
- (iii) Learners are informed about the schedule of Practical PCP sessions. Practicals may be arranged in groups of learners.
- (iv) The attendance sheet must be properly maintained in each Practical PCP class.
- (v) The award list must be filled up, as per the given assessment criteria.
- (vi) The techniques of group work may be followed in Practical PCP sessions.
- (vii) Learners shall be asked to bring the practical record book in each class. Each learner is expected to maintain it, as per the instructions given in the practical manual.

### 5. Precautions (DOs and DON'Ts)

Discuss the following points with the learners regarding preparing the practical record book:

- (i) Throughout the practical note book, the learners should follow the same style. Ask them to use a good fountain pen and a sharp black pencil. It is recommended that the right hand page should be written in blue ink and the left hand page with a black pencil.

The recommended style of writing is shown below:

Left hand page	Right hand page
Scale, Projections, Calculations. Graph, Diagram, Figures	Title of the Exercise, Date, Exercise No, Interpretation and Conclusion

- (ii) Each experiment should start from a new page.
- (iii) Neat and proportionate well labeled of Diagrams should be drawn.

- (iv) Mistakes should be crossed out with a single line so that they can still be read. The correct statement should be rewritten in its place.
- (v) No page should be torn-off from the practical record book.
- (vi) Before going to take the Practical Examination get all the exercises of Practical Record Book signed by the tutor.

## 6. List of Activities:

There are 15 exercises in the Biology Practical Manual. These 15 activities are distributed under three sections as:

### Exercise 1: Some Common Instruments

### Exercise 2

- 2.1 Preparation of temporary mount of onion peel to observe and study epidermal cells
- 2.2 Preparation of temporary stained mount of human cheek cells.
- 2.3 Preparation of temporary mount of leaf epidermis to study the structure of stomata.
- 2.4 Temporary stained preparation and study of striated muscle fibres in cockroach.
- 2.5 Preparation and study of xylem and phloem from *cucurbita* stem.

**Exercise 3:** Study of morphological modifications of plant parts like root, stem and leaf.

**Exercise 4:** To study the T.S. of dicot and monocot stems and roots from permanent slide.

**Exercise 5:** Study of the microscopic anatomy (histology) of mammalian tissues and organs

**Exercise 6:** To study the structure and function of different parts of flowers (*China rose and Petunia*)

**Exercise 7:** Study of animal specimens and their classification to identify the characteristic features of sponge, earthworm, butterfly, apple snail, starfish, dogfish (*Scoliodon*) bonyfish (Rohu), toad, house lizard, pigeon and bat.

**Exercise 8:** Preparation of a slide of onion root tip for observation of stages of mitosis.

**Exercise 9:** To study the special adapting features in some plants and animals

### Exercise 10:

- (a) To study the physical properties of different soil samples
- (b) To study the water holding capacity of different soil samples

**Exercise 11:** Demonstration of osmosis by potato osmometer

**Exercise 12:** Determine the rate of photosynthesis in an aquatic plant (*Hydrilla* or *Elodea*)

**Exercise 13:** Study the structure and germination in gram and bean.

**Exercise 14:** To demonstrate the release of CO<sub>2</sub> during germination of seeds.

**Exercise 15:** To study about the action of salivary amylase on starch.



**Senior Secondary Level**  
**GEOGRAPHY (316)**  
**Practical Examination**

**1. Objectives:**

Practical exercises are an integral part of learning geography. The experience gained during practicals help the learners in developing problem solving skills and keen interest. The learner develops the ability of using tools such as Scales Projections, Weather Maps, Graphs, Diagrams, Topographical Sheets and Statistical methods. The purpose of introducing Formative and Summative Assessment in Practical PCP sessions is to encourage learners' involvement and active participation in PCP classes as well as continuous assessment which leads to learning.

**2. Implementation:**

There are 9 activities listed in the Practical Manual of the Senior Secondary Course in Geography (316). These activities are to be conducted in 5 PCPs as given below, at the study centre/AI. These will be assessed through Formative (Continuous) Assessment. The Sixth PCP is reserved for final examination that will be assessed through Summative (Final) Assessment at the Study Centre. The dates for the practical examination (Final) will be notified by NIOS in the examination date sheet. 50% weightage is for each of Formative (Continuous) and Summative (Final) Assessments. The maximum mark for Practical in Geography is 20. The *distribution of activities in 05 PCPs* is as follows:

**First PCP Practical:**

- (i) Orientation of the learners about distribution of activities to be performed and allocation of Marks for both the Formative (Continuous) and Summative (Final) assessment.
- (ii) Learners may be introduced to the practical syllabus and pattern of Practical Examination in Geography at Senior Secondary level.
- (iii) In this PCP, the learners may be given a brief idea about maps, its elements and types, construction of Linear Scale, Map Projections, interpretation of Topographical Sheets, study of physical and cultural Maps and representation of data.
- (iv) Importance of maps, classification of maps according to scale and conventional signs and symbols will also be discussed in this PCP.
- (v) The learners are required to do two exercises given at the end of lesson no.1 in their Practical record book.

- (vi) The learner will be introduced to the Topographical Maps, identification of relief features on a map through contours and interpretation of Toposheets.

**Second PCP Practical:**

- (i) Orientation of learners about the meaning and use of geospatial technology.
- (ii) The learners will also be taught about the concept of remote sensing, its processes, advantages and principles, platform and sensors alongwith elements of image and photo interpretation.
- (iii) The learners will be asked to do exercise no. 1 and 2 given in the practical manual at the end of the practical lesson no. 2 in their Practical record book.

**Third PCP Practical:**

- (i) The learner will be introduced to the concept of GPS, its segments, processes and uses.
- (ii) Learner will be taught about GIS, data base in GIS and application of GIS.
- (iii) At the end of the PCP, the learners will be asked to do the exercises no. 3 and 4 given at the end of practical lesson no. 2.

**Fourth PCP Practical:**

- (i) Orientation of learners about statistical data, its interpretation and presentation.
- (ii) The learners will learn about Arithmetic Mean, Median, Mode and Percentile.
- (iii) The learners will also learn about Line Graph, Bar Diagram, Pie Diagram and Star Diagram.
- (iv) The learners will be asked to do exercise no. 1 and 2 given in the practical manual at the end of the practical lesson no. 3 in their Practical record book.

**Fifth PCP Practical:**

- (i) The learners will gain knowledge about the construction of Dot Maps and Choropleth Maps.
- (ii) The learners will do exercise no. 3 given at the end of lesson no. 3 in their practical record book.
- (iii) The learner will also be told about the type of Questions asked in the final examination of Geography Practical.

**3. Scheme of Practical Examination:**

The following scheme of practical examinations is to be followed as per the details given below:

- ❖ The conduct of practical examinations is mainly linked with practical PCP. There are 06 practical sessions which are made compulsory.
- ❖ The initial five (05) PCP practicals have to be assessed through Formative Assessment (Continuous) and will be utilized for learning.
- ❖ The final (6<sup>th</sup> PCP) practical will be utilized for Summative (Final) Assessment for practical examination.

- ❖ A weightage of 50% of the marks will be awarded for Formative Assessment (05 practical classes) and 50% marks for the 6<sup>th</sup> practical class for Summative Assessment.

#### I. Marks Distribution in Formative Assessment (05 PCP Sessions):

S. No.	Criteria for Assessment	Marks	Remarks
1.	Regular Participation in 05 PCP Classes	2	The five boxes under Formative Assessment in the award list will be filled up based on these 05 criteria.
2.	Activities Performed in 05 PCP Classes	2	
3.	Practical Record maintained in 05 PCP Classes	2	
4.	Use of practical instruments/equipment	2	
5.	Participation with Peer-Group and Tutor	2	
<b>Total</b>		<b>10</b>	

#### II. Marks Distribution in Summative Assessment (6<sup>th</sup> Final PCP Class):

S. No.	Criteria for Assessment	Marks	Remarks
1.	Assessment of activity performed (Two activities out of given three activities)	$2 \times 3\frac{1}{2} = 7$	Time of 3 hours will be allowed for the final examination.
2.	Viva-Voce based on the activities	3	
<b>Total</b>		<b>10</b>	

**Note:** The total (Formative and Summative Assessment) weightage is 20 marks. In the award list, the marks obtained by the learner, both in Formative and Summative Assessment are to be mentioned clearly and the final figure is the sum of the marks of Formative and Summative Assessment.

#### 4. Preparations for PCP Practical Sessions:

- The Centre Superintendent and Tutor must read the instructions mentioned in the Guidelines for practical PCPs.
- Check and arrange the materials, tools, equipment etc. that are needed in the Practical PCP sessions in advance.
- Learners are informed about the schedule of Practical PCP sessions. Practicals may be arranged in groups of learners.
- The attendance sheet must be properly maintained in each Practical PCP class.
- The award list must be filled up as per the given assessment criteria.
- The techniques of group work may be followed in Practical PCP sessions.
- Learners shall be asked to bring the practical record book in each class. Each learner is expected to maintain it as per the instructions given in the practical manual.

#### 5. Precautions (DOs and DON'Ts)

Discuss the following points with learners regarding preparing the practical record book:

- (i) Throughout the practical note book the learners should follow the same style. Ask them to use a good fountain pen and a sharp black pencil. It is recommended that the right hand page should be written in blue ink and the left hand page with a black pencil.
- (ii) The recommended style of writing is shown below:

Left hand page	Right hand page
Scale, Projections, Calculations, Graph, Diagram, Figures	Title of the Exercise, Date Exercise No., Interpretation and conclusion

- (i) Each experiment should start from a new page.
- (ii) Diagrams, Graphs, Maps, Projections should be drawn neatly and with proportionate scale.
- (iii) Mistakes should be crossed out with a single line so that they can still be read. The correct statement should be rewritten in its place.
- (iv) No page should be torn-off from the practical record book.
- (v) Before going to take Practical Examination get all the exercises of the Practical Record Book signed by the tutor.

## 6. List of Activities:

There are 9 activities in the Geography Practical Manual. These 9 activities are distributed under five sections as:

### 6.1 Section - A

1. A car running at a speed of 45 Kilometres per hour to reach Ghaziabad from Delhi in 20 minutes. If the distance between Delhi and Ghaziabad is shown on a map by a distance of 2.5 cm, draw a graphic scale for this map and calculate the R.F. also.
2. Construct a graphic scale on a R.F. of 1:40,000 so that one can read kilometres and metres directly on it.

### Section - B

1. Take any photograph and identify the feature on the basis of photo/image elements such as colour, size, shape, etc.
2. Draw an electromagnetic spectrum on your notebook and identify the range of visible regions.
3. Collect three types of spatial data and describe it.
4. Collect any one non-spatial data describing the rows and columns.

### Section - C

1. Draw a line graph showing growth of population in India from 1901-91.

Years	1901	1911	1921	1931	1941	1951	1961	1971	1981	1991
Population (in million)	23.8	25.2	25.1	27.9	31.9	36.1	43.9	54.8	68.6	84.4

2. Construct a bar diagram showing Annual Rainfall in Thiruvananthapuram.

Months	Jan.	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
<b>Rainfall (in mms)</b>	22.9	20.8	38.6	105.7	207.8	356.4	223.0	145.5	137.9	273.3	205.5	74.5

3. Prepare a star diagram to represent the following data:

Direction	No. of days the wind is blowing
N	45
NE	110
E	25
SE	27
S	23
SW	15
W	90
NW	20
Calm Day	10
<b>Total</b>	<b>365</b>





**Senior Secondary Level**  
**GEOGRAPHY (316)**  
**(FOR REGIONAL MEDIUM ONLY)**  
**Practical Examination**

**1. Objectives:**

Practical exercises are an integral part of learning geography. The experience gained during practicals help the learners in developing problem solving skills and keen interest. The learner develops the ability of using tools such as Scales Projections, Weather Maps, Graphs, Diagrams, Topographical Sheets and Statistical methods. The purpose of introducing Formative and Summative Assessment in Practical PCP sessions is to encourage learners' involvement and active participation in PCP classes as well as continuous assessment which leads to learning.

**2. Implementation:**

There are 15 activities listed in the Practical Manual of the Senior Secondary Course in Geography (316). These activities are to be conducted in 5 PCPs as given below, at the study centre/AI. These will be assessed through Formative (Continuous) Assessment. The Sixth PCP is reserved for final examination that will be assessed through Summative (Final) Assessment at the Study Centre. The dates for the practical examination (Final) will be notified by NIOS in the examination date sheet. 50% weightage is for each of Formative (Continuous) and Summative (Final) Assessments. The maximum mark for Practical in Geography is 20. The *distribution of* activities in 05 PCPs is as follows:

**First PCP Practical:**

- (i) Orientation of the learners about distribution of activities to be performed and allocation of Marks for both the Formative (Continuous) and Summative (Final) assessment.
- (ii) Learners may be introduced to the practical syllabus and pattern of Practical Examination in Geography at Senior Secondary level.
- (iii) In this PCP, the learners may be given a brief idea about construction of Linear Scale, Latitude and Longitude, Map Projections, interpretation of Topographical Sheets, study of Weather Maps and representation of data.
- (iv) Importance of maps, classification of maps according to scale. The construction of simple Linear Scale will also be discussed in this PCP.

- (v) The learners are required to do two exercises given at the end of lesson no.1 in their Practical record book.

**Second PCP Practical:**

- (i) Orientation of learners about the merits and demerits of Globe and Maps
- (ii) The learners will also be taught about the Map Projections. Stress will be laid on the construction of Cylindrical Equal Area Projection, Mercator's Projection and Simple Conical Projection with One Standard Parallel.
- (iii) The learners will be asked to do three exercises given in the practical manual at the end of the lesson no. 2, 'Map Projection', in their Practical record book.

**Third PCP Practical:**

- (i) The learner will be introduced to the Topographical Maps, identification of relief features on a map through contours and interpretation of Toposheets.
- (ii) At the end of the PCP, the learners will be asked to do the exercises given at the end of lesson no. 3.

**Fourth PCP Practical:**

- (i) Orientation of learners about concept and Weather instruments in the interpretation of Weather Maps.
- (ii) Learners have to choose five exercises given at the end of lesson no. 4 of Practical Manual.

**Fifth PCP Practical:**

- (i) Orientation of learners about data interpretation and statistical diagrams
- (ii) The learners will learn about Arithmetic Mean, Median, Mode and Percentile.
- (iii) The learners will also learn about Line Graph, Bar Diagram, Pie Diagram and Star Diagram.
- (iv) The learners will also gain knowledge about the construction of Dot Maps and Choropleth Maps.
- (v) The learners will do three exercises given at the end of lesson no.5 in their practical record book.
- (vi) The learner will also be told about the type of Questions asked in the final examination of Geography Practical.

**3. Scheme of Practical Examination:**

The following scheme of practical examinations is to be followed as per the details given below:

- ❖ The conduct of practical examinations is mainly linked with practical PCP. There are 06 practical sessions which are made compulsory.
- ❖ The initial five (05) PCP practicals have to be assessed through Formative Assessment (Continuous) and will be utilized for learning.

- ❖ The final (6<sup>th</sup> PCP) practical will be utilized for Summative (Final) Assessment for practical examination.
- ❖ A weightage of 50% of the marks will be awarded for Formative Assessment (05 practical classes) and 50% marks for the 6<sup>th</sup> practical class for Summative Assessment.

#### I. Marks Distribution in Formative Assessment (05 PCP Sessions):

S.No.	Criteria for Assessment	Marks	Remarks
1.	Regular Participation in 05 PCP Classes	2	The five boxes under Formative Assessment in the award list will be filled up based on these 05 criteria.
2.	Activities Performed in 05 PCP Classes	2	
3.	Practical Record maintained in 05 PCP Classes	2	
4.	Use of practical instruments/equipment	2	
5.	Participation with Peer-Group and Tutor	2	
	<b>Total</b>	<b>10</b>	

#### II. Marks Distribution in Summative Assessment (6<sup>th</sup> Final PCP Class):

S.No.	Criteria for Assessment	Marks	Remarks
1.	Assessment of activity performed (Two activities out of given three activities)	$2 \times 3\frac{1}{2} = 7$	Time of 3 hours will be allowed for the final examination.
2.	Viva-Voce based on the activities	3	
	<b>Total</b>	<b>10</b>	

**Note:** The total (Formative and Summative Assessment) weightage is 20 marks. In the award list, the marks obtained by the learner, both in Formative and Summative Assessment are to be mentioned clearly and the final figure is the sum of the marks of Formative and Summative Assessment.

#### 4. Preparations for PCP Practical Sessions:

- (i) The Centre Superintendent and Tutor must read the instructions mentioned in the Guidelines for practical PCPs.
- (ii) Check and arrange the materials, tools, equipment etc. that are needed in the Practical PCP sessions in advance.
- (iii) Learners are informed about the schedule of Practical PCP sessions. Practicals may be arranged in groups of learners.
- (iv) The attendance sheet must be properly maintained in each Practical PCP class.
- (v) The award list must be filled up as per the given assessment criteria.
- (vi) The techniques of group work may be followed in Practical PCP sessions.
- (vii) Learners shall be asked to bring the practical record book in each class. Each learner is expected to maintain it as per the instructions given in the practical manual.

## 5. Precautions (DOs and DON'Ts)

Discuss the following points with learners regarding preparing the practical record book:

- (i) Throughout the practical note book the learners should follow the same style. Ask them to use a good fountain pen and a sharp black pencil. It is recommended that the right hand page should be written in blue ink and the left hand page with a black pencil.
- (ii) The recommended style of writing is shown below:

Left hand page	Right hand page
Scale, Projections, Calculations, Graph, Diagram, Figures,	Title of the Exercise, Date Exercise No. Interpretation and conclusion

- (iii) Each experiment should start from a new page.
- (iv) Diagrams, Graph,, Maps, Projections should be drawn neatly and with proportionate scale.
- (v) Mistakes should be crossed out with a single line so that they can still be read. The correct statement should be rewritten in its place.
- (v) No page should be torn-off from the practical record book.
- (vi) Before going to take Practical Examination get all the exercises of the Practical Record Book signed by the tutor.

## 6. List of Activities:

There are 15 activities in the Geography Practical Manual. These 15 activities are distributed under five sections as:

### 6.1 Section-A (Maps: Concepts and Skills)

1. A car running at a speed of 45 Kilometres per hour to reach Ghaziabad from Delhi in 20 minutes. If the distance between Delhi and Ghaziabad is shown on a map by a distance of 2.5 cms draw a graphic scale for this map and calculate the R.F. also.
2. Construct a graphic scale on a R.F. of 1:40,000 so that one can read kilometres and metres directly on it.

### Section-B (Maps Projections)

1. Prepare a graticule for a Cylindrical Equal-Area projection for the world on the scale of 1:160,000,000 with the interval of 15°.
2. Draw a Mercator Projection for the world on the scale of 1:2,50,000,000 at an interval of 15°.
3. Construct graticules for an area stretching between 30° N to 70° N and 40°E to 30° W on a simple conical projection with one standard parallel with a scale of 1:2,00,000,000 taking on interval of 10°.
4. Draw a Zenithal Equi-Distant Projection for the north hemisphere on the scale of 1:2,00,000,000 at the interval of 15°.

### Section-C (Interpretation of Topographic Maps)

1. Interpret of a topographical map under the following heads:
  - (a) landforms (b) lines of communication (c) Settlements

**Note:** Study Centres/AIs are advised to get Xeroxed copies of these maps provided in the practical manual.

### Section-D (Study of Weather Maps)

1. Study the weather map of any day and answer the following questions:

- ❖ Name the two areas of high pressure
- ❖ Name the two areas of low pressure
- ❖ Which area experienced misty conditions?
- ❖ Name an area which received rainfall.

2. Show the following pressure systems with the help of isobars:

(b) Tropical Cyclone (b) Temperate Cyclone

3. Recognise and name the following isobaric systems:

**Note:** Study Centres/AIs are advised to get Xeroxed copies of these figures provided in the practical manual.

4. Study the weather map and find the general wind direction, cloud conditions and sea conditions.

**Note:** Study Centres/AIs are advised to get Xeroxed copies of the map provided in the practical manual.

5. The map which shows, different isobaric systems-depression, tropical Cyclones, anticyclone, wedge, trough and a col. recognise these pressure systems and write below the map their appropriate names.

**Note:** Study Centres/AIs are advised to get Xeroxed copies of these maps provided in the practical manual.

### Section-E (Data Interpretation and Statistical Diagrams)

1. Draw a line graph showing growth of population in India from 1901-2011.

Years	1901	1911	1921	1931	1941	1951	1961	1971	1981	1991	2001	2011
Population (in million)	23.8	25.2	25.1	27.9	31.9	36.1	43.9	54.8	68.3	84.6	102.8	121.02

2. Construct a bar diagram showing Annual Rainfall of any station.

3. Prepare a star diagram to represent the following data:

Direction	No. of days the wind is blowing
N	45
NE	110
E	25
SE	27
S	23
SW	15
W	90
NW	20
Calm days	10
<b>Total</b>	<b>365</b>



## Senior Secondary Level **HOME SCIENCE (321)** Practical Examination

### 1. Objectives:

Home Science is a practical oriented subject. It encompasses different modules like Food and Nutrition, Resources Management, Human Development, Textile and Clothing at the senior secondary level. One optional module, either housekeeping or creative hand embroidery, is also available. The practical class through PCP (personal contact programme) in Home Science at the senior secondary level will enable the learner better understand the subject and also prepare him/her for some job or entrepreneurship. The purpose of introducing Formative and Summative Assessments in Practical PCP is to encourage the learner's involvement and active participation in PCP classes. Participation in 6 PCPs (5+1) by all learners is mandatory.

### 2. Implementation:

There are 18 practicals in the Lab manual, Book 3 of Home Science (312). These activities will be conducted in 5 PCPs at the Study Centre. The sixth PCP is reserved for the final practical examination. These will be assessed through Formative (Continuous) Assessment. The **Sixth PCP** is reserved for the final examination that will be assessed through Summative (Final) Assessment at the Study Centre. The dates for the practical examination (Final) will be notified by NIOS in the examination date sheet. 50% weightage is for each of Formative (Continuous) and Summative (Final) Assessments. The maximum marks for Practical in Home Science is 20 (10+10). The distribution of activities in 05 PCPs is as follows:

#### **First PCP Practical:**

- (i) Orientation of the learners about the distribution of activities to be performed and allocation of Marks for both the Formative (Continuous) and Summative (Final) Assessments
- (ii) Orientation of the learners about the other practicals so that the learners can be prepared to bring the raw material needed in the class (e.g. paper for weaving, material to make a household item etc.).
- (iii) Orientation of the learners about the choice of the optional modules, namely House-keeping and Creative Hand Embroidery

- (iv) Orientation of the learners about the activities to be done in the class for the 2<sup>nd</sup> module, “**Food and Nutrition**”, i.e. preparation of selected food products: ingredients, weights, procedure of making and storing the product (practical no. 1-3 in the lab manual) as: (Any one preparation from each category can be chosen according to availability in the local area)
- Preservation of seasonal foods
  - Preparation of dishes at home, using methods of food enrichment and their evaluation
  - Categorization of different food items available at home into various food groups

### **Second PCP Practical:**

- (i) Orientation of the learners about the activities in 3<sup>rd</sup> module, “**Resource Management**” i.e. how to identify sources of pollution, type of work and responsibilities of different family members and making of a monthly expenditure plan (practical no. 3-6 in the lab manual) as:
- Identification of sources of pollution and suggestions of remedial measures
  - Identification of difference in work and responsibilities of one’s family members, according to age and gender
  - Record and evaluation of a family’s expenditure for a month

### **Third PCP Practical:**

- (i) Orientation of the learners about the activities in the 4<sup>th</sup> module “**Human Development**” i.e. how to observe children and take the interview of an adolescent (practical no. 7-9 in the lab manual) as:
- Observation of language development in children- 1.5 to 3 years old
  - Observation of social behaviour and expression of fear and anger in children 1-2 years old
  - Interview of a teenager regarding their physical changes and social & emotional problems faced during adolescence

### **Fourth PCP Practical:**

- (i) Orientation of the learners about the activities in the 5<sup>th</sup> module, “**Textile and Clothing**”, such as identification of fibers by different methods, ways of making weaves in paper and techniques of stain removal (practical no. 10-12 in the lab manual) as:
- Identification of fibers by visual and burning test
  - Creating plain and twill weaves using strips of paper
  - Removal of stains of curry, blood, mud, ink and tea/ coffee

### **Fifth PCP Practical:**

- (i) Division of the learners according to the optional subject choice, i.e. Housekeeping Module and Creative Hand Embroidery, in Module 6A and Module 6B

- (ii) Orientation of two learner groups individually about activities to be done in each module (practical no. 13-15 for Housekeeping and practical no. 16-18 for Creative Hand Embroidery in the lab manual) as:

### Module 6A: Housekeeping

- Changing a fuse and plug of an electric iron (Check all possible safety measures)
- Care and maintenance of wooden surfaces, floors, brass, aluminium, silver and plastic articles
- Using waste material to prepare useful household items

### Module 6B: Creative Hand Embroidery

- Preparation of a colour wheel
- Using basic embroidery stitches to prepare a sampler
- Enlarging and reducing motifs

### 3. Scheme of Practical Examination:

The scheme of practical examinations is to be followed, as per the details given below:

- ◆ The conduct of practical examinations is mainly linked with practical PCPs. There are total 06 practical sessions which are made compulsory.
- ◆ The initial five (05) PCP practicals have to be assessed through Formative Assessment (Continuous) and will be utilized for learning.
- ◆ The final (6<sup>th</sup> PCP) practicals will be utilized for Summative (Final) Assessment for practical examination.
- ◆ A weightage of 50% of the marks will be awarded for Formative (05 practical classes) Assessment and 50% marks for the 6<sup>th</sup> practical class for Summative Assessment.

#### A. Marks Distribution in Formative Assessment (05 PCP Classes):

S.No.	Criteria for Assessment	Marks	Remarks
1.	Regular Participation in 05 PCP Classes	2	The five boxes under Formative Assessment in the award list will be filled up based on these 05 criteria.
2.	Activities Performed in 05 PCP Classes	2	
3.	Practical Record maintained in 05 PCP Classes	2	
4.	Observation (in given practical)	2	
5.	Observation (Group participation with peers)	2	
<b>Total</b>		<b>10</b>	



**B. Marks Distribution in Summative Assessment (6<sup>th</sup> Final PCP Class):**

S. No.	Criteria for Assessment	Marks	Remarks
1.	Assessment of activity performed Two activities out of given three activities (Each activity should be from different modules)	$2 \times 3\frac{1}{2} = 7$	Time of 2½ hours will be allowed for the final examination.
2.	Viva-Voce based on the activities	3	
	<b>Total</b>	<b>10</b>	

**Note:** The total (Formative and Summative Assessment) weightage is 20 marks. In the award slip, the marks obtained by the learner both in Formative and Summative Assessments are to be mentioned clearly and the final figure is the sum of the mark of Formative and Summative Assessments.

**4. Preparations and precautions for PCP Practical Sessions:**

- (i) The Centre Superintendent and the Tutor must read the instructions mentioned in the Guidelines for practical PCPs.
- (ii) The attendance sheet must be properly maintained in each Practical PCP class.
- (iii) The award list must be filled up as per the given assessment criteria.
- (iv) The Tutor as well as the learner must read the instructions given in the practical manual.
- (v) The Tutor must check and arrange the materials, tools, equipment etc. that will be needed in the Practical PCP sessions in advance.
- (vi) The techniques of group work may be followed in Practical PCP sessions. One group can do one practical and another group another practical, then turn wise.
- (vii) Wherever necessary, give them a demonstration about the practical, e.g. accurate weighing of ingredients, testing of the final stage of cooking jam, pickle etc.
- (viii) Learners are informed about the schedule of Practical PCP sessions in advance.
- (ix) Learners can be asked to bring certain material, like waste material to design an article in the class.
- (x) Learners shall be asked to bring the practical record book in each class. Each learner is expected to maintain it, as per the instructions given in the practical manual. It will be used in the final examination.
- (xi) They should be told to maintain cleanliness and follow safety measures when using fire, gas, or chemicals, etc.
- (xii) Learners should be asked to clean the articles after use.

(xiii) Before going for Practical Examination, get all the exercises (17 practicals) of Practical Record Book signed by the tutor.

## **5. List of all practicals for senior secondary Home Science**

### **CORE MODULES:**

#### **Module 2: Food and Nutrition**

1. Preservation of seasonal foods
2. Preparation of dishes at home, using methods of food enrichment and their evaluation
3. Categorization of different food items available at home into various food groups

#### **Module 3: Resource Management**

1. Identification of sources of pollution and suggestions of remedial measures
2. Identification of difference in work and responsibilities of one's family members according to age and gender
3. Record and evaluation of family's expenditure for a month

#### **Module 4: Human Development**

1. Observation of language development in children 1.5 to 3 years old
2. Observation of social behaviour and expression of fear and anger in children 1-2 years old
3. Interview of a teenager regarding their physical changes & social and emotional problems faced during adolescence

#### **Module 5: Textile and Clothing**

1. Identification of fibers by visual and burning test
2. Creating plain and twill weaves using strips of paper
3. Removal of stains of curry, blood, mud, ink and tea/ coffee

### **OPTIONAL MODULES:**

#### **Module 6A: Housekeeping**

1. Changing a fuse and plug of an electric iron
2. Care and maintenance of wooden surfaces, floors, brass, aluminum, silver and plastic articles
3. Using waste material to prepare useful household items

#### **Module 6B: Creative Hand Embroidery**

1. Preparation of a colour wheel
2. Using basic embroidery stitches to prepare a sampler
3. Enlarging and reducing motifs



**Senior Secondary Level**  
**COMPUTER SCIENCE (330)**  
**Practical Examination**

**1. Objectives:**

Practicals in the form of ‘Hand on’ experiences form a major part of the Computer Science curriculum. The syllabus of practical in ‘Computer Science’ subject intends to present clear guidelines for learners and tutors for the same. The purpose of introducing Formative and Summative Assessments in Practical PCP is to encourage learners’ involvement and active participation in PCP classes as well as continuous assessment which leads to learning.

**2. Implementation**

The Computer Lab should have at least 10 – 15 working computers of configuration compatible to the needs of syllabus. In all, the computers, the software Operating system, C++ compiler, and Internet connection must be installed. One working Network printer should be there in the lab.

The practical activities are to be conducted in 5 PCPs, as given below, at the study centre. These will be assessed through Formative (Continuous) Assessment. The Sixth PCP is reserved for final examination that will be assessed through Summative (Final) Assessment at the Study Centre. The dates for the practical examination (Final) will be notified by NIOS in the examination date sheet. 50% weightage is for each of Formative (Continuous) and Summative (Final) Assessments. The maximum mark for Practical in Computer Science is 40. The *distribution of* activities in 05 PCPs is as follows:

**First PCP Practical:**

Orientation of the learners about the distribution of activities to be performed and allocation of Marks for both the Formative (Continuous) and Summative (Final) Assessment

1. Write a program to input the values of Principal, Rate, and Time and calculate Simple Interest.
2. Write a program to input the unit price of an item and the quantity of item to be bought. Then, calculate the total price.

3. Write a program to convert temperature from Fahrenheit to Celsius.

### **Second PCP Practical:**

1. Write a program to input two numbers and swap them using a third variable or swap them without using a third variable.
2. Write a program to input a character and check whether it is a letter of the alphabet, or a digit, or some other character.
3. Write a program to input a year (e.g., 1994) and check whether it is a leap year.

### **Third PCP Practical:**

- Write a program to input a character. If the character is a lowercase letter, then display the corresponding upper case letter and vice-versa. If the character is not a letter, then display the character as it is.
- Write a program to input 10 numbers and find their sum and average.
- Write a program to input a number. If the number is negative, then again input the number. Keep on doing so until the user enters a non-negative number.

### **Fourth PCP Practical:**

1. An Armstrong number is a number the sum of the cubes of whose digits is equal to the number itself. An example of an Armstrong number is 153 ( $1^3+5^3+3^3 = 153$ ).

Write a program to input a number and find out whether it is an Armstrong number.

2. Write a program to input a number n and display factorials of all the numbers from 1 to n, using loop.
3. Write a program to input a string and then display this string in reverse order.

### **Fifth PCP Practical:**

1. Write a program that reads a list of numbers from the user and places them in an array of type float. Once the numbers are stored in the array, the program should find their average and print it along with the list of numbers. Use pointer notation, wherever possible.
2. Write a menu driven program in C++ to perform the following functions on a binary file "BOOK.DAT" containing objects of the following class:

```
class Book
{
    int BookNo;
    char Book_name[20];
public:
    // function to enter book details
    void enterdetails();
    //function to display Book details
    void showdetails();
    //function to return Book_no
    int Rbook_no() {return Book_no;}
    //function to return Book_name
    int Rbook_name() {return Book_name;}
};
```

- i. Append Records
- ii. Modify a record for a given book no.
- iii. Delete a record with a given book no.
- iv. Search for a record with a given Book name
- v. Display a sorted list of records (sort on Book No.)

### 3. Scheme of Practical Examination:

The following scheme of practical examinations is to be followed, as per the details given below:

- ❖ The conduct of practical examinations is mainly linked with practical PCP. There are 06 practical sessions which are made compulsory.
- ❖ The initial five (05) PCP practicals have to be assessed through Formative Assessment (Continuous) and will be utilized for learning.
- ❖ The final (6<sup>th</sup> PCP) practical will be utilized for Summative (Final) Assessment for the practical examination.
- ❖ A weightage of 50% of the marks will be awarded for Formative (05 practical classes) Assessment and 50% marks for the 6<sup>th</sup> practical classes for Summative Assessment.

#### I. Marks Distribution in Formative Assessment (05 PCP Sessions):

S. No.	Criteria for Assessment	Marks	Remarks
1	Regular Participation in 05 PCP Classes	5	The five boxes under Formative Assessment in the award list will be filled up based on these 04 criteria.
2	Activities Performed in 05 PCP Classes	10	
3	Practical Record maintained in 05 PCP Classes	2 ½	
4	Participation with Peer-Group and Tutor	2 ½	
	<b>Total</b>	<b>20</b>	

#### II. Marks Distribution in Summative Assessment (6<sup>th</sup> Final PCP Class):

S. No.	Criteria for Assessment	Marks	Remarks
1.	Assessment of activity performed	15	Time of 2 hours will be allowed for the final examination.
2.	Viva-Voce based on the activities	5	
	<b>Total</b>	<b>20</b>	

**Note:** The total (Formative and Summative Assessment) weightage is 40 marks. In the award list, the marks obtained by the learner, both in Formative and Summative Assessments, are to be mentioned clearly and the final figure is the sum of the marks of Formative and Summative Assessments.

### 4. Preparations for PCP Practical Sessions:

- (i) The Centre Superintendent and the Tutor must read the instructions mentioned in the Guidelines for practical PCPs.

- (ii) Check and arrange the materials, tools, equipments, etc. that are needed in the Practical PCP sessions in advance.
- (iii) Learners are informed about the schedule of Practical PCP sessions. Practicals may be arranged in groups of learners.
- (iv) The attendance sheet must be properly maintained in each Practical PCP class.
- (v) The award list must be filled up, as per the given assessment criteria.
- (vi) The techniques of group work may be followed in Practical PCP sessions.
- (vii) Learners shall be asked to bring the practical record book in each class. Each learner is expected to maintain it as per the instructions given in the practical manual.

### 5. Precautions (DOs and DON'Ts)

Discuss the following points with the learners regarding writing the practical record book:

- (i) Throughout the practical note book, the learners should follow the same style. Ask them to use a good fountain pen and a sharp black pencil. It is recommended that the right hand page should be written in blue ink and the left hand page with a black pencil.

The recommended style of writing is shown below:

Left hand page	Right hand page
Program, print out of the output screen	Title of the Exercise, Date, Exercise No. Interpretation and Conclusion

- (ii) Each experiment should start from a new page.
- (iii) Mistakes should be crossed out with a single line so that they can still be read. The correct statement should be rewritten in its place.
- (iv) No page should be torn off from the practical record book.
- (v) Before going to take the Practical Examination, get all the exercises of Practical Record Book signed by the tutor.

### 6. Computer Lab Rules (Do's and Don'ts)

- ❖ The computers in the lab are to be used for academic purposes only.
- ❖ Uploading or downloading software without permission is strictly prohibited
- ❖ Do not make any changes to the desktop or to the installed software.
- ❖ Playing computer games is strictly prohibited.
- ❖ Report any problem to the instructor.
- ❖ Please Logoff when you leave.

**Note:** Material for the practical examination will be provided by the centre superintendant at the practical examination centre, as per requirement of the activities.



## Senior Secondary Level **PAINTING (332)** Practical Examination

### 1. Objectives

Painting is a powerful way of self expression. This makes people more sensitive to their environment and develops a creative attitude. It helps in developing the aesthetic sense, skill and knowledge of learners. It is a medium to express their thoughts and feelings to others. The objective of this document is to provide a clear vision and concept of the subject to the learner of the course. Step wise exercises in the prescribed course curriculum will help the learner to draw and paint with original, innovative thinking. After understanding about colours, space, harmony and perspective, the learner will develop artistic skill and his/her power of observation will become stronger. The purpose of introducing Formative and Summative Assessment in Practical PCP is to encourage learners' involvement and active participation in PCP classes as well as continuous assessment which leads to learning.

### 2. Implementation

There are 09 activities listed in the Practical Manual of Senior Secondary Level Course in Painting (332) and Guide material is also provided for step by step process of the practical lessons. These activities are to be conducted in 5 PCPs, at the study centre. These will be assessed through Formative (Continuous) Assessment. The Sixth PCP is reserved for the final examination that will be assessed through Summative (Final) Assessment at the Study Centre. The dates for the practical examination (Final) will be notified by NIOS in the examination date sheet. 50% weight age is for each of Formative (Continuous) and Summative (Final) Assessments. The maximum mark for Practical in Painting is 60. The distribution of activities in 05 PCPs is as follows:

#### **First PCP Practical**

**Object and Nature Study** (Any object placed in front of the learners and one from the Nature drawing)

- ❖ Aim of this PCP is to focus on quality of line drawing.
- ❖ Placement of the paper (portrait or landscape), arrange and draw the given objects within the space, keeping in mind division of background, middle ground and foreground.

- ❖ Measuring of objects from distance with the help of a pencil. To measure, close one of your eyes, hold a pencil at arm's length (always keep your arm straight).
- ❖ Understanding of relative study of objects and usage of negative– positive space.

The Tutor must ensure that the learner places a newsprint sheet underneath the actual drawing sheet. (To avoid transferring of any drawing board texture)

Learners are introduced to the elements of Drawing (line –strength and fluency, thick and thin lines, rhythm, texture, shape etc.) and its importance through practice based exercises.

### **Second PCP Practical**

#### **Composition in Mixed Medium, Poster and Texture**

Create a Painting on the given subject, keeping in mind the principles of composition such as rhythm, harmony, balance and texture and so on.

Effective communication and expression of the idea /concept /emotions to the viewer through colours, balance and perspective

Individual innovation, creativity and originality should be much encouraged and appreciated.

Topics suggested by the tutor, for example- Village scene, Busy road in city, any festival celebration, Market, Rainy season, Playing in the playground and so on.

Learners must focus on the concept of perspective introduced in the PCP.

Composition should be creative, original and different, reference is allowed but not copying. Introducing the learners to Primary, Secondary, Cool, Warm, Complementary, and Contrast colours.

### **Third PCP Practical**

#### **Making Collage and Graphics**

Introduction to Collage and Graphic art forms.

Learners should do the Study of Colours and their preparations from locally available vegetables and minerals. They should also study different styles of Collage and Graphic art forms.

Apart from the above mentioned forms, learners can also study their own local regional art forms.

Select one motif from the popular folk art and repeats the motif in a 6"X6" square, using primary colours to create a new design.

### **Fourth PCP Practical**

#### **Different Art forms and Figure Drawing**

Learner should study and understand different figures from to day to day life and gradually arrange visual elements around human figures to form a painting, using different colour mediums or mixed mediums.

Effective communication and expression of the idea/concept/emotions to the viewer through colours and perspective will be appreciated.

Individual innovation, creativity and originality should also be encouraged and appreciated.



## **Fifth PCP Practical**

### **Abstract Painting and Creating Tribal and Folk Art forms**

Create a Painting using wild imagination in colours and forms.

Examiner should arrange any three objects, i.e. man made or commonly available objects and ask them to arrange the object and draw. Create illustrations that would give a sense of all the elements of a composition.

They should also study different styles of Folk and Tribal arts from various regions. Select any popular motifs then create folk or tribal art using primary colours.

The tutor also should talk about Contemporary artists and Folk artists, about art works and their application techniques.

### **3. Scheme of Practical Examination**

The following scheme of practical examinations is to be followed as per the details given below:

- ❖ The conduct of practical examinations is mainly linked with practical PCP sessions and there are 06 practical sessions which are made compulsory.
- ❖ The initial five (05) PCP Practicals have to be assessed through Formative (Continuous) Assessment and will be utilized for learning.
- ❖ The final (6<sup>th</sup>PCP) practical will be utilized for Summative (Final) Assessment for practical examination.
- ❖ A weight age of 50% of the marks will be awarded for Formative (05practical classes) Assessment and 50% marks for the 6<sup>th</sup> practical classes for Summative Assessment.

#### **I. Marks Distribution in Formative Assessment (05PCPSessions):**

<b>S.No.</b>	<b>Criteria for Assessment</b>	<b>Marks</b>	<b>Remarks</b>
1.	Regular Participation in 05 PCP Classes	6	The five boxes under Formative Assessment in the award list will be filled up based on these 05 criteria.
2.	Activities Performed in 05 PCP Classes	6	
3.	Practical Record maintained in 05 PCP Classes	6	
4.	Use of practical materials and mediums	6	
5.	Participation with Peer-Group and Tutor	6	
<b>Total</b>		<b>30</b>	

#### **II. Marks Distribution in Summative Assessment (6<sup>th</sup> Final PCP Class):**

<b>S.No.</b>	<b>Criteria for Assessment</b>	<b>Marks</b>	<b>Remarks</b>
1.	Assessment of activity performed (Two activities out of given 05 activities)	20	Time of 04 hours will be allowed for the final examination.
2.	Portfolio Submission	10	
<b>Total</b>		<b>30</b>	

**Note:** The total (Formative and Summative Assessment) weight age is 60 Marks. In the award list, the marks obtained by the learner, both in Formative and Summative Assessments, are to be mentioned clearly and the final figure is the sum of the marks of Formative and Summative Assessments.

#### **4. Preparations for PCP Practical Sessions**

- ❖ The Centre Superintendent and Tutor must read the instructions mentioned in the Guidelines for practical PCPs.
- ❖ Check and arrange the materials, tools, medium etc. that are needed in the Practical PCP sessions in advance.
- ❖ Learners are informed about the schedule of Practical PCP sessions.
- ❖ The attendance sheet must be properly maintained in each Practical PCP class.
- ❖ The award list must be filled up, as per the given assessment criteria.
- ❖ The techniques of group work may be followed in Practical PCP sessions.
- ❖ Learners shall be asked to bring the practical record book in each class. Each learner is expected to maintain it as per the instructions given in the practical manual.

#### **5. Precautions (DOs and DON'Ts)**

Discuss the following points with the learners regarding writing the practical record book:

- ❖ Throughout the practical note book, the learner should follow the same style. Ask them to use Half Imperial sized or (15" X 22") Cartridge sheets, Newsprint or A3 sheets, Rubber, Sharpener/ mount cutter, 2B, 4B, 6B and 8B Drawing Pencils, Half Imperial sized drawing file, Colour-pencil colours, Oil Pastels colours, Water colours, Poster colours etc. Paint Brushes (round and Flat No. 2, 4, 6, 8, and 10), Colour Palette, container for water and rag (Old piece of cotton cloth), etc.
- ❖ Each art work should start from a new art sheet.
- ❖ No art sheet should be torn-off from the practical record book.
- ❖ All the objects should be of different sizes and shapes.
- ❖ All the objects should not be placed in a straight line.
- ❖ Tutor /Examiner should select objects of preferably different colours.
- ❖ The objects should be placed at 'eyelevel while the study.

#### **6. List of Activities**

There are 09 activities in the Painting Practical Manual and Portfolio.

##### **Section–A (Portfolio Submission)**

Learner needs to submit portfolio with six works and one Sketch Book with minimum 20 works (any size).

Portfolio submission along with one sketch book or twenty pages of any available papers in soft pencils shall be submitted. All the sketches should include what the learners have studied

earlier. Learners need to submit portfolios with minimum six works, which shall include dating, mounting and maintaining of each work.

### **Part 1 “Creating different Composition, Poster and Texture”**

Submit minimum three works as follows:-

- ❖ One Illustration with Slogan – one Poster (As A4 size Cartridge Sheet)
- ❖ One Landscape with a different medium – As A4 size Cartridge Sheet Two in colours
- ❖ One Composition with human and Animal figure – A4 size Cartridge Sheet

### **Part 2 Three works from “Making of Collage, Graphics and Folk Art forms**

Submit minimum three works as follows:-

- ❖ Create a Collage on Pollution or Nature – One work in a A4 size Cartridge sheet (Material to be used: button, sticks, cotton, wool and any waste materials and Two in mix media.)
- ❖ Make a Composition with Vegetable Printing – One work in A4 size cartridge sheet.
- ❖ Book Cover with Folk Motif – One Book Cover in any size. (Material to be used: Traditionally or locally available materials, A3 size paper, colours, pencil etc)

**Sketch Book** - Sketch book with 20 sketches from “Nature and Object Study” (Black and White / Colours)

\*Note: Submission of Portfolio is mandatory for the learner as session work.

### **Section-B (Creating different Composition, Poster and Texture)**

- ❖ Free hand drawing directly from life and Nature would give a sense of all the elements of a composition. Starting with basic design and various experiments to understand the forms. Use of different colours will bring the sense of composition.
- ❖ Learner should study the create tonal values from light to dark using with 2B to 4B pencils. TRY NOT TO USE ERASER WHILE SHADING.
- ❖ The making of poster will be very helpful to understand the textural quality of a composition. Poster to be created with the help of cut out coloured pictures or any easily available materials.

### **Section-C (Making of Collage, Graphics and Folk Art forms)**

- ❖ Starting with basic design and various materials and mediums to understand the forms. Use of different colours will bring the sense of the collage.
- ❖ The making of collage and folk art forms will be very helpful to understand the textural quality of the collage and other art forms mentioned. Collage to be created with the help of coloured cut out papers, picture from magazine or any easily available materials and taking care of all the elements.
- ❖ Create poster, graphic and folk art with the inanimate and animate forms also taking care of rhythm, balance, space, colours and harmony.



**Senior Secondary Level**  
**PAINTING (332)**  
**(FOR REGIONAL MEDIUM ONLY)**  
**Practical Examination**

**1. Objectives:**

Painting is a powerful way of self expression. This makes people more sensitive to their environment and develops a creative attitude. It helps in developing the aesthetic sense, skill and knowledge of learners. It is a medium to express their thoughts and feelings to others. The objective of this document is to provide a clear vision and concept of the subject to the learner of the course. Step wise exercises in the prescribed course curriculum will help the learner to draw and paint with original, innovative thinking. After understanding about colours, space, harmony and perspective, the learner will develop artistic skill and his/her power of observation will become stronger. The purpose of introducing Formative and Summative Assessment in Practical PCP is to encourage learners' involvement and active participation in PCP classes as well as continuous assessment which leads to learning.

**2. Implementation:**

There are 12 activities listed in the Practical Manual of Secondary Level Course in Painting (225). These activities are to be conducted in 5 PCPs, at the study centre. These will be assessed through Formative (Continuous) Assessment. The Sixth PCP is reserved for the final examination that will be assessed through Summative (Final) Assessment at the Study Centre. The dates for the practical examination (Final) will be notified by NIOS in the examination date sheet. 50% weightage is for each of Formative (Continuous) and Summative (Final) Assessments. The maximum mark for Practical in Painting is 70. The *distribution of activities* in 05 PCPs is as follows:

**First PCP Practical**

**Object and Nature Study** (Any object placed in front of the learners and one from the Nature drawing)

- ❖ Aim of this PCP is to focus on quality of line drawing.
- ❖ Placement of the paper (portrait or landscape), arrange and draw the given objects within the space, keeping in mind division of background, middle ground and foreground
- ❖ Measuring of objects from distance with the help of a pencil. To measure, close one of your eyes, hold a pencil at arm's length (always keep your arm straight).

- ❖ Understanding of relative study of objects and usage of negative – positive space.

The Tutor must ensure that the learner places a newsprint sheet underneath the actual drawing sheet. (To avoid transferring of any drawing board texture)

Learners are introduced to the elements of Drawing (line –strength and fluency, thick and thin lines, rhythm ,texture, shape etc.) and its importance through practice based exercises.

### **Second PCP Practical**

#### **Composition in Mixed Medium**

Create a Painting on the given subject, keeping in mind the principles of composition such as rhythm, harmony, balance and texture and so on.

Effective communication and expression of the idea/concept/emotions to the viewer through colours, balance and perspective

Individual innovation, creativity and originality should be much encouraged and appreciated.

Topics suggested by the tutor, for example- Village scene, Busy road in city, any festival celebration, Market , Rainy season, Playing in the playground and so on.

Learners must focus on the concept of perspective introduced in the PCP.

Composition should be creative, original and different, reference is allowed but not copying.

Introducing the learners to Primary, Secondary, Cool, Warm, Complementary, and Contrast colours.

### **Third PCP Practical**

#### **Folk art as Motif**

Introduction to folk Art.

Learners should do the Study of Colours and their preparations from locally available vegetables and minerals. They should also study different styles of folk paintings from various regions, such as Phad, Madhubani, Kalamkari , Warli, Alpana, Rangoli, Kolam etc.

Apart from the above mentioned folk art forms, learners can also study their own local regional folk art.

Select one motif from the popular folk art and repeat the motif in a 6"X6" square, using primary colours to create a new design.

### **Fourth PCP Practical**

#### **Human and Animal Figure Drawing**

Learner should study and understand human figures from to day to day life and gradually arrange visual elements around human figures to form a painting, using different colour mediums or mixed mediums.

Effective communication and expression of the idea/concept/emotions to the viewer through colours and perspective will be appreciated.

Individual innovation, creativity and originality should also be encouraged and appreciated.

## **Fifth PCP Practical**

### **Abstract Painting in colour**

Create a Painting using wild imagination in colours and forms

Examiner should arrange any three objects, i.e. man made or commonly available objects and ask them to arrange the object and draw. Create illustrations that would give a sense of all the elements of a composition.

The tutor also should talk about masters and contemporary artists, artworks and their application techniques.

### **3. Scheme of Practical Examination:**

The following scheme of practical examinations is to be followed as per the details given below:

- ❖ The conduct of practical examinations is mainly linked with practical PCP sessions and there are 06 practical sessions which are made compulsory.
- ❖ The initial five (05) PCP practicals have to be assessed through Formative (Continuous) Assessment and will be utilized for learning.
- ❖ The final (6<sup>th</sup> PCP) practical will be utilized for Summative (Final) Assessment for practical examination.
- ❖ A weightage of 50% of the marks will be awarded for Formative (05 practical classes) Assessment and 50% marks for the 6<sup>th</sup> practical classes for Summative Assessment.

#### **I. Marks Distribution in Formative Assessment (05 PCP Sessions):**

S.No.	Criteria for Assessment	Marks	Remarks
1.	Regular Participation in 05 PCP Classes	7	The five boxes under Formative Assessment in the award list will be filled up based on these 05 criteria.
2.	Activities Performed in 05 PCP Classes	7	
3.	Practical Record maintained in 05 PCP Classes	7	
4.	Use of practical instruments/equipment	7	
5.	Participation with Peer-Group and Tutor	7	
<b>Total</b>		<b>35</b>	

#### **II. Marks Distribution in Summative Assessment (6<sup>th</sup> Final PCP Class):**

S.No.	Criteria for Assessment	Marks	Remarks
1.	Assessment of activity performed (Two activities out of given 05 activities)	20	Time of 04 hours will be allowed for the final examination.
2.	Portfolio Submission	15	
<b>Total</b>		<b>35</b>	

**Note:** The total (Formative and Summative Assessment) weightage is 70 Marks. In the award list, the marks obtained by the learner, both in Formative and Summative Assessments, are to be mentioned clearly and the final figure is the sum of the marks of Formative and Summative Assessments.

#### **4. Preparations for PCP Practical Sessions:**

- ❖ The Centre Superintendent and Tutor must read the instructions mentioned in the Guidelines for practical PCPs.
- ❖ Check and arrange the materials, tools, equipment etc. that are needed in the Practical PCP sessions in advance.
- ❖ Learners are informed about the schedule of Practical PCP sessions.
- ❖ The attendance sheet must be properly maintained in each Practical PCP class.
- ❖ The award list must be filled up, as per the given assessment criteria.
- ❖ The techniques of group work may be followed in Practical PCP sessions.
- ❖ Learners shall be asked to bring the practical record book in each class. Each learner is expected to maintain it as per the instructions given in the practical manual.

#### **5. Precautions (DOs and DON'Ts)**

Discuss the following points with the learners regarding writing the practical record book:

- ❖ Throughout the practical note book, the learner should follow the same style. Ask them to use Half Imperial sized or (15" X 22") Cartridge sheets, Newsprint or A3 sheets, Rubber, Sharpener/ mount cutter, 2b, 4b, 6b and 8B Drawing Pencils, Half Imperial sized drawing file, Colour-pencil colours, oil pastels colours, water colours, Poster colours etc. Paint Brushes (round and Flat No. 2, 4, 6, 8, and 10), Colour Palette, container for water and rag (Old piece of cotton cloth), etc.
- ❖ Each experiment should start from a new page.
- ❖ No page should be torn-off from the practical record book.
- ❖ All the objects should be of different sizes and shapes.
- ❖ All the objects should not be placed in a straight line.
- ❖ Tutor/ Examiner should select objects of preferably different colours.
- ❖ The objects should not be placed above or below the learners' eye level.

#### **6. List of Activities:**

There are 12 activities in the Painting Practical Manual and Portfolio (with twelve works)

### **6.1 Section –A (Portfolio submission)**

Portfolio submits along with one sketch book or twenty pages of any available papers with Sketches in soft pencils. All the sketches should include what the learners have studied earlier like landscape, animal, birds, flowers, trees, etc. Learners need to submit portfolios with minimum twelve works, which includes dating, mounting and maintaining of each work.

Part 1 Object and Nature study (Minimum four works)

½ imperial size paper

- ❖ One in pencil line drawing
- ❖ One with Tone
- ❖ Two in colours

Part 2 Painting and Composition – (Minimum four works)

¼ imperial size papers

- ❖ Two in colours
- ❖ Two in mix media

Part 3 Regional Folk Painting – (Minimum four works)

¼ imperial size paper

- ❖ Four different folk arts by traditional or locally available materials and colours.

### **6.2 Section- B (Object and Nature Study)**

- ❖ Place any one or two objects in front of the learners.
- ❖ Learner should study the object and create tonal values from light to dark using with 2B to 4B pencils. DO NOT USE ERASER WHILE SHADING
- ❖ Learner should create the object by colours also.

### **6.3 Section-C (Composition in Mixed Medium)**

- ❖ Free hand drawing directly from life and Nature would give a sense of all the elements of a composition. Starting with basic design and various experiments to understand the forms. Use of different colours will bring the sense of composition.
- ❖ The making of collages will be very helpful to understand the textural quality of a composition. Collage to be created with the help of coloured cut out papers, picture from magazine or any easily available materials and taking care of all the elements of composition.
- ❖ Create composition with the Geometrical shapes in animate and inanimate form staking care of rhythm, balance, space, colours and harmony.





**Senior Secondary Level**  
**ENVIRONMENTAL SCIENCE (333)**  
**Practical Examination**

**1. Objectives:**

Practicals are an integral part of understanding and learning any science subject. Environmental Science is a subject which can be best understood by field studies, analytical laboratory exercises and creative activities. Scientific practical approach will also provide hands-on experience at devising methods for preventing environmental degradation and make the learner realise the importance of energy and its conservation.

**2. Implementation:**

Practical work cultivates psycho-motor skills. Therefore, adequate weightage needs to be provided to (i) analytical laboratory exercises and (ii) creative activities. A practical course in Environmental Science, however, is incomplete without field studies which have thus been included in the practical Environmental Science curriculum.

Included in the curriculum are **four** laboratory exercises which are **mandatory**. Out of the **six** creative activities, a learner can choose any **two out of the seven** exercises listed for field studies, a learner can choose any **three**. Therefore, a student needs to compulsorily carry out **four** laboratory exercises, **two** creative activities and **three** field studies to make a total of **nine practicals** in the whole year.

**Note:** Read the manual carefully. Follow the instructions given in the introduction of the manual. (Page no. 1-4)

The maximum mark for Practical in Environmental Science (333) is **20**. The distribution of activities in 05 PCPs are as follows:

**First PCP Practical:**

It shall be devoted to the following:

- (i) Apprising learners regarding the SOP
- (ii) Practical curriculum
- (iii) Scheme of implementation
- (iv.) Allocation of marks

Therefore, **attendance in the first PCP is compulsory** for all learners opting for Environmental Science.

**Note:** Field studies and creative activities are to be discussed in the **first PCP**. Any doubts regarding the field work / creative activity can be discussed in the **second, third and fourth**

PCP. The **creative activities** should be submitted in the **fifth** PCP while the **field studies** should be submitted in the **sixth** PCP.

**Second PCP Practical:**

- Laboratory exercise No-8 will be performed during the second PCP session.
- Doubts of the learners related to field studies and creative activities should be cleared by the Tutors during the second PCP session.

**Third PCP Practical:**

- Laboratory exercise No-9 will be performed during the third PCP session.
- Doubts of the learners related to field studies and creative activities should be cleared by the Tutors during the third PCP session.

**Fourth PCP Practical:**

- Laboratory exercise No-10 will be performed during the fourth PCP session.
- Doubts of the learners related to field studies and creative activities should be cleared by the Tutors during the fourth PCP session.

**Fifth PCP Practical:**

- Laboratory exercise No-11 will be performed during the fifth PCP session.
- Learners should submit their creative activities during fifth PCP session.

**3. Scheme of Practical Examination:**

The following scheme of practical examination is to be followed, as per the details given below:

- The practical examinations (mainly linked with practical PCP) are to be conducted in 06 practical sessions which are made compulsory.
- The initial five (05) PCP practicals have to be assessed through Formative (Continuous) Assessment and will be utilized for learning.
- The final (6<sup>th</sup> PCP) practical will be utilized for Summative (Final) Assessment for practical examination. The dates for the practical examination (Final) will be notified by NIOS in the examination date sheet.
- A weightage of 50% of the marks will be awarded for Formative (05 practical classes) Assessment and 50% marks for the 6<sup>th</sup> practical class for Summative Assessment.

**I. Marks Distribution in Formative Assessment (05 PCP Sessions):**

S.No.	Criteria for Assessment	Marks	Remarks
i.	Creative Activities	02	The five boxes under Formative Assessment in the award list will be filled up based on these 05 criteria.
	Activities Performed in 05 PCP sessions	02	
	Practical Record maintained in 05 PCP sessions	02	
	Use of practical instruments/equipment	02	
	Participation with Peer-Group and Tutor	02	
	<b>Total</b>	<b>10</b>	

## II. Marks Distribution in Summative Assessment (6<sup>th</sup> Final PCP):

S.No.	Criteria for Assessment	Marks	Remarks
1.	Assessment of experiment performed (One experiment) Setting up of the experiment and demonstration Recording the observation Conclusion	3 marks  01 mark 01 mark (03+01+01)=05 marks	Time of 3 hours will be allowed for the final examination.
2.	Field Studies	3 marks	
	Viva-Voce	2marks	
	<b>Total</b>	<b>10 marks</b>	

**Note:** The total (Formative and Summative Assessment) weightage is 20 marks. In the award list, the marks obtained by the learner, both in Formative and Summative Assessments are to be mentioned clearly and the final figure is the sum of the marks of Formative and Summative Assessments.

### 4. Preparations for PCP Practical Sessions:

- (i) The Centre Superintendent and Tutor must read the instructions mentioned in the Guidelines for practical PCP sessions.
- (ii) Learners should be informed about the schedule of Practical PCP sessions. Practicals may be arranged in groups of learners.
- (iii) A separate register for recording attendance during practicals should be maintained.
- (iv) Please ensure that the instruments, glassware and equipment used in the practical exercise are clean in order to get correct results. Arrange the materials, tools, equipment etc. that will be needed in the Practical PCP sessions in advance.
- (v) Each experiment should start from a new page. Mistakes should be crossed out with a single line so that they can still be read. The correct statement should be rewritten in its place.
- (vi) The award list must be filled up as per the given assessment criteria.
- (vii) Tutors should ensure that during practicals requisite precautions are undertaken by the learners.
- (viii) Please ensure that the Practical Record book is checked and signed from time to time and a record of evaluation of experimental work maintained throughout the year.
- (ix) Practical Record Books should be complete and neat, and regularly got signed by the tutor.

(x) Attendance is mandatory in the first PCP; otherwise it shall be difficult to understand the scheme of practical examination and its evaluation includes both Formative Assessment and Summative Assessment.

(xi) Please consult the printed practical manual before undertaking any practical exercise.

## **5. List of Activities:**

### **A. FIELD STUDIES (Any three):**

1. Study a simple ecosystem (suggested habitats-pond, river, estuarine, lake, grassland, forest and desert) and describe the biotic and abiotic components of the ecosystem
2. Study of the effect of human interactions with the natural environment
3. Survey of vegetation, birds, insects and other animals in your locality
4. Choose five common trees/ plant species from your neighbourhood and list their common names. Describe each plant in terms of its height and leaf characteristics
5. Describe the environmental problem/s of your locality and suggest their remedy
6. Visit to different water bodies in your village/locality and describe their uses and source of water pollution if any
7. To segregate domestic solid waste into biodegradable and non-biodegradable components

### **B. LABORATORY EXERCISES (ALL ARE COMPULSORY)**

1. Study of water quality
2. Soil texture and analysis of component
3. To estimate dust (particulate) deposition on the leaves of road side plants
4. To study the effect of light intensity on the growth of plants

### **C. CREATIVE ACTIVITIES (Any two)**

- (i) Set up an aquarium
- (ii) To study the biodiversity of birds and insects in your locality
- (iii) To prepare a list of plants and animals which are used as food for humans and to comment on their habit and habitat
- (iv) Make herbarium sheets of 10 different plants/trees (you can consult your teacher/tutor how to make a herbarium sheet)
- (v) To describe: (a) climate of an urban area; (b) Yearly variation in suspended particulate matter in the same area.
- (vi) To make an audit of the electrical energy consumption by various house hold appliances of your home.

**Note:** Material for practical examination will be provided by the centre superintendant at the practical examination centre as per requirement of the activity.



**Senior Secondary Level**  
**MASS COMMUNICATION (335)**  
**Practical Examination**

**1. Objectives**

Practicals have an important role and relevance in Mass Communication. The purpose of teaching Mass Communication is not only to make learners familiar with terms used in this subject but to make them aware about facts, concepts and principles. This is to prepare learners to understand concepts by doing exercises and practicals relating to them. Self experience and observation not only eliminates doubts and misconceptions in one's mind but also generates an interest and curiosity in the subject. The present practical course thus considers practical work as an integral part of the Mass Communication curriculum at the Senior Secondary stage. This guideline covers the procedure to be adopted by the NIOS learners for dealing with the practical examination. It focuses on enriching practical skills and prepares learners for cultivating a scientific attitude and a scientific temper. The purpose of introducing Formative and Summative Assessments in Practical PCP is to encourage learners' involvement and active participation in PCP classes as well as continuous assessment which leads to learning.

**2. Implementation:**

There are 16 exercises listed in the Practical Manual of the Senior Secondary Course in Mass Communication (335). These activities are to be conducted in 5 PCP sessions at the study centre. These will be assessed through Formative (Continuous) Assessment. The Sixth PCP is reserved for the final examination that will be assessed through Summative (Final) Assessment at the Study Centre. The dates for the practical examination (Final) will be notified by NIOS in the examination date sheet. 50% weightage is for each of Formative (Continuous) and Summative (Final) Assessments. The maximum mark for Practical in Mass Communication is 20. The distribution of activities in 05 PCPs is as follows:

**First PCP Practical:**

1. The Tutor will arrange a visit to a News Agency or Press in the nearby area of the concerned AI. The learners will be asked to observe the process of news making and information related to printing of newspaper and note down their observations in the practical book. Learners may also be motivated to read newspapers and find the messages within.
2. Learners have to choose **any three activities** to be performed from the following experiments (S. No.1-4 of Practical Manual) as:

- Construction of message
- Determine non verbal communication in print media
- Analyse newspapers and ideas about how to conduct an interview

**Second PCP Practical:**

1. Orientation / visit of learners to nearby recording studio/ All India Radio/ TV programme production house or Doordarshan Kendra. Motivating learners to listen to Radio Programmes/ MVV/Community radio to observe various programme formats.
2. Learners have to choose **any two activities** to be performed from the following experiments (S. No.5-8 of Practical Manual) as:
  - ❖ Differentiate words for various media like print or radio
  - ❖ Idea about different Radio programme formats
  - ❖ Differentiate between TV and print as medium
  - ❖ Determine categories of television channels.

**Third PCP Practical:**

1. The learners will be apprised by the Tutor about the different forms of advertisements, print media and advertisement. Learners may also be motivated to get information about Public Relations.
2. Learners have to choose **any one activity** to be performed from the following experiments (S. No.9-10 of Practical Manual) as:
  - ❖ Identification of different forms of advertisement
  - ❖ Observe any activity of Product Public Relation.

**Fourth PCP Practical:**

1. The learners will be introduced to the basics of News Media, including internet and e-mail.
2. Learners have to choose **any two activities** to be performed from the following experiments (S. No. 11-12 of Practical Manual) as:
  - ◆ Assessing internet for information gathering
  - ◆ Practically open an e-mail account

**Fifth PCP Practical:**

1. The learners will be taught about Traditional Media, functions of Traditional Media practicals from Module 7A or 7B, as per the option of the learners. Those who have opted module for 7B, will be introduced to photography ie taking photographs and preparing a photo feature.
2. Learners will perform 2 practicals out of four from S.No. 13-16 as per their choice.

### **Sixth PCP:**

This PCP will be the final practical examination. The scheme for practical examination is given below.

### **3. Scheme of Practical Examination:**

The scheme of practical examinations is to be followed as per the details given below:

- The conduct of practical examinations is mainly linked with practical PCP sessions and there are 06 practical sessions which are made compulsory.
- The initial five (05) PCP practicals are assessed through Formative (Continuous) Assessment and will be utilized for learning.
- The final (6<sup>th</sup> PCP) practical will be utilized for Summative (Final) Assessment for practical examination.
- A weightage of 50% of the marks will be awarded for Formative (05 practical classes) Assessment and 50% marks for the 6<sup>th</sup> practical class for Summative Assessment.

#### **I. Marks Distribution in Formative Assessment (05 PCP Sessions):**

<b>S.No.</b>	<b>Criteria for Assessment</b>	<b>Marks</b>	<b>Remarks</b>
1.	Regular Participation in 05 PCP Classes	2	The five boxes under Formative Assessment in the award list will be filled up based on these 05 criteria.
2.	Activities Performed in 05 PCP Classes	2	
3.	Practical Record maintained in 05 PCP Classes	2	
4.	Use of practical tools	2	
5.	Participation with Peer-Group and Tutor	2	
<b>Total</b>		<b>10</b>	

#### **II. Marks Distribution in Summative Assessment (6<sup>th</sup> Final PCP Class):**

<b>Sl.</b>	<b>Criteria for Assessment</b>	<b>Marks</b>	<b>Remarks</b>
1.	Two practicals from Core Modules (Modules 1 to 6) (Both should not be from the same module)	$2\frac{1}{2} \times 2 = 5$	Time of 3 hours will be allowed for the final examination.
2.	One practical from Optional Module (Module 7A or 7B )	$2 \times 1 = 2$	
	Viva-Voice	3	
<b>Total</b>		<b>10</b>	

**Note:** The total (Formative and Summative Assessments) weightage is 20 marks. In award list, the marks obtained by the learner, both in Formative and Summative Assessments are to be mentioned clearly and the final figure is the sum of the marks of Formative and Summative Assessments.

#### **4. Preparations for PCP Practical Sessions:**

- (i) The Centre Superintendent and Tutor must read the instructions, mentioned in the Guidelines for practical PCPs.
- (ii) Check and arrange the materials, tools, equipment, visits etc. that will be needed in the Practical PCP sessions in advance.
- (iii) Learners are informed about the schedule of Practical PCP sessions. Practicals may be arranged in groups of learners.
- (iv) The attendance sheet must be properly maintained in each Practical PCP class.
- (v) The award list must be filled up as per the given assessment criteria.
- (vi) The techniques of group work may be followed in Practical PCP sessions.
- (vii) Learners will be asked to bring the practical record book in each class.
- (viii) Each learner is expected to maintain it as per the instructions given in the practical manual.

#### **List of Practicals**

##### **FIRST PCP**

<b>Practical No.</b>	<b>Module No.</b>	<b>Practical Activity</b>
1.	1	Construction of a simple and clear message
2.	1	Observation of non verbal communication in the print media
3.	2	Cultivating the habit of newspaper reading and analyzing a newspaper
4.	2	Preparation to conduct an interview

##### **SECOND PCP**

<b>Practical No.</b>	<b>Module No.</b>	<b>Practical Activity</b>
5.	3	Differentiation between the spoken word used in radio and the written word used in print media
6.	3	Identification of different formats of radio programmes
7.	4	Differentiation between television and print as two different mediums of mass communication
8.	4	Categorization of television channels



### **THIRD PCP**

<b>Practical No.</b>	<b>Module No.</b>	<b>Practical Activity</b>
9.	5	Identification of different form of advertisements in the print media
10.	5	Observation of activities involved in product public relations

### **FOURTH PCP**

<b>Practical No.</b>	<b>Module No.</b>	<b>Practical Activity</b>
11.	6	Accessing facilities available on the internet
12.	6	Opening an e-mail account

### **FIFTH PCP**

<b>Practical No.</b>	<b>Module No.</b>	<b>Practical Activity</b>
13.	7A	Communicating effectively through traditional media
14.	7A	Identifying a traditional media form and its function in society
15.	7B	Making a photography
16.	7B	Preparing a photo feature



**Senior Secondary Level**  
**DATA ENTRY OPERATIONS (336)**  
**Practical Examination**

1. **Objectives:** Data Entry Operations is a practical oriented subject. The purpose of introducing Formative and Summative Assessments in practical PCP is to encourage learners' involvement and active participation in PCP classes as well as continuous assessment which leads to learning.

2. **Implementation**

The Computer Lab should have at least 10 – 15 working computers of configuration to the need of the syllabus. In all the computers, required software and Internet connection must be installed. One working Network printer should be there in the lab.

The practical activities are to be conducted in 5 PCP sessions, at the study centre. These will be assessed through Formative (Continuous) Assessment. The Sixth PCP session is reserved for final examination that will be assessed through Summative (Final) Assessment at the study centre. The dates for the practical examination (Final) will be notified by NIOS in the examination date sheet. 50% weightage is for each of Formative (Continuous) and Summative (Final) Assessments. The maximum mark for Practical in Data Entry Operations is 60. The distribution of activities in 05 PCPs is as follows:

**First PCP Practical**

- Orientation of the learners about the distribution of activities to be performed and allocation of marks for both the Formative and Summative Assessments.
  - (2) Write down the following details.
    - (i) Configuration of your system
    - (ii) RAM Capacity
    - (iii) Hard disk Capacity
    - (iv) Different drives available on your system.
    - (v) At least 5 features of any OS being used at your study center/home.
  - (3) Enter your Bio-data with the following details in Times New Roman, font size 10 and save this file with 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 :

Perform the following activities on the above file:

- Copy the file on CD and take the CD out
  - Delete the file from the computer system
  - Insert the CD again and scan it for virus.
- (4) Open the file, "Details" and perform the following activities:
- 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 whole document and increase its font size by 2 points.
  - E. Make the line spacing 2.0. (whole document)
  - F. Type 'Bio-Data' at the top of the document and make it Bold, Center aligned, Underlined. Set the font size to 14.
  - G. Type the following at the end:  
 Name: \_\_\_\_\_ Place: \_\_\_\_\_ Date: \_\_\_\_\_
- (5) Type a document of at least 2 pages on any topic, with the following specifications:
- a. Line spacing 1.5
  - b. Insert space after every paragraph.
  - c. Include at least one numbered list and one bulleted list.
  - d. Perform spellcheck and grammar check on the whole document
  - e. If there is any name in the document, it should not appear as a misspelled word.
  - f. Title of the document should also be set as the page header.
  - g. Footer should include Page number and your name.
  - h. Left margin: 1.5", Right margin: 0.5", Top margin: 1", Bottom Margin: 1"

## Second PCP Practical

- (1) Create a time table, using table in MS Word.
- (2) Create a Data source having the following details:

Roll No	Email Id	Postal Address
1111	one@abc.com	301, Vasant Kunj
2222	two@asc.com	23, Vivek Vihar
3333	three@asc.com	51, Saket
4444	four@asc.com	342, Malviya Nagar

Save this file as 'Mydata'.

- (3) With the help of Mail Merge facility, use the file 'Invitation' as Main Document, 'Invitees' as Data Source and merge them with the following format:

<Title><Firstname><LastName>

<Designation>

<Institute>

<City>

Save it as 'Invitation Letter' in the folder 'abc'. Take a print out of this Merged Document (invitation letter).

- (4)
  - (i) Create a workbook containing two worksheets.
  - (ii) Save the workbook with the name 'Marksheet
  - (iii) Rename the worksheets as 'DataSheet' and 'ChartsSheet',
  - (iv) Enter the data in 'DataSheet' as follows.

	A	B	C	D	E	F
	Name of Student	Roll No.	Hindi	English	Computer	Mathematics
1	Reena	1001	60	85	72	85
2	Ram	1002	70	79	65	72
3	Mehra	1004	82	74	81	85
4	Vipin	1005	72	74	71	76
5	Vijay	1006	64	69	67	65

## Third PCP Practical:

- (1) Create a PowerPoint presentation using the following slides and save this with the name 'My School'. Apply animation style to your PowerPoint presentation. Insert Slide numbers and Date in all the slides.

- (2) Title Slide, Introduction Slide, At least one slide each for (i) School Achievements in Academics, (ii) School Achievements in Sports, (iii) School Achievements in Extra-Curricular activities, Credits slide and Thank You slide.
- (3) Create your e-mail ID in at least two free e-mail Service Providers like Yahoo, Gmail, Hotmail, etc. Send a mail from one ID to the other. Then, from the second ID send reply to the first. Include an attachment with the reply.
- (4) Send a letter to your friend inviting him to attend a family function from your new e-mail ID.

**Fourth PCP Practical:**

- (1) Search websites of popular newspapers and download important events related to sports on a particular day.
- (2) Visit to NIOS website: [www.nios.ac.in](http://www.nios.ac.in). Try to find and open the link for ‘MuktaVidyaVani’ in the NIOS website. Take the print out of today’s MuktaVidyavani schedule.
- (3) Using a Spreadsheet program, enter the following data in a worksheet. Save it as ‘Result’ in the folder, ‘abc’, and take its print out.

<b>A</b>	<b>B</b>	<b>C</b>
<b>Employee Name</b>	<b>Employee ID</b>	<b>Salary</b>
Ajay	501	16000
Ankita	503	19000
Rakesh	504	16800
Reema	505	20020

Insert one column and one row in the above worksheet, as per the following:

- (i) Column to be inserted between B and C:
  - (ii) Data for New column  
Date of Birth  
29-10-1986  
30-07-1991  
05-03-1984  
08-10-1986
  - (iii) Calculate total salary of all the employees, using appropriate formula and enter it in row 6 and giving the row heading, ‘Total Salary’.
  - (iv) Draw a pie chart for the above data.
- (4) The following data is to be entered in an Excel sheet and suitable graphs are to be inserted to represent the data.

## Class X Result Analysis

### ENGLISH

GP	F	M	Total
10	4	7	11
9	8	11	19
8	25	24	49
7	21	22	43
6	12	25	37
5	10	13	23
4	2	5	7
—	0	0	0
<b>Total</b>	<b>82</b>	<b>107</b>	<b>189</b>

### SCIENCE

GP	F	M	Total
10	9	15	24
9	9	18	27
8	18	19	37
7	18	17	35
6	9	21	30
5	12	14	26
4	7	3	10
—	0	0	0
<b>Total</b>	<b>82</b>	<b>107</b>	<b>189</b>

### HINDI

GP	F	M	Total
10	4	7	11
9	12	18	30
8	29	16	45
7	15	27	42
6	14	29	43
5	8	9	17
4	0	1	1
—	0	0	0
<b>Total</b>	<b>82</b>	<b>107</b>	<b>189</b>

### SCIENCE

GP	F	M	Total
10	7	13	20
9	12	19	31
8	22	15	37
7	13	15	28
6	11	27	38
5	11	13	24
4	5	5	10
—	1	0	1
<b>Total</b>	<b>82</b>	<b>107</b>	<b>189</b>

### MATHS

GP	F	M	Total
10	6	16	22
9	9	13	22
8	15	16	31
7	15	13	28
6	16	19	35
5	9	17	26
4	10	11	21
—	1	2	3
<b>Total</b>	<b>81</b>	<b>107</b>	<b>188</b>

#### Abbreviations Used

<i>GP</i>	<i>Grade Point</i>
<i>F</i>	<i>Female</i>
<i>M</i>	<i>Male</i>

### Income Expenditure statement

Income		Expenses	
Fee	24000000	Salaries	22000000
Annual Charges	1500000	Maintenance	1500000
External Exams	20000	Stationery	50000
PTA Fund	100000	Others	1900000
<b>Total</b>	<b>25620000</b>	<b>Total</b>	<b>25450000</b>
Balance:	25620000-25450000 = 270000		

#### Fifth PCP Practical:

- (1) As a part of its 'Healthy India Drive', an NGO, Unnat Bharat Nirman, has decided to educate people on infectious diseases. For this, they want to create a brochure and a presentation. Your job is to create the brochure and the presentation using Word, Excel, and PowerPoint.

**Word:** The brochure is to be designed in Word. The outlines of the brochure are as follow: NGO name and Logo → Name of the campaign (Healthy India) → Statements to convince that prevention is better than cure → Names of infectious diseases, along with some pictures → How the diseases spread → Preventive measures to stop the spread of diseases. The brochure will also have the graph(s) that you prepared in Excel.

The document should contain suitable a header and a footer.

The brochure should be of at least 4 pages with the following specifications:

Margins: Top – 1”, Bottom – 1”, Left = 1.5”, Right – 0.7”

Line Spacing: 1.5;

Paragraph Spacing – Space above and below each paragraph.

- (2) **Excel:** Gather data (from Internet, Hospitals, or any other source) on the major fatal infections. Enter this data in an Excel spreadsheet and prepare suitable graphs in Excel.
- (3) Open the NIOS website and make a list of online courses available under academic / vocational.
- (4) (i) Enter the data of expenditure on various items in your family in the following format in a worksheet and save it in the name, 'Expenditure'.

Grocery	30%
Milk	25%
Vegetables	15%
Clothes	20%
Miscellaneous	10%

- (ii) Plot a pie chart based on the data in the file, 'Expenditure'. Save the file
- (iii) Open the file, 'Expenditure' and plot a bar chart. Save the file.

### 3. Scheme of Practical Examination:

The following scheme of practical examinations is to be followed as per the details given below:

- The conduct of practical examinations is mainly linked with practical PCP sessions and there are 06 practical sessions which are compulsory.
- The initial five (05) PCP practicals are assessed through Formative (Continuous) Assessment and will be utilized for learning.
- The final (6<sup>th</sup> PCP) practical will be utilized for Summative (Final) Assessment for the practical examination.
- A weightage of 50% of the marks will be awarded for Formative Assessment (05 practical classes) and 50% marks for the 6<sup>th</sup> practical class for Summative Assessment.

#### I. Marks Distribution in Formative Assessment (05 PCP Sessions):

S.No.	Criteria for Assessment	Marks	Remarks
1.	Regular Participation in 05 PCP Classes	10	The five boxes under Formative Assessment in the award list will be filled up based on these 04 criteria.
2.	Activities Performed in 05 PCP Classes	10	
3.	Practical Record maintained in 05 PCP Classes	5	
4.	Participation with Peer-Group and Tutor	5	
	<b>Total</b>	<b>30</b>	

#### II. Marks Distribution in Summative Assessment (6<sup>th</sup> Final PCP Class):

S.No.	Criteria for Assessment	Marks	Remarks
1.	Assessment of activity performed (For two activities)	20	Time of 2 hours will be allowed for the final examination.
2.	For taking the print outs of the output	5	
3.	Viva-Voce based on the activities	5	
	<b>Total</b>	<b>30</b>	

**Note:** The total (Formative and Summative Assessments) weightage is 60 marks. In the award list, the marks obtained by the candidate, both in Formative and Summative Assessments are to be mentioned clearly and the final figure is the sum of the marks of Formative and Summative Assessments.

### 4. Preparations for PCP Practical Sessions:

- (i) The Centre Superintendent and Tutor must read the instructions mentioned in the Guidelines for practical PCPs.
- (ii) Check and arrange the materials, tools, equipment etc. that will be needed in the Practical PCP sessions in advance.



- (iii) Learners are informed about the schedule of Practical PCP sessions. Practicals may be arranged in groups of learners.
- (iv) The attendance sheet must be properly maintained in each Practical PCP class.
- (v) The award list must be filled up, as per the given assessment criteria.
- (vi) The techniques of group work may be followed in Practical PCP sessions.
- (vii) Learner shall be asked to bring the practical record book in each class. Each learner is expected to maintain it as per the instructions given in the practical manual.

### 5. Precautions (DOs and DON'Ts)

Discuss the following points with the learners, regarding preparing the practical record book:

- (i) Throughout the practical note book, the learners should follow the same style. Ask them to use a good pen and a sharp black pencil. It is recommended that the right hand page should be written in blue ink and the left hand page with a black pencil.

The recommended style of writing is shown below:

Left hand page	Right hand page
Table, Chart and print out of the output screen	Title of the Exercise, Date, Exercise No. Interpretation and Conclusion

- (ii) Each experiment should start from a new page.
- (i) Mistakes should be crossed out with a single line so that they can still be read. The correct statement should be rewritten in its place.
- (ii) No page should be torn-off from the practical record book.
- (iii) Before going to take Practical Examination, get all the exercises of Practical Record Book signed by the tutors.

### 6. Computer Lab Rules (Do's and Don'ts)

- The computers in the lab are to be used for academic purposes only.
- Uploading or downloading of any software without permission is strictly prohibited
- Do not make any changes to the desktop or to the installed software.
- Playing computer games is strictly prohibited.
- Report problems, 'if any' to the instructor.
- Please Logoff when you leave.

**Note:** Material for practical examination will be provided by the centre superintendant at the practical examination centre, as per the requirement of the activities.



**Senior Secondary Level**  
**LIBRARY AND INFORMATION SCIENCE (339)**  
**Practical Examination**

**1. OBJECTIVES**

Practicals are essential for learning and understanding any science subject. Similarly, study of Library and Information Science subjects requires practical training. Practical imparts hands-on experience and help the learner to learn quickly and understand the concept more clearly. Library and Information Science is a subject which can be best understood by field studies, like exploring different types of institutions providing information and practical exercises to manage and organize information resources held by these institutions.

**2. IMPLEMENTATION**

To impart necessary practical skills, 15 practicals (12 from core modules and 3 from any one of the two optional modules 5A or 5B) have been identified. Students have to perform 12 practicals from four core modules listed in sections A, B, C, and D, and 3 practicals from one of the optional modules listed in sections **E** and **F (Appendix A)**. The list covers all the major aspects of Library and Information Science Curriculum. All 15 practicals are compulsory.

15 practicals listed in Appendix A have to be performed during Personal Contact Programme. Facility for carrying out practicals and their evaluation is to be provided during Personal Contact Programme. Five PCPs are to be used by learners to perform 15 practicals, at least three practicals each day. A learner has to prepare a daily record of the practicals carried out and get it evaluated. The Initial 5 PCPs are compulsory for the learner and will be utilized for Learning and Formative Assessment, failing which learner will not be eligible to appear in the final (6<sup>th</sup> PCP) which will be utilized for Summative Assessment for conducting final practical examination. The dates for the final practical examination (6<sup>th</sup> PCP) will be notified by NIOS in the examination date sheet. 50% weightage will be for each of Formative (Continuous) and Summative (Final) Assessments. The maximum marks for practical in Library and Information Science is 20. The *distribution of activities* in 05 PCPs is as follows:

**In the First PCP**, the Tutor will arrange a visit to the AI Library for the learners and an Information Centre in the nearby area of the AI. The learners will observe the library and Information centre features, services and note down the differences between library and Information Centre from the point of view of services provided by Library, Information centres and an Automated Library. The Tutor will discuss and evaluate the observations noted down in the practical book by the learner.

**In the Second PCP**, the Tutor will apprise the learners about the primary and secondary sources of information, abridged and unabridged dictionaries. He will apprise also the learners regarding the method to use sources of information to answer the reference queries. He will ask the learners to identify primary and secondary sources of information on the basis of their features. Learners will perform the practicals in section B of **Appendix A**.

**In the Third PCP** the learners will be appraised by the Tutor about the main classes of Dewey Decimal Classification, Colon Classification and Cataloguing and shelving of books according to classified arrangement of books in a library. Learners will perform the practicals in section C of **Appendix A**.

**In the Fourth PCP**, the learners will be introduced to basic routines of manual as well as computerized circulation services of a library, how to carry out literature search in a library catalogue and online databases and compile a subject bibliography on the basis of searches made using library catalogue and online databases. Learners will perform the practicals in section D of **Appendix A**.

**In the Fifth PCP**, the learners will be taught about practicals from Module 5A or 5B, as per the option of learners. Those who have opted for module 5A will be introduced to the Accession Register and process of accessioning, Career in Librarianship and periodical publications and others will be taught about types of indexes, web-based search and navigational search. Learners will perform 3 practicals either from section E or section F of Appendix A.

**The sixth PCP** will be the final practical examination. The scheme for practical examination is given below.

### 3. SCHEME OF PRACTICAL EXAMINATION:

The following scheme of practical examinations is to be followed, as per the details given below:

- The conduct of practical examinations is mainly linked with practical PCP sessions and there are 06 practical sessions are compulsory.
- The initial five (05) PCP practicals are assessed through Formative (Continuous) Assessment and will be utilized for learning.
- The final (6<sup>th</sup> PCP) practical will be utilized for Summative (Final) Assessment for practical examination.
- A weightage of 50% of the marks will be awarded for Formative (05 practical classes) Assessment and 50% marks for the 6<sup>th</sup> practical class for Summative Assessment.

#### **Marks Distribution in Formative Assessment (05 PCP Sessions):**

S.No.	Criteria for Assessment	Marks	Remarks
1.	Regular Participation in 05 PCP Classes	2	The five boxes under Formative Assessment in the award list will be filled up based on these 05 criteria.
2.	Activities Performed in 05 PCP Classes	2	
3.	Practical Record maintained in 05 PCP Classes	2	
4.	Use of practical tools	2	
5.	Participation with Peer-Group and Tutor	2	
	<b>Total</b>	<b>10</b>	

### Marks Distribution in Summative Assessment (6<sup>th</sup> Final PCP Class):

S.No.	Criteria for Assessment	Marks	Remarks
i.	a) Two practicals from Core Modules (Modules 1 to 4)	$2\frac{1}{2} \times 2 = 5$	Time of 3 hours will be allowed for the final examination.
	b) (Both should not be from the same module)	$2 \times 1 = 2$	
	One practical from Optional Module (Module 5A or 5B)		
ii.	Viva-Voce	3	
	<b>Total</b>	<b>10</b>	

**Note:** The total (Formative and Summative Assessments) weightage is 20 marks. In the award list, the marks obtained by the learner, both in Formative and Summative Assessments are to be mentioned clearly and the final figure is the sum of the marks of Formative and Summative Assessments.

#### 1. Preparations for PCP Practical Sessions:

- (i) The Centre Superintendent and Tutor must read the instructions mentioned in the Guidelines for practical PCPs.
- (ii) Check and arrange the materials, tools, equipment etc. that will be needed in the Practical PCP sessions in advance.
- (iii) Learners are informed about the schedule of Practical PCP sessions. Practical may be arranged in groups of learners.
- (iv) The attendance sheet must be properly maintained in each Practical PCP class.
- (v) The award list must be filled up, as per the given assessment criteria.
- (vi) The techniques of group work may be followed in Practical PCP sessions.
- (vii) Learners will be asked to bring the practical record book in each class. Each learner is expected to maintain it as per the instructions given in the practical manual.

### APPENDIX A

#### List of Practicals:

##### Section A

Practical No.	Module No.	Practical
1.	1	To visit a library and an information centre.
2.	1	To visit an automated library and record its features
3.	1	To identify services of library and information centre

**Section B**

<b>Practical No.</b>	<b>Module No.</b>	<b>Practical</b>
1.	2	To identify primary and secondary sources of information
2.	2	To differentiate between abridged and unabridged dictionaries
3.	2	To find answers of reference queries

**Section C**

<b>Practical No.</b>	<b>Module No.</b>	<b>Practical</b>
1.	3	To identify subjects from Dewey Decimal Classification(DDC) and Colon Classification numbers(CC)
2.	3	To search and understand different components of manual and computerized catalogues.
3.	3	To understand classified arrangement of books on the shelves and shelving of books.

**Section D**

<b>Practical No.</b>	<b>Module No.</b>	<b>Practical</b>
1.	4	To understand basic routines of manual as well as computerized circulation services.
2.	4	To compile a subject bibliography
3.	4	To carry out literature search using online databases.

**Section E**

<b>Practical No.</b>	<b>Module No.</b>	<b>Practical</b>
1.	5(A)	To learn accessioning of documents
2.	5(A)	To find and record educational qualifications for 3 different posts of library professionals from any source of information.
3.	5(A)	To find out Periodicity, Volume, Issue Number, Publisher and ISSN of 5 periodicals.

**OR**

**Section F**

<b>Practical No.</b>	<b>Module No.</b>	<b>Practical</b>
1.	5(B)	To identify different types of indexes
2.	5(B)	To understand and practice web based search techniques
3.	5(B)	To carry out Navigational search



**Senior Secondary Level**  
**PHYSICAL EDUCATION (373)**  
**Practical Examination**

**1. Objectives:**

Physical Education and Yog is a subject at senior secondary level connect theory with practical. Practical aspects of Physical Education & Yog covers health related fitness, motor fitness and skill testing of different games, yog asana and other aspects of yog such as yogic kriyas, tranquillizing and cooling pranayama and meditation. Such practical will help to develop skills, knowledge, values and attitude towards student's health and fitness. During the practical students will be able to perform yogic practices and assess their own fitness level and skill related fitness to maintain healthy life style. The purpose of introducing Formative and Summative Assessments in Practical PCP is to ensure learners' involvement and active participation in PCP classes as well as continuous assessment which leads to learning.

**2. Implementation:**

There are 33 (thirty-three) practical which are listed in 5 sections mentioned in the practical manual of the Physical Education and Yog (373). These practicals are to be conducted in 5 PCP sessions, as given below, at the study centre. These will be assessed through Formative (Continuous) Assessment. The Sixth PCP is reserved for the final examination that will be assessed through Summative (Final) Assessment at the Study Centre. The dates for the practical examination (Final) will be notified by NIOS in the examination date sheet. 50% weightage is for each of Formative (Continuous) and Summative (Final) Assessments. The maximum mark for Practical in Physical Education and Yog is 30. The distribution of activities in 05 PCPs are as follows:

**First PCP Practical**

- (i) Orientation of learners about distribution of activities to be performed and allocation of Marks for both Formative (Continuous) and Summative (Final) assessment.
- (ii) Learners may be introduced to the practical syllabus and patterns of practical examination in Physical Education and Yog at Senior Secondary level.
- (iii) In this PCP, the learners may be given a brief idea about the execution, measurement and evaluation process of all components of Health Related Fitness Tests.

- (iv) The Health related fitness will cover Muscular Strength, Muscular Endurance, Flexibility, Cardio-Vascular Endurance and Body Composition.

**Second PCP Practical:**

- (i) Orientation of learners about the execution, measurement and evaluation process of all components of Physical and Motor Fitness Tests.
- (ii) The Physical and Motor Fitness components will cover Power, Speed, Agility, Balance, and Reaction.

**Third PCP Practical:**

- (i) Learners will be introduced about the Skills of Team and Individual Games.
- (ii) The learners will also be taught about the different Skill tests to measure general playing ability of players.
- (iii) Learners will perform skill tests of Basketball, Badminton, Football, Volleyball and Hockey.

**Fourth PCP Practical:**

- (i) Orientation of the learners about Sukshma Vyayama.
- (ii) The learners will be taught about the Asana (Poses) such as Surya Namaskar, Standing Asanas, Forward Bending Asanas, Backward Bending Asanas, Inverted Asanas, Twisting Asanas, and Balancing Group of Asanas.
- (iii) Learners will also perform Asana (Poses) such as Surya Namaskar, Standing Asanas, Forward Bending Asanas, Backward Bending Asanas, Inverted Asanas, Twisting Asanas, and Balancing Group of Asanas.

**Fifth PCP Practical:**

- (i) Orientation of the learners about Shatkarma such as Jal Neti, Kunjal Kriya, Kapalabhati Kriya, and Tratak Kriya.
- (ii) The learners will be taught about Tranquilizing and Cooling Pranayama, Hasta Mudra, Bandh (Locks) and Meditation.
- (iii) The learners will also perform Shatkarma such as Jal Neti, Kunjal Kriya, Kapalabhati Kriya, and Tratak Kriya.
- (iv) The learners will also perform Tranquilizing and Cooling Pranayama, Hasta Mudra, Bandh (Locks) and Meditation.

**3. Scheme of Practical Examination:**

The following scheme of practical examination will be followed as per the details given below:

- (i) The conduct of practical examinations is mainly linked with practical PCP. There are 06 practical sessions which are made compulsory.

- (ii) The initial five (05) PCP practical have to be assessed through Formative Assessment (Continuous) and will be utilized for learning.
- (iii) The final (6<sup>th</sup> PCP) practical will be utilized for Summative (Final) Assessment for practical examination.
- (iv) A weightage of 50% of the marks will be awarded for Formative Assessment (05 practical classes) and 50% marks for the 6<sup>th</sup> practical class for Summative Assessment.

**A. Marks Distribution in Formative Assessment (05 PCP Sessions):**

S.No.	Criteria for Assessment	Marks	Remarks
1.	Regular Participation in 05 PCP Classes	3	The five boxes under Formative Assessment in the the award list will be filled up based on these 05 criteria.
2.	Activities Performed in 05 PCP Classes	3	
3.	Practical record maintained in 05 PCP Classes	3	
4.	Use of practical instruments/equipment	3	
5.	Participation with Peer-Group and Tutor	3	
<b>Total</b>		<b>15</b>	

**B. Marks Distribution in Summative Assessment (6<sup>th</sup> Final PCP Class):**

S.No.	Criteria for Assessment	Marks	Remarks
1.	Assessment of activity performed (Two activities out of given threeactivities)	2x5=10	Time of 3 hours will be allowed for the final examination.
2.	Viva-Voce based on the activities	5	
<b>Total</b>		<b>15</b>	

**4. Preparations and Precautions for PCP Practical Sessions:**

- (i) The Centre Superintendent and Tutor must read the instructions mentioned in the Guidelines for practical PCPs.
- (ii) The attendance sheet must be properly maintained in each Practical PCP class.
- (iii) The award list must be filled up as per the given assessment criteria.
- (iv) The tutor as well as the learner must read the instructions given in the practical manual.



- (v) The tutor must check and arrange the materials, tools, equipment etc. that will be needed in the practical PCP sessions in advance.
- (vi) The technique of group work may be followed in Practical PCP sessions. One group can do one practical and another group another practical, then turn wise.
- (vii) Whenever necessary, give them a demonstration about the practical, e.g. accurate performance of sit-ups, performing kunjaj kriya etc.
- (viii) Learners are informed about the schedule of Practical PCP sessions in advance.
- (ix) Learners should be asked to bring their equipment like hockey stick, yoga mat, football etc.
- (x) Learners shall be asked to bring the practical record book in each class. Each learner is expected to maintain it, as per the instructions given in the practical manual. It will be used in the final examination.
- (xi) They should be told to maintain cleanliness and follow safety measures.
- (xii) Before going for Practical Examination, get all the exercises (33 Practical) of Practical record book signed by the tutor.

## **5. Field Rules**

- (i) Learner should be in proper sports kit.
- (ii) Warm up should be done before the practical examination and cooling down activities must be performed after the practical examination is over.
- (iii) Standard equipment must be used to conduct the practical examination.
- (iv) Outdoor field surface must be levelled and proper layout as mentioned in practical manual should be marked.
- (v) Certified first aider can be present at the place of practical examination.
- (vi) Learner should carry water and towel while coming for practical examination.
- (vii) Learners should take meal well before 3 hours from the commencement of practical e

## **6. List of Activities**

There are 33 practical exercises in the Physical Education and Yog Practical Manual. These 33 activities are distributed under five sections.

### **Section 1:**

This section will cover Health related Fitness Components (Practical 1 to Practical 5) such as Muscular Strength, Muscular Endurance, Flexibility, Cardio-Vascular Endurance and Body Composition.

**Section 2:**

This section will cover Physical and Motor Fitness Components (Practical 6 to Practical 10) which are- Power, Speed, Agility, Balance, and Reaction.

**Section 3:**

In section 3 skill tests of Basketball, Badminton, Football, Volleyball and Hockey (Practical 11 to Practical 15) will be performed.

**Section 4:**

This section will talk about the Asana (Poses) (Practical 16 to Practical 24) such as Surya Namaskar, Standing Asanas, Forward Bending Asanas, Backward Bending Asanas, Inverted Asanas, Twisting Asanas, and Balancing Group of Asanas.

**Section 5:**

Section 5 will be devoted to Shatkarma such as Jal Neti, Kunjal Kriya, Kapalabhati Kriya, and Tratak Kriya as well as Tranquilizing and Cooling Pranayama, Hasta Mudra, Bandh (Locks) and Meditation (Practical 25 to Practical 33).



**Senior Secondary Level**  
**EARLY CHILD CARE AND EDUCATION (376)**  
**Practical Examination**

**1. Objectives:**

The purpose of the ECCE course is not only to acquaint learners with theoretical knowledge but also to provide them an opportunity to link it to the actual environment of ECCE. These activities help learners to link theoretical knowledge with the actual ECCE environment, fostering problem-solving skills and practical application. Through hands-on experiences like visiting ECCE centres, interacting with parents and children, and engaging in creative activities, learners develop a deeper understanding of young children and the workings of an ECCE centre. The introduction of formative and summative assessments in practical sessions ensures active participation and continuous learning.

**2. Implementation:**

There are 22 activities divided into five categories in the Practicum Manual of ECCE (376). The five categories are Observation, Family Practices, School Records, Infrastructure & Facilities in an ECCE Centre, and ECCE Staff & Programme.

These activities will be conducted in 5 PCPs at the Study Centre. The sixth PCP is reserved for the final practical examination. These will be assessed through Formative (Continuous) Assessment. The Sixth PCP is reserved for the final examination that will be assessed through Summative (Final) Assessment at the Study Centre. The dates for the practical examination (Final) will be notified by NIOS in the examination date sheet. Moreover, 50% weightage is for each Formative (Continuous) and Summative (Final) Assessments. The maximum marks for Practical in ECCE are 20 (10+10). The distribution of activities in 05 PCPs is as follows:

**Distribution of Activities in 05 Practicum Sessions:**

**First PCP Practical:**

1. Orientation of the learners about the distribution of activities to be performed and allocation of Marks for both the Formative (Continuous) and Summative (Final) Assessments

2. Orientation of the learners about all the practicum activities under to observation.
3. Learners have to choose **any one activity** to be performed from the following observation activities (Practicum 1 to 4 of Practicum Manual) as:
  - Designing a format for observation.
  - Observations of five-month-old infant to study the milestones achieved.
  - Observations of a toddler at outdoor play
  - Observation of a five-year-old child at indoor play

### **Second PCP Practical:**

1. Orientation of the learners about all the practicum activities under to family practices.
2. Learners have to choose **any one activity** to be performed from the following family practices activities (Practicum 5 to 8 of Practicum Manual) as:
  - Design a questionnaire to be used to interview parents/caregiver of a toddler regarding development in any one domain.
  - Prepare a questionnaire with eight to 10 questions to gather information about feeding practices of infants and toddlers.
  - Prepare a questionnaire with eight to 10 questions to gather information about child care routines and practices of children in the age group of four to five years.
  - Prepare a list of innovative play activities and materials used by children in your neighbourhood/family.

### **Third PCP Practical:**

1. Orientation of the learners about all the practicum activities under the school records.
2. Learners have to choose **any one activity** to be performed from the following school records activities (Practicum 9 to 12 of Practicum Manual) as:
  - Visit the neighbourhood ECCE centre and study the children's and teacher's records maintained by them. Write a report of 150 words of your observation.
  - Design a child's cumulative record/child's profile record based on your observation during the visit to an ECCE centre.
  - Design a child's admission record based on your observation during the visit to an ECCE centre.
  - Design a child's portfolio based on your observation during the visit to an ECCE centre.

### **Fourth PCP Practical:**

1. Orientation of the learners about all the practicum activities under the infrastructure and facilities of an ECCE Centre.
2. Learners have to choose **any one activity** to be performed from the following infrastructure and facilities of an ECCE Centre activities (Practicum 13 to 18 of Practicum Manual) as:
  - Design an assessment sheet for easy and quick assessment of requisite infrastructure of an ECCE Centre
  - Assessment of Space Management of an ECCE Centre
  - Assessment of outdoor play equipment of an ECCE Centre
  - Assessment of indoor play equipment of an ECCE Centre
  - Assessment of water and toilet facilities of an ECCE Centre
  - Assessment of air, light and ventilation facilities of an ECCE Centre

### **Fifth PCP Practical:**

1. Orientation of the learners about all the practicum activities under the ECCE staff and programme.
2. Learners have to choose **any one activity** to be performed from the following ECCE staff and programme activities (Practicum 19 to 22 of Practicum Manual) as:
  - Draw up a set of questions to be asked during the selection interview of the teacher
  - Draw up a set of questions to be asked during the selection interview of the Centre In-charge.
  - Draw up a set of questions to be asked during the selection interview of the Centre Helper.
  - Visit the neighborhood ECCE Centre and note the programme being followed. Design a three-hour
  - ECCE programme to be followed in a preschool.

### **3. Scheme of Practical Examination:**

The practical examination follows the scheme below:

- The 5 initial sessions focus on formative (continuous) assessment.
- The 6th session is reserved for summative (final) assessment.
- 50% of the total marks are awarded for formative assessment and 50% for summative assessment.

### Marks Distribution for Formative Assessment (05 Sessions):

S.No.	Criteria for Assessment	Marks	Remarks
1.	Regular Participation in 05 PCP Sessions	2	The six boxes under Formative Assessment in the award list will be filled up based on these 05 criteria.
2.	Activities Performed in 05 PCP Sessions	2	
3.	Practical Record Maintenance	2	
4.	Presentation of Practicum Activities	2	
5.	Participation in Peer Group and Interaction with Tutors	2	
<b>Total</b>		<b>10</b>	

### Marks Distribution for Summative Assessment (6th Session):

S.No.	Criteria for Assessment	Marks	Remarks
1.	Portfolio	3	Time of 3 hours will be allowed for the final practical examination
2.	Assessment of any two Activities from Assigned Categories	2+2	
3.	Viva-Voce Based on Activities	3	
	<b>Total</b>	<b>10</b>	

## 4. Format of the Practicum Activity

As far as possible, all practicum activities should be presented in the format given below. The format may include the following information:

- **Aim:** Define the scope of the activity
- **Introduction:** Describe the relevance of practical activity to the theoretical background
- **Objectives:** Relate to the outcomes of practical activity
- **Materials Required:** List the various materials that need to be assembled to carry out the activity successfully
- **Method:** List the steps to be followed to complete the activity
- **Observation:** Record the observation in detail
- **Conclusion/Discussions/Interpretations:** Justify the relationship between aim of the activity and the results obtained

## 5. Directions to Conduct the Activity

- Formulate the objectives of the activity carefully. This will guide you to understand what is required to be done.
- List carefully and assemble required materials before starting the activity.
- Write the methodology carefully and follow the steps accurately.
- After each step, note down the observation, so that required information is available accurately, with no gaps.
- Observe all prescribed precautions, or else the outcome or results will not be accurate.
- Carry and refer the manual while conducting the practicum activities.

## 6. Maintenance of Record Book/Portfolio

Each practical is to be recorded in the Record Book in the format below:

- Aim of the activity
- Materials required
- Method/Procedure
- Observations made
- Conclusions/Interpretations
- Precautions observed

## 7. Examples of the Activities for final practical examination:

The activities are distributed into five categories:

### A. OBSERVATION

- Design a format to record the observations of children. Observe a child/children in your neighborhood/family for 20 minutes in the settings listed below. Prepare a report of each your observations in 150 words.
  - **Infant of five months:** Observe the milestones achieved.
  - **Toddlers at outdoor play:** Comment on the interaction of the toddler with other children and the type of play indulged in.
  - **Five year old child at indoor play:** Comment on the interaction and type of play indulged in.

## **B. FAMILY PRACTICES**

1. Design a questionnaire to be used to interview parents of a toddler regarding development in any one domain.
2. Prepare a list of eight to 10 questions to gather information of family practices with regard to:
  - Feeding practices of infants and toddlers
  - Childcare routines and practices of children in the age group of four to five years
3. List of innovative play activities and materials used by children in your neighbourhood/ family.

## **C. SCHOOL RECORDS**

1. Visit the neighbourhood ECCE centre and study the children's and teacher's records maintained by them. Write a report of 150 words on your observation.
2. Design the following records based on your observation during the above visit:
  - Child's cumulative record/Child's profile record
  - Child's admission record
  - Child's portfolio

## **D. INFRASTRUCTURE AND FACILITIES IN AN ECCE CENTRE**

1. Design an assessment sheet for easy and quick assessment of requisite infrastructure of an ECCE Centre. Using this format, visit the neighbourhood ECCE centre and assess the following:
  - Space Management
  - Outdoor play equipment
  - Indoor play equipment
  - Water and toilet facilities
  - Air, light and ventilation

## **E. ECCE STAFF AND PROGRAMME**

1. Draw up a set of questions to be asked during the selection interview of the following staff:
  - Teacher
  - Centre In-charge
  - Centre Helper
2. Design a three hour ECCE programme to be followed in a preschool after visiting and studying the same in the neighbourhood preschool.





**Senior Secondary Level**  
**NATYAKALA (385)**  
**Practical Examination**

**1. Objectives**

Indian knowledge has a glorious tradition. The history of India has been rich in the creation of knowledge in both philosophical and practical aspects of life. Indian philosophers and scientists have contributed to almost all spheres of life ranging from politics, economy, commerce, astronomy, shipbuilding to art, music, drama, dance etc. According to Indian tradition, Prajapati himself is considered to be the original creator of drama and the art of theater has been given special respect by calling Natyashastra as Natya Veda. On the basis of History, Purana, Natya classical texts and other literary creations and historical evidence, it has been said that the art of theater had developed in India many centuries before Christ, which was passed down from generation to generation by people like acrobats, dancers, bards etc. through singing and playing. In the present times, it is necessary to introduce the present generation to the sublime elements of our ancient knowledge tradition and to preserve and promote this stream of knowledge.

In module, fourfold acting – Angika, Vachika, Aharya and Satvika Abhinaya have been discussed in detail. Under this, special attention has been paid to the practical aspect of acting. Also, the technique of theatre has been explained, as well as the experimental aspect of drama has been explained through the experimental/practical aspect of Mudrarakshasa play.

The goal of implementing formative and summative assessments in practical PCP classes is to encourage learners' involvement and active participation in PCP classes, as well as continuous assessment, which leads to learning.

**2. Implementation**

There are two activities mentioned in the Practical manual of Secondary Course in Natyakala. These activities are divided into 6 PCP sessions of 3 hrs each day for minimum 3 days at the Study Centre. These can be a revision of all the earlier PCP activities and doubts or any queries of the candidate can be clarified. These will be assessed through continuous Assessment. The last PCP is reserved for final examination.

### **First PCP Practical**

- (i) Attendance of all learners is compulsory, since the learner is introduced to the course details.
- (ii) Orientation of learners about distribution of activities to be performed and allocation of Marks for both Formative (Continuous) and Summative (Final) assessment.
- (iii) Learners may be introduced to the practical syllabus and patterns of practical examination in Natyakala at Secondary level.
- (iv) In this PCP, the learners may be given a brief idea about the practical aspects of the following:
  - Introduction of Angika enactment
  - Mukhaja enactment
  - Sharirabhinaya
  - Cheshtakriyabhinaya
  - Samanyabhinaya
  - Abhayantrabhinaya
  - Abhayantrabhinaya.
- (v) Teaching of practical aspects of the angika enactment needs the attention of the learners more serious and sincere.

### **Second PCP Practical**

- (i) In this PCP, the learners may be given a brief idea about the practical aspects of the following:
  - General introduction of Vachika Enactment.
  - General introduction about the Swara, Varna, Kaku, Alankara and Angasa.
  - Vachikabhinaya in Chitrabhinaya and Samanyabhinaya.
- (ii) Teaching of practical aspects of the vachika enactment needs the attention of the learners more serious and sincere.

### **Third PCP Practical**

- (i) In this PCP, the learners may be given a brief idea about the practical aspects of the following:
  - Introduction of Aharya enactment.
  - Methods of Aharya enactment.
  - Pustarachana

- Different methods of alankarana.
  - Angarachana and Sanyukta varnas.
  - Creation of Sanjeeva
  - Importance of in the performance of drama.
- (ii) Teaching of practical aspects of the Aharya enactment needs the attention of the learners more serious and sincere.

#### **Fourth PCP Practical**

- (i) In this PCP, the learners may be given a brief idea about the practical aspects of the following:
- Introduction of enactment.
  - Introduction of rasas.
  - Introduction of bhavas (emotions).
  - Introduction of sattva in enactment.
- (ii) Teaching of practical aspects of the Satvika enactment needs the attention of the learners more serious and sincere.

#### **Fifth PCP Practical**

- (i) In this PCP, the learners may be given a brief idea about the practical aspects of the following:
- Introduction to theater techniques.
  - Methods of Ancient theater techniques.
  - Introduction of modern techniques of theater techniques.
  - Stage decoration in dramatic performance.
  - Introduction of light and sound in drama staging.
  - Importance of light and sound in theatrical presentation.
  - Different types of light and sound presentation.
  - Enactment of Mudrarakshasa Drama.
- (ii) Teaching of practical aspects of the theater techniques needs the attention of the learners more serious and sincere.

#### **Sixth PCP Practical**

- Revision of all previous 5 PCPs.
- Learner's difficulties to be solved.
- The enactments to be demonstrated by Learners.

### 3. Marks Distribution in Formative Assessment (5 PCP sessions)

Formative Assessment	Marks	Remarks
Regular Participation in sessions.05 PCP	5	Assessment in the award list will be filled up based on these 05 PCP sessions
Activities presented in PCP sessions	5	
Presentation of Practical lessons	10	
<b>Total</b>	<b>20 Marks</b>	

### Distribution in Summative Assessment (6th Final PCP session)

Summative Assessment	Marks	Remarks
Assessment of at least two activities performed	5	Time of assessment will be held for 3 hours for the final examination
A Maintain records of the theatrical aspects learnt in the form of writing and preserving	5	
Interaction of the learner with the tutor	10	
<b>Total</b>	<b>20 Marks</b>	

**Note:** The total (Formative and Summative Assessment) weightage are 60 Marks in award list, the marks obtained by the learner, both in Formative and Summative Assessment are to be mentioned clearly and the final figure is the sum of the marks of Formative and Summative Assessments.

#### 4. Preparation For PCP Practical Session

- 1) The Centre Superintendent and Tutor must read the instruction mentioned in the Guidelines for Practical PCPs.
- 2) All equipments if needed by learner to be provided for conducting the classes and practice exams by the Centre.
- 3) Learners should be informed about the schedule of practical sessions.
- 4) The attendance sheet has to be maintained by the PCP Tutor.
- 5) The award list must be filled up as per the given assessment criteria
- 6) The technique of group presentation should be encouraged by the PCP Tutor.
- 7) Learners shall be asked to bring the practical record book in each class. Each learner is expected to maintain it as per the instruction given in the practical material.

#### 5. Precautions (Do's and Don'ts)

- 1) The candidates should be encouraged to watch drama, theater, folk drama etc. on various occasions or festivals.

- 2) Attendance Registers of such activities have to be maintained and monitored by the Tutor.
- 3) Tutor should teach the subject in a manner in which the candidates understand it easily.
- 4) Encouraging the active participation from the candidates is to be made regular.

## 6. Mark Distribution

### Instruction for the Marks distribution in details

Examiner for the final Examination/ Summative Assessment

S.No.	Module Name	Module Detail	Name of Lesson	Total Marks
	Different Types of Enactment: Theoretical Applications	In this module, fourfold acting – Angika, Vachika, Aharya and Satvika Abhinaya have been discussed in detail. Under this, special attention has been paid to the practical aspect of acting.	1. Angika Enactment 2. Vachika Enactment 3. Aharya Enactment 4. Satvika Enactment	25
	Theoretical Applications of Theatre	In this module, the technique of theatre has been explained, as well as the experimental aspect of drama has been explained through the experimental/ practical aspect of Mudrarakshasa play.	5. Theater Techniques: An Introduction 6. Mudrarakshasa	15



**Vocational Secondary Level**  
**CUTTING TAILORING & DRESS MAKING (605/606)**  
**Practical Examination**

**PRACTICAL PAPER-1**

**CUTTING AND TAILORING (605)**

Max. Marks: 90

Time: 3 Hrs.

**SYLABUS FOR PRACTICAL MODULE -1**

**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 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>

## I. 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 for both the theory and practical.
- viii. For each bi-monthly test teacher should set question papers for 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 & SAMPLE : “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 (Dress Making) (606)**

### **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 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)**  
**Dress Making (606)**

**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 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 - 46 cm.

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>Marks</b>	<b>Observation</b>
<b>1. Pattern making</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 1/6th + 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.

1. Size	Marks	Observation
	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.

**Vocational Secondary Level**  
**BEAUTY CULTURE AND HAIR CARE (612)**  
**Practical Examination**

**Max. Marks : 90**

**Time : 3 hrs**

### **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: dryers, 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.
16. (i) Demonstrate any casual style with braids.

(ii) Demonstrate any of the following hair cut considering your client facial shape:-

- (a) Boy Cut                      (b) Blunt cut  
(c) U Cut                        (d) Step Cut

17. Demonstrate wire rollers on a medium length hair.  
18. (i) Demonstrate blow drying on a client.  
(ii) Demonstrate hair parting for wooden rollers.

### III. MARKING SCHEME

(i) Practical	80 marks
(ii) Viva	10 marks
<b>Total Marks</b>	<b>90 marks</b>
<b>Total Time</b>	<b>3 Hrs.</b>

### IMPORTANT NOTE

Each jobs is of 20 marks. Each student is supposed to perform four jobs, selected from the list of Practicals. The examiner should however allocate atleast six jobs to each candidate.

<b>EVALUATION OF STEPS IN PRACTICALS:</b>	<b>BREAK UP OF MARKS</b>
1. Preparation of client	2
2. Preparation of trolley and tray	2
3. Precautions	2
4. Proper sequence of steps	6
5. Finishing	2
6. Time taken	2
7. Neatness in performance	2
8. Question(s) related to the job (Viva).	2
<b>Total</b>	<b>20</b>

i) Performance of four Practical jobs during Examination $4 \times 20$	80 marks
ii) Viva	10 marks

### IV. GUIDELINE FOR EXAMINER

1. Examiner should check up four jobs of the examinees.
2. Different sets on job can be given to different candidates.
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 | 3  | Setting clips.                  |
| 4  | Tail combs                  | 20 | Sheets                          |
| 5  | Full combs                  | 21 | Pedicure bowls                  |
| 6  | Brush for blow drying       | 22 | Manicure bowls                  |
| 7  | Spray and water bottles     | 23 | Hair razor                      |
| 8  | One set of the following    | 24 | Hair Cutting cape               |
|    | i) Eye liner brushes        | 25 | Saucepan                        |
|    | ii) Lip brushes             | 26 | Waxing knife                    |
|    | iii) Blushon brushes        | 27 | Foot Scraper                    |
| 9  | Manicure sets               | 28 | Adjustable shampoo chairs       |
| 10 | Hair dye brushes            | 29 | Mirror 4' × 3'                  |
| 11 | Facial steamer              | 30 | Heater                          |
| 12 | Hairdryer                   | 31 | Shampoo basin for hair dressing |
| 13 | Massage (Vibrator)          | 32 | Geyser                          |
| 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. Peel 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     | 8. Setting lotion   |
| 2. Bob pins         | 9. Protective cream |
| 3. Jura pins        | 10. Plain stuffing  |
| 4. Invisible pins   | 11. Hair spray      |
| 5. Shampoo          | 12. Switches        |
| 6. Hair conditioner | 13. Switch stand    |
| 7. Hair dye         | 14. Wigs            |



**Vocational Secondary Level**  
**CERTIFICATE IN INDIAN EMBROIDERY (REVISED) (628)**  
**Practical Examination**

**Max. Marks: 70**

**Time: 3 hrs**

Candidate has to do any two activities. Choose one activity from each group i.e Group A and Group B

**Marks Distribution**

1. Activity from group A	–	40 marks
2. Activity from group B	–	20 marks
3. Viva	–	05 marks
4. Record Book/Practical file	–	05 marks
<b>Total</b>	<b>=</b>	<b>70 marks</b>

**Group –A**

Candidate has to do one activity from this group

**Distribution of Marks**

1. Transfer of design and placement	-	10 marks
2. Actual performance	-	20 marks
3. Neatness and presentation	-	05 marks
4. Correct choice of colour/motif/thread/needle etc.	-	05 marks
<b>Total</b>	<b>=</b>	<b>40 marks</b>

**List of suggested practical activities**

1. Embroider three handkerchiefs with a naturalistic motif. Use atleast two basic stitches to embroider each motif.
2. Make a *Kashida* sample using all the stitches.
3. Make *Zardozi* sample using all the stitches.
4. Make a *Zalakdozi* sample using shades and tints of a colour of your choice.
5. Make a *Kasuti* sample using all the stitches.
6. Make a *Kantha* sample using all the stitches.
7. Make a *Phulkari* sample using all the stitches.

8. Make a *Chikankari* sample using all the stitches.
9. Make a *Rajasthani* embroidery sample using mirrors.
10. Make a *Sindhi Tropa* sample.

**Group – B**

Candidate has to do one activity from this group

**Distribution of Marks**

1. Actual performance	-	15 marks
2. Neatness and presentation	-	05 marks
<b>Total</b>	<b>=</b>	<b>20 marks</b>

**List of suggested practical activities**

1. Using different types of lines create three designs reflecting any three principles of art.
2. Draw the designs and colour using two types of contrast colour harmonies.
3. Draw and colour designs showing rhythm and emphasis.
4. Draw and colour each of 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 on the fabric using various methods of transfer of design.
8. Prepare a colour wheel.
9. Make a hue/value chart of a colour of your choice.
10. Colour the given motif using triad and tetrad colour harmonies for children’s garment.

**Internal Assessment: 100 marks**

The Internal Assessment will include the following:

- a. Attendance - 10 Marks, wherein the criteria will be,

Attendance (%)	Marks
95-100	10
90-84	9
85-89	8
80-85	7
75-79	6
70-74	5

- b. Project/Portfolio – 60 Marks (Minimum 5 projects are to be completed in this portfolio, which will be of 12 marks each).
- c. Class interaction – 20 marks
- d. Learning Interest /Punctuality /behavior – 10 marks

**Vocational Secondary Level  
BEAUTY THERAPY (640)  
Practical Examination**

**Time: 3 hrs**

**Max.Marks: 70**

**Scheme of Practical Examination:**

S. No.	Items		Distribution of Marks	Remarks
1.	Practical Activity	Major Activity	1 × 20 = 20 marks	Learner has to perform any one activity out of the given two.
		Minor Activity	3 × 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

**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 × 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**

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**Vocational Secondary Level  
HAIR CARE AND STYLING (641)  
Practical Examination**

**Time: 3 hrs**

**Maximum Marks: 70**

**Scheme of Practical Examination:**

S. No.	Items		Distribution of Marks	Remarks
1.	Practical Activity	Major Activity	1 × 20 = 20 marks	Learner has to perform any one activity out of the given two.
		Minor Activity	3 × 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:**

1. 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)
2. 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)
3. Each major activity is of 20 marks and minor activity is of 10 marks each.
4. 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

**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.

## HAIR CARE AND STYLING (641)

### 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 × 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**

**Vocational Secondary Level  
HAND AND FOOT CARE (642)  
Practical Examination**

**Time: 3 hrs**

**Maximum Marks: 70**

**Scheme of Practical Examination:**

S. No.	Items		Distribution of Marks	Remarks
1.	Practical Activity	Major Activity	1 × 20 = 20 marks	Learner has to perform any one activity out of the given two.
		Minor Activity	3 × 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

**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 × 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**



**Vocational Secondary Level**  
**BAKERY & CONFECTIONERY (256)**  
**Practical Examination**

**Marking Scheme:**

Max. Marks : 60

**(I) Distribution of Marks**

Time : 3 Hrs.

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

$2 \times 20 = 40$  marks

(ii) Viva voce based on 2 activities

$2 \times 10 = 20$  marks

**(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

**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.





**Vocational Secondary Level**  
**CERTIFICATE IN BASIC COMPUTING (608)**  
**Practical Examination**

**Max. Marks : 60**

**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.



**Vocational Secondary Level**  
**DESK TOP PUBLISHING (DTP) (613)**  
**Practical Examination**

**Max. Marks : 60**

**Time: 2 hrs**

**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 - A**, 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 -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" × 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

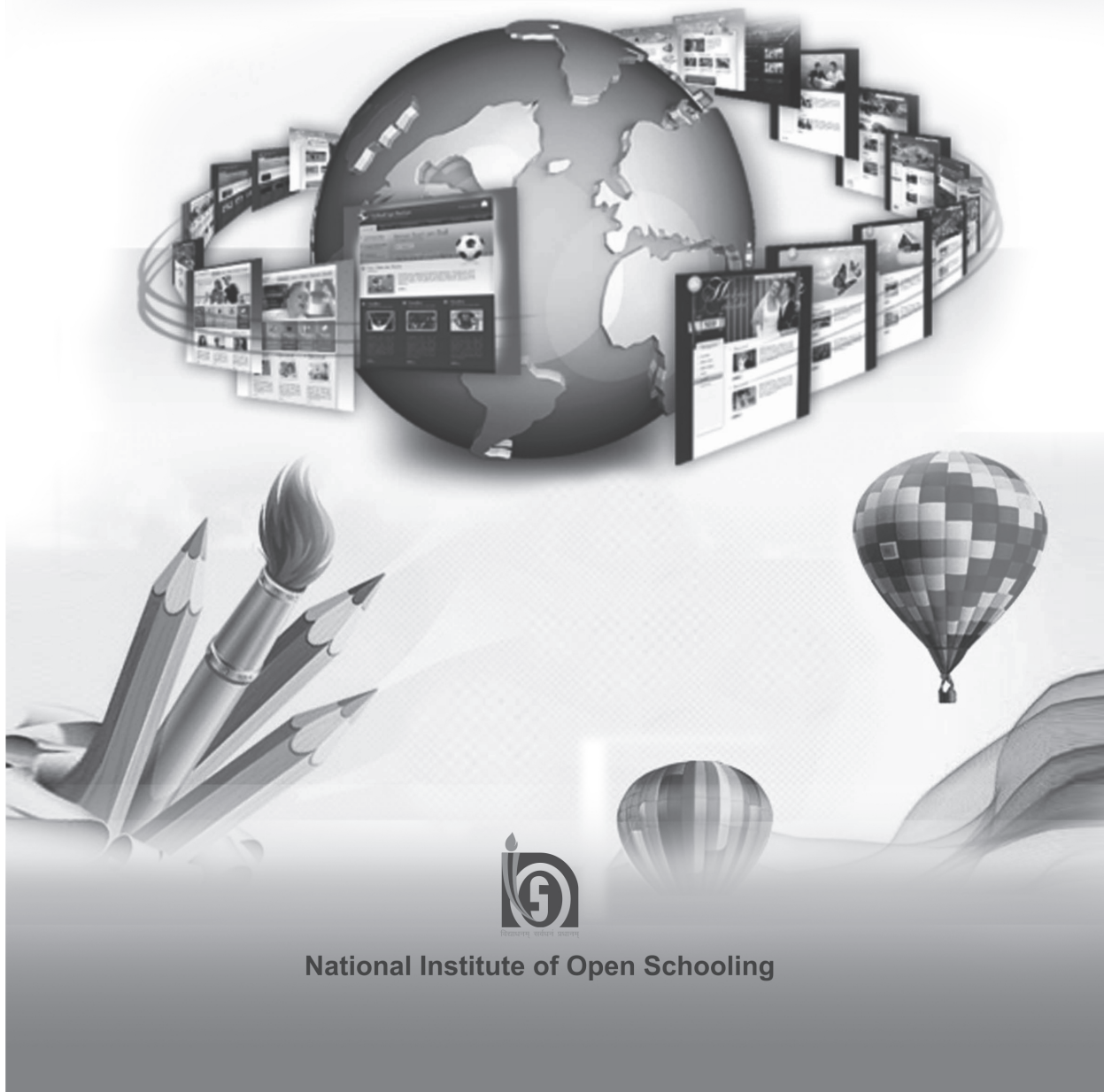
- (a) Draw a rectangle of 10cm × 20cm and increase its size to 20cmx30cm.
  - (b) Fill yellow colour in it, out lines black.
  - (c) Rotate it 45 degree upwards.
  - (d) Type a text “National Institute of Open Schooling” at the centre of the rectangle.
  - (e) Make the corner of the rectangle round.
- 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.

# WEB DEVELOPMENT **660**

**NSQF Level - 3**



**National Institute of Open Schooling**



**Vocational Secondary Level  
CERTIFICATE IN YOGA (614)  
Practical Examination**

Maximum Marks : 60

Time : 2 hours

Sr. No.	Marks for Practical Test	Marks
1.	Internal Assessment*	20
2.	Activities* * (i) Pranayama-2 = 10 (2 × 5 = 10 Marks)      5 Marks each (ii) Purification Activity (Shatakarma - Jal Neti or Kunjal Kriya) -1      5 Marks (iii) Asana (Posture) - 15 (5 × 3 = 15 Marks)      3 Marks each	30
3.	Viva (Viva)***	10
	<b>Total Marks</b>	<b>60</b>

**Note:**

Practical examination of a batch of 20 learners will be conducted by two teachers at least.

\* Internal assessment marks are to be given on the basis of the student's activities throughout the session.

\*\* Yogic Practices:

1. Any two pranayama out of Anulom Vilom, Kapalbhata Sheetal, Bhramari, Bhastrika, Sheetkari or rapid breathing should be given to the candidate for demonstration.
2. Anyone Shatkarma Kriya (Cleansing Techniques) Jal Neti or Kunjal should be given to the candidate for demonstration.
3. Asana: - Any five asanas should be given to the candidate for demonstration from the following asanas; Shavasana (Dead body Asana), Padmasana (Lotus Asana), Sukhasana, Lion Asana, Brajasana (Thunderbolt Asana), Tadasana (Palm Tree Asana), Bhujangasana (Cobra Asana), various knee movements, various neck movements.

\*\*\* Try to know the attitude and dedication of the learner towards yoga through common questions in the oral examination.





**Vocational Senior Secondary Level**  
**HOUSE KEEPING (356)**  
**Practical Examination**

**Marking Scheme**

**Max. Marks : 60**  
**Time : 3 Hrs.**

**Distribution of Marks :**

- |  |                   |
|--|-------------------|
| (i) Performing Activities : any two, of 20 marks each. | 2 × 20 = 40 marks |
| (ii) Viva voce based on 2 activities                   | 2 × 10 = 20 marks |

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

- |   |          |
|---|----------|
| - correct selection color / flowers<br>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



**Vocational Senior Secondary Level  
CATERING MANAGEMENT (357)  
Practical Examination**

**Making Scheme:**

Max. Marks : 60

**Distribution of Marks**

Time : 3 Hrs.

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

$2 \times 20 = 40$  marks

(ii) Viva voce based on 2 activities

$2 \times 10 = 20$  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

**List of Activities**

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



**Vocational Senior Secondary Level  
FOOD PROCESSING (358)  
Practical Examination**

**Max. Marks : 60**

Time : 3 Hrs.

**Marking Scheme**

**Distribution of Marks**

- |  |                   |
|--|-------------------|
| (i) Performing Activities : any two, of 20 marks each. | 2 × 20 = 40 marks |
| (ii) Viva voce based on 2 activities                   | 2 × 10 = 20 marks |

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

- |  |         |
|--|---------|
| - Correct identification/selection of material/equipment | 3 marks |
| - Correct weighing/measurement of ingredients            | 2 marks |
| - Performance and product                                | 8 marks |
| - Presentation of work                                   | 4 marks |
| - Precautions taken                                      | 3 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.                        |               |         |                |



**Vocational Senior Secondary Level**  
**HOTEL FRONT OFFICE OPERATIONS (360)**  
**Practical Examination**

Max. Marks : 60

Time : 3 Hrs.

**Distribution of Marks**

- |   |                   |
|---|-------------------|
| 1. Performing Activities (any two)          | 2 × 20 = 40 marks |
| 2. Viva voice (for each performed activity) | 2 × 10 = 20 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 |

**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.



**Vocational Senior Secondary Level**  
**PRESERVATION OF FRUITS AND VEGETABLES (363)**  
**Practical Examination**

**Max. Marks : 60**

**Time : 3 Hours**

**Distribution of marks**

1.	Performing Activities any two	2 × 15 marks
	◆ correct sequencing of activities (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 × 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





**Vocational Senior Secondary Level  
CERTIFICATE IN WEB DESIGNING  
AND DEVELOPMENT (622)  
Practical Examination**

**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.)

<b>Registration</b>	
First Name:	<input style="width: 90%;" type="text"/>
Last Name:	<input style="width: 90%;" type="text"/>
Father's Name:	<input style="width: 90%;" type="text"/>
Date of Birth:	<input style="width: 90%;" type="text"/>
Qualification:	<input style="width: 90%;" 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	80	70+30
3	Web Designing and Development	622	30	70
4	Data Entry Operations	632	40	60
5	Certificate in Computer Applications	711-712	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.

## 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 <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 India</li><li>-Great Personalities of India</li></ul> <p><b>-Yoga</b></p>

# NATIONAL INSTITUTE OF OPEN SCHOOLING

A-24/25, Inst. Area  
Sector-62, Noida

**Information About**

- Admission
- On Demand Examination
- e-Services
- Accreditation/E-Accreditation
- Mukta Vidya Vani / Radio Vahini
- Felicitations/Awards
- Notice Board / Office Order
- Tender Notice
- Vacancy
- Success Stories
- Library

**Meeting and Events**

**NIOS OPEN EDUCATIONAL RESOURCES**

**STUDENT INFORMATION SECTION**

**ONLINE COURSE MATERIAL**

## Evaluation System

You are here: [Home](#) > [Departments/Units](#) > [Evaluation](#)

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 National Institute of Open Schooling has certain features in its evaluation system such as freedom to answer the questions in Public Examinations in any one of the scheduled regional languages, although the Question Papers supplied would generally be in English and Hindi available Regional mediums only. Intimation letter and Certificate have scanned photographs of the learners, and the information about Examination Centres and results are made available online. Besides, NIOS has been doing innovations in the evaluation system to maintain its credibility and standards. The On Demand Examination System at Secondary and Senior Secondary level for the registered candidates is one such innovation.

- Freedom to answer the question in Public Examinations in any one of the scheduled regional Languages, although the Question Papers supplied would generally be in English and Hindi/available Regional medium only.
- Hall tickets with Scanned photograph of the learners.
- Information about examination centres and results are made available online.

**The NIOS is a National Board for Secondary and Senior Secondary Examinations similar to the Central Board of Secondary Education (CBSE) and the Council for the Indian School Certificate Examinations (CISCE).**

The Public Examinations are held twice a year in the months of April-May and October-November on dates fixed by the NIOS. However, you are also eligible to appear through On Demand Examination at Secondary Level and Senior

**Information About**

- Admission
- On Demand Examination
- e-Services
- Accreditation/E-Accreditation
- Mukta Vidya Vani / Radio Vahini
- Felicitations/Awards
- Notice Board / Office Order
- Tender Notice
- Vacancy
- Success Stories
- Library

**Meeting and Events**

**NIOS OPEN EDUCATIONAL RESOURCES**

**STUDENT INFORMATION SECTION**

**ONLINE COURSE MATERIAL**

## Academic Department

You are here: [Home](#) > [Departments/Units](#) > [Academic](#)

**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
- Academic - Departmental Advisory Board
- Academic - Council
- Open Basic Education (OBE)
  - Secondary Course equivalent to Class X
  - Senior Secondary Course equivalent to class XII
  - Vocational Education
- Trainee Packages for ODL Functionaries.

## Activity - 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/Dream Weaver 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 the tagline "An autonomous institution under Ministry of Education, Govt. of India" and "The Largest Open Schooling System in the World". A navigation menu includes links for "About Us", "Departments / Units", "Programmes", "Learners Corner", "Notification", "Related Links", and "Contact Us". The main content area is titled "Profile" and contains a list of links for "NIOS Profile 2022 in English", "NIOS Profile 2022 in Hindi", "What is NIOS?", "What does NIOS do?", "How does NIOS Function?", and "NIOS ISO 9001:2015 Certification". Below this, a section titled "What is NIOS" provides a detailed description of the institution's history and mission, mentioning its establishment in 1979 and its role in providing open schooling facilities. The page also includes a sidebar with "Information About" and "Meeting and Events" sections, and a footer with a search bar 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 screenshot displays the NIOS website's 'Academic Department' page. The header includes the NIOS logo, name in Hindi and English, and the motto 'Azadi Ka Amrit Mahotsav'. A navigation menu at the top contains links for 'About Us', 'Departments / Units', 'Programmes', 'Learners Corner', 'Notification', 'Related Links', and 'Contact Us'. The main content area is titled 'Academic Department' and 'Programmes and Courses'. It provides an overview of the department's role in developing educational programmes and courses, and lists various units such as Open Basic Education (OBE), Secondary and Senior Secondary Education, Capacity Building Cell, NIOS Secretariat, COMOSA Secretariat, Graphic Unit, and Library and Documentation Services. A sidebar on the left offers links to 'Information About' (Admission, On Demand Examination, e-Services, Accreditation/E-Accreditation, Mukta Vidya Vani / Radio Vahini, Felicitation/Awards, Notice Board / Office Order, Tender Notice, Vacancy, Success Stories, Library) and 'Meeting and Events'. The footer shows the current date as 03-03-2023 and the temperature as 30°C.

The screenshot displays the NIOS website's 'Vocational Education' page. The header and navigation menu are identical to the previous screenshot. The main content area is titled 'Vocational Education' and 'About the Department and the Courses'. It describes the Vocational Education and Training (VET) initiative and its importance in the national education system. The page lists several key documents and resources, including 'श्रीग शिवाजी शिक्षण' (Shri G. Shivaji Education), 'Accreditation Norms for Vocational Stream (Secondary & Senior Secondary/V/S1 KB)', 'Handloom Weavers Course at Secondary Level (6 KB)', 'Yoga Teacher Training Programme', and 'Norms for Accreditation of different Vocational Courses (1.98 MB)'. A sidebar on the left provides the same 'Information About' and 'Meeting and Events' links as the previous page. The footer shows the current date as 03-03-2023 and the temperature as 30°C.

## Activity - 3

(5 Marks)

Host the website into any free web hosting server.





**Vocational Senior Secondary Level**  
**CERTIFICATE IN COMPUTER & OFFICE APPLICATIONS (631)**  
**Practical Examination**

**Scheme of Examination**

**Max. Marks: 60**  
**Time: 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 Power Point	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.



**Vocational Senior Secondary Level**  
**DATA ENTRY OPERATIONS (632)**  
**Practical Examination**

**Max. Marks : 70**  
**Time :3 Hours**

**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>	<b>70</b>

**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

- Create a table structure for the above data.
- 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
- Make a simple query to show Roll No. and first name of all the students.
- Make the query to list the course code and duration for the first name 'Vibha'. Save the query as query-2.
- Display the first name and last name of those students who offered course code 330. Save the query as query -3
- Generate a separate report Gender wise.
- 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	Your photograph
Address	
Phone No.	

Slide 2

<p style="text-align: center;"><b><u>MY FAMILY</u></b></p>
--

Slide 3

<p style="text-align: center;"><b>Family Members</b></p> <p>★ Father's Name : _____</p> <p>★ Mother's Name : _____</p> <p>★ Brother's Name : _____</p> <p>★ Sister's Name : _____</p>
---

Slide 4

<p style="text-align: center;"><b>Picture of Your House</b></p>
---

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.



**Vocational Senior Secondary Level**  
**WEB DEVELOPMENT (660)**  
**Practical Examination**

**Max. Marks: 70**  
**Time: 3 Hrs**

**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**

Open Office – 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**



**Vocational Senior Secondary Level  
CRM DOMESTIC VOICE (661)  
Practical Examination**

**Max. Marks: 70  
Time: 3 Hrs**

**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 complaint. 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 represents 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.



**Vocational Secondary Level**  
**COMPUTER HARDWARE ASSEMBLY AND MAINTENANCE (663)**  
**Practical Examination**

**Max. Marks: 70**  
**Time: 3 Hrs**

**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**





**Vocational Senior Secondary Level**  
**YOGA ASSISTANT (667)**  
**Practical Examination**

**Max. Marks: 100+20**

**Time: 3.00 hrs.**

**Pass Criteria: 50% in both (Practical & Internal Assignments)**

**Marking Schemes for Practical Examination:**

<b>Activities</b>	<b>Marks Allotted</b>	<b>Remarks</b>
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>	

**Marking Schemes for Internal Assignments:**

Internal Assignments during PCPs & Training (Study Centre will take test of skills & competencies and also see candidate performance like sincerity, regularity & other human values)	20	The obtained marks will update under the Internal Assignments
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**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>– 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- Yoga Assistant Spotting:**

**30 Marks (10x3)**

1. Identification of any Yoga Asana through picture/poster and its benefits.
2. Identification of any Pranayama through picture/poster its use.
3. Identification of any Sukshma Yogic Practice through picture/poster its use.

### **Practical Activities**

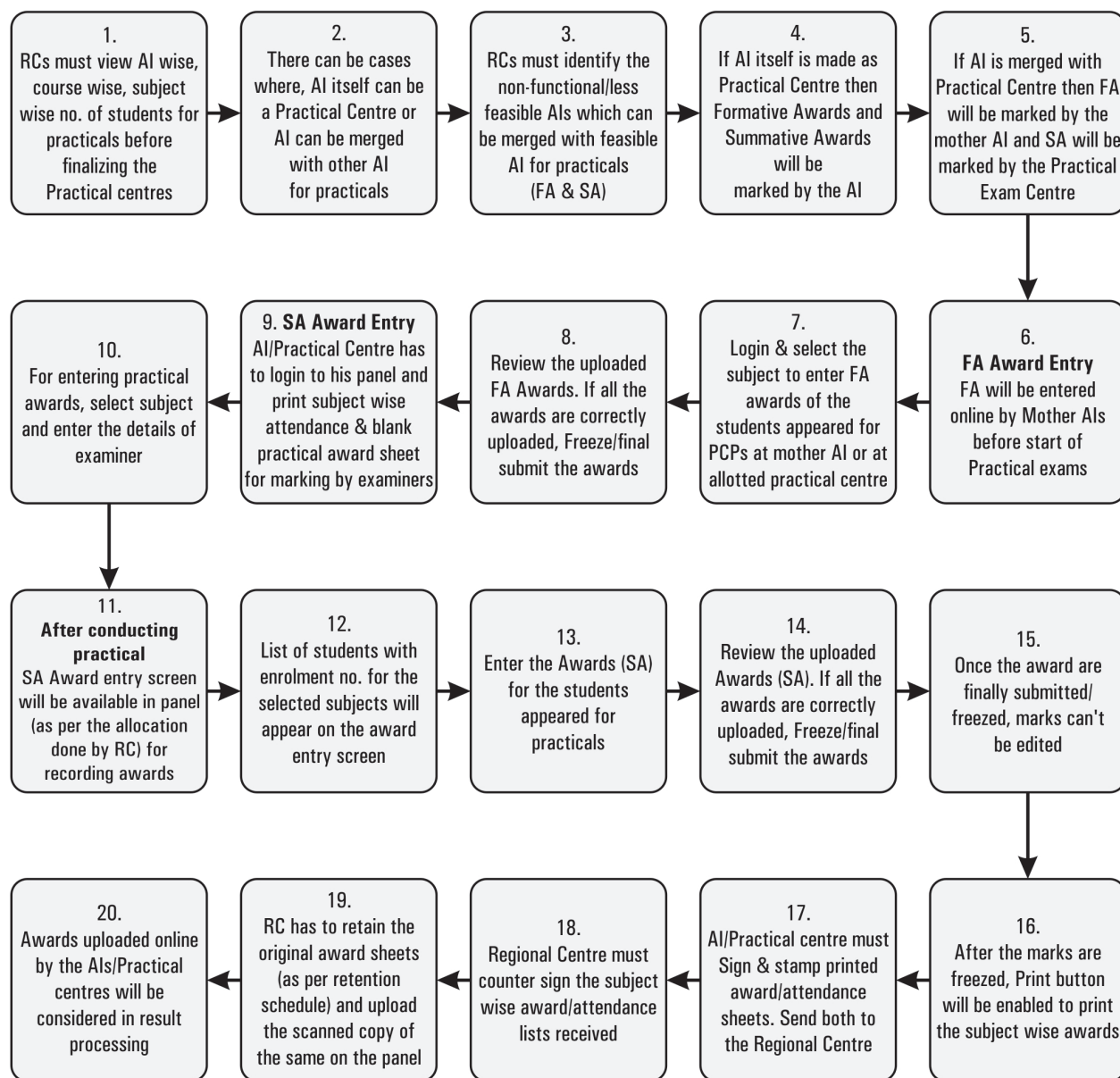
**40 Marks (20x2)**

1. Sukshma vyayama (leg joints)
2. Sukshma vyayama (hand joints)
3. Sukshma vyayama (eye practices)
4. Abdominal group asanas
5. Shakti bandha
6. Relaxation asanas
7. Meditative asanas
8. Vajrasana group
9. Standing asanas
10. Backward bending asanas
11. Forward bending asana
12. Spinal twisting asanas
13. Inverted asanas
14. Balancing group of asanas
15. Suryanamaskara
16. Pre-pranayama practice
17. Stimulating pranayama
18. Tranquilizing and cooling pranayama
19. Nadi shodana pranayama
20. Neti kriya
21. Kunjal kriya - vaman dhauti

22. Laghu shankha prachalana
23. Kapalabhati kriya
24. Trataka kriya
25. Hasta and mana mudra
26. Kaya and adhara mudra
27. Water fast
28. Morning walk
29. Hot fomentation
30. Wet pack

# ANNEXURES

## Process flow diagram for conduct of Practical examination and online uploading of marks (Formative and Summative)



In case the AI is not a practical centre, the AI (mother AI) will be responsible for uploading the Formative Awards and the practical centre will upload the Summative awards. Ensure that no column is left blank while uploading the marks online.

**SPECIMEN OF ATTENDANCE SHEET FOR PRACTICAL EXAMINATION**

**(Secondary /Sr. Secondary Summative Examination)**

Exam Centre No. \_\_\_\_\_

Name of Centre/AI \_\_\_\_\_

Subject \_\_\_\_\_

Date \_\_\_\_\_

<b>Roll No.</b>	<b>Name of Candidate</b>	<b>Serial No. of Practical Examination Answer Book</b>	<b>Candidates Signature</b>

**SIGNATURES OF PRACTICAL EXAMINERS COUNTERSIGNED BY CENTRE SUPDT. & OSD**

**Note:**

1. Specimen signature of the candidate must be verified by the Practical Examiner with the signature of the candidate on the I.Card/Admission Card.
2. If the candidate is absent the Examiner should write ABSENT in the column of signature of the candidate and encircle the Roll No. in RED INK.

\* To be used only if the Computerised Attendance Sheet is not received at the Centre.

**PROFORMA FOR 'UFM CASES'**

(SECONDARY/ SR. SECONDARY SUMMATIVE PRACTICAL APR./OCT. 20... EXAMINATION )

1. Centre No..... Name of Centre/AI .....
2. Roll No..... Name of Candidate .....
3. Subject .....
4. Date and Time of incident .....Date.....Time
5. Mode of Unfair means used in exam and circumstances in which caught.  
.....  
.....
6. Type of copying material found from the candidate i.e help book, loose printed/hand written sheets. No. of pages/ loose sheets found be also indicated, mobile phone/electronic gadgets.  
.....  
.....
7. Place from where copying material recovered, e.g. pant pocket, shirt pocket, beneath the desk or in the answer book, inside shoes/socks etc
8. Any other information.....

Sign. of the  
CandidateSign. of Internal  
ExaminerSign. of External  
ExaminerSign of Centre Superintendent/  
AI Coordinator**IMPORTANT:**

1. Make the report in duplicate, one copy be attached with the answer book of the candidate and the other copy be sent to Dy. Director (Exams)/Concerned Regional Director the same day for necessary action.
2. If the candidate is caught copying, encircle the portion copied in the Practical Examination Answer Book as well as in the copying material and mention its page no(s). on top of the answer book and the copying material.
3. The 2nd Practical Examination Answer Book should be issued to the candidate immediately and the candidate should not be debarred from taking the future practical examination if any. If the candidate refuses to accept the 2nd copy please write this fact in para 6 above and on the cover page of the first Practical Examination Answer Book of the candidate.
4. The Examiner/Centre Supdt./ Coordinator of the AI should record the Roll No., of the candidate on the material recovered, number the same as sing at..
5. The Coordinator of the AI should record on the Answer Book the fact and brief details of the UFM case.

**Specimen Form For  
FORWARDING UNFAIR MEANS CASES**

(SECONDARY / SR. SECONDARY SUMMATIVE PRACTICAL APR./OCT. 20... EXAMINATION)

1. Name of candidate \_\_\_\_\_
2. Roll No. \_\_\_\_\_
3. Exam. Secondary/Sr. Secondary \_\_\_\_\_
4. Date \_\_\_\_\_
5. Subject & Paper \_\_\_\_\_
6. Time of the Incident \_\_\_\_\_
7. Circumstances under which caught \_\_\_\_\_
8. Unfair aids recovered \_\_\_\_\_
9. Whether Statement received from the candidate Yes/No \_\_\_\_\_
10. Whether 2nd copy of Answer Book was given Yes/No \_\_\_\_\_
11. Statement of Examiner obtained Yes/No \_\_\_\_\_
12. Remarks of Centre Superintendent/ Coordinator of the AI :  
\_\_\_\_\_  
\_\_\_\_\_

Date : \_\_\_\_\_ Sign of Centre Supdt./ Coordinator of the AI \_\_\_\_\_  
Name of Centre Supdt./ Coordinator of the AI \_\_\_\_\_

Exam Centre No. \_\_\_\_\_ Address \_\_\_\_\_  
\_\_\_\_\_

**Enclosures:**

1. First/Second Copies of Answer Book 1/2 copies \_\_\_\_\_
2. Statement of Candidate Enclosed/not enclosed \_\_\_\_\_
3. Statement of Examiner Enclosed/not enclosed \_\_\_\_\_
4. Unfair aids/materials recovered Pages \_\_\_\_\_
5. Filled up format of UFM cases as per Annexure -2

**(Note: Please use separate proforma for each case)**



**Specimen of  
ABSENTEE STATEMENT**

(SECONDARY/ SR. SECONDARY SUMMATIVE PRACTICAL APR./OCT. 20... EXAMINATION)

NAME OF THE CENTRE/AI \_\_\_\_\_ EXAM CENTRE NO. \_\_\_\_\_

1. Roll Nos. of candidates absent in all the subjects \_\_\_\_\_

**2. Details of Partly Absentee Cases**

S.No.	Roll No. (s)	Subject (s)

**3. Details of Unfair Means Cases**

S.No.	Roll No. (s)	Subject (s)

**4. Details of Transfer Case Appeared**

S.No.	Roll No. (s)	Subject in appeared	Transfer from Centre No.	
			From	To

**5. Details of Subject Changed by the Candidates**

S.No	Roll No.(s)	Subject (s) changed	
		From _____	To _____

**Signature of OSD of NIOS**

**Signature of Centre Superintendent /Coordinator  
AI (With Rubber Stamp)**

**Note :** This may please be returned to the Concerned Regional Director soon after the Practical Examination is over along with the Attendance Sheets, duly attested by the Centre Superintendent. This should be prepared separately for Secondary and Senior Secondary examinations.





*Practical Exam. Bill Proforma-1*

**NATIONAL INSTITUTE OF OPEN SCHOOLING**  
**CONSOLIDATED BILL FOR SUMMATIVE PRACTICAL**  
**APRIL/OCT. 2-..... EXAMINATION**

(To be filled in by the Centre Supdt. of the Centre/Coordinator of the AI)

1. Examination Centre No. \_\_\_\_\_
2. Name of Centre Supdt/ Coordinator of the AI. \_\_\_\_\_
3. Amount claimed for Centre Supdt. (*Practical Exam. Bill Proforma-10*) \_\_\_\_\_
4. Amount claimed for examiners (*Practical Exam. Bill Proforma-11*) \_\_\_\_\_
5. Amount claimed for other staff: (*Practical Exam. Bill Proforma-12*) \_\_\_\_\_
6. Amount claimed for Lab. Charges : (*Practical Exam. Bill Proforma-13*) \_\_\_\_\_
7. Postage/Conveyance/Packing cloth charges \_\_\_\_\_
8. Total amount claimed
9. Less Advance Received
10. Balance amount claimed
11. Bank Details for Payment
  - (i) Name of the Payee \_\_\_\_\_
  - (ii) S.B. A/c No. \_\_\_\_\_
  - (iii) Name and Address of the Bank \_\_\_\_\_
  - (iv) IFS Code \_\_\_\_\_
  - (v) E-mail: \_\_\_\_\_
  - (vi) Mobile No.: \_\_\_\_\_

**Verified**

(Centre Supdt.)

Name/Centre No.

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NB: Use Photocopies for submitting additional bills.

**REMUNERATION BILL FOR THE ‘CENTRE SUPERINTENDENT’ FOR  
SUMMATIVE PRACTICAL EXAMINATION**

1. **Name of the Examination:** Secondary/Sr. Secondary/Vocational- April/October \_\_\_\_\_
2. **No. & Name of the Examination Centre/AI:** \_\_\_\_\_  
\_\_\_\_\_
3. **Remuneration for working as Supdt. of NIOS Practical Examination for** \_\_ days (s):  
@ Rs. 750/- per day .
4. **Details of Duty during Practical Examinations:**

S. No.	Date of Practical Examination	Subject & Paper	No. of Batches	No. of Students in each Batch+	Rate	Amount
1.						
2.						
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						

**Total No. of Sessions** \_\_\_\_\_

**Signature of the Centre Suptd/ Coordinator of the AI**

Name (in block letters) \_\_\_\_\_

Dated: \_\_\_\_\_

Postal Address \_\_\_\_\_

**(for Office use)**

*Practical Exam. Bill Proforma-3*

**BILL FOR SUMMATIVE PRACTICAL APRIL/OCT. 20..... EXAMINERS**

Name:.....

Course: Secondary/Sr. Secondary

Subject:.....Code.....

**A. REMUNERATION:**

S. No.	Date of Practical Examination	No. of Batches	No. of examined in each batch	Total No. of Students	Rate	Amount Claimed
						<b>Total</b>

**A. CONVEYANCE: (for external examiners only)**

S. No.	Date of Practical Examination	No. of Batches	No. of examined in each batch	Total No. of Students	Rate	Amount Claimed
						<b>Total</b>

**Total of A & B = Rs. .... In words (Rupees.....)**

Signature of Claimant \_\_\_\_\_ Signature of Centre Superintendent \_\_\_\_\_

Address \_\_\_\_\_ Address \_\_\_\_\_

Rubber Stamp \_\_\_\_\_

**BILL FOR OTHER STAFF CHARGES**

(SUMMATIVE PRACTICAL APR./OCT. 20... EXAMINATION)

1. Name of the Centre \_\_\_\_\_

2. Centre No. \_\_\_\_\_

3. Name of Centre Superintendent \_\_\_\_\_

4. Lab. Assistant's Charges

S.No.	Name of the Lab bearer/sweeper	Subject of Practical	No. of Sessions* Attended	Amount claimed
1.				
2.				
3.				
4.				
5.				

**Total Amount claimed:**

5. Lab. Bearer/Sweeper's Charges

S.No.	Name of the Lab bearer/sweeper	Subject of Practical	No. of Sessions* Attended	Amount claimed
1.				
2.				
3.				
4.				
5.				

**Total Amount claimed:**

.....

\*Not more than two sessions in a day.

**Verified**

**(Signatures of Centre Supdt. with Seal)**

**NATIONAL INSTITUTE OF OPEN SCHOOLING**

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

**BILL FOR LABORATORY CHARGES**

(SUMMATIVE PRACTICAL APR./OCT. 20... EXAMINATION)

1. Centre No \_\_\_\_\_
2. Name of the Centre/AI \_\_\_\_\_
3. Name of Centre Superintendent \_\_\_\_\_

Name of Laboratory	Subject of Practical (Sec./Sr. Sec)	No. of Candidates Registered	Amount Claimed	Remarks

**Total Amount Claimed Rs.** \_\_\_\_\_

**Verified**  
**Signature of Centre Superintendent** \_\_\_\_\_  
**With seal**



## SPECIMEN PROFORMA OF AWARD LIST

DO NOT FOLD/TAG THE FOIL		<b>National Institute of Open Schooling ICR Award Sheet for Practical</b> <small>(USE BLUE/BLACK BALL PEN ONLY)</small>								
Examination & Year				Region		Sr. No.				
Subject			Paper		Centre No./AI No.					
Max. Marks:		Min. Pass Marks:		Above 33% <input type="checkbox"/> <input type="checkbox"/>		Below 33% <input type="checkbox"/> <input type="checkbox"/>				
						Total Absent <input type="checkbox"/> <input type="checkbox"/>				
S. No.	ROLL NUMBER	MARKS (FIG.)						TOTAL (FORMATIVE + SUMMATIVE)		
		FORMATIVE (50%)			TOTAL	SUMMATIVE (50%)		FIG.	WORDS	
1		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Grand Total		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Name of the Internal Examiner _____				Signature _____		Date _____				
Name of the External Examiner _____				Signature _____		Date _____				
Name & Signature of Co-ordinator of AI _____				Countersigned by RD NIOS _____						

**NATIONAL INSTITUTE OF OPEN SCHOOLING**  
**LIST OF REGIONAL CENTRES AND STATES COVERED**  
**UNDER EACH REGIONAL CENTRE**

Name of the Region	Address of Regional Centre & Contact Number	States Covered
1. Bengaluru	Office of the Director (Vocational Education) 3rd Floor, PUE Bhawan, 18th Cross Sampige Road, Malleswaram, Bangluru - 560012, Karnataka Ph.: 080-23464223 Email: rcbengaluru@nios.ac.in	Karnataka
2. Bhopal	Manas Bhawan, Shyamla Hills, Bhopal - 462002 (M.P.) Ph.: 0755-2661842, 2660331 E-mail: rcbhopal@nios.ac.in	Madhya Pradesh
3. Bhubaneswar	ELTI Campus, Maitri vihar, Chandrashekhar Pur, Bhubaneswar - 751023 (Odisha) Ph. No. 0674-2302688, E-mail.: rcbbsr@nios.ac.in	Odisha
4. Chandigarh	YMCA Complex, Sector-11C, Chandigarh-160011 Ph.: (O) 0172-2744915, 3950979 E-mail: rcchandigarh@nios.ac.in	Punjab, Chandigarh, & Haryana (Excluding Gurgaon, Faridabad, Jhajjar & Palwal)
5. Chennai	Govt. Model Higher Secondary School Lady Wellington Campus Triplicane,, Chennai-600005 Phone No. 044-28442237; E-mail: rcchennai@nios.ac.in	Tamil Nadu, Pondicherry
6. Delhi	A-31, Institutional Area, NH-24, Sector-62, NOIDA- 201309 Ph: (O) 0120-2404914, 2404915 E-mail: rcdelhi@nios.ac.in	NCT of Delhi and bordering Distts. of NCT in Uttar Pradesh and Haryana comprising of Distts. of Gautam Buddh Distt. - Gautam Buddha Nagar (U.P.) Nagar (Noida and Greater Noida), Ghaziabad, Gurgaon, Faridabad, Jhajjar and Palwal
7. Dehradun	B.S.N.L. Telephone Exchange Building Turner Road, Near ISBT, Clement Town, Dehradun - 248002, Uttarakhand Ph.: (O) 0135- 2629166; 2623929 E-mail: rcdehradun@nios.ac.in	Saharanpur, Muzaffar Nagar, Moradabad and J.P. Nagar (Amroha) districts of U.P. Uttrakhand, Meerut, Bagpat

Name of the Region	Address of Regional Centre & Contact Number	States Covered
8. Gandhinagar	7th Floor, 'D' Wing M.S. Building, Near Pathikashram Bus Stand, Sector-11 Gandhi Nagar-382011, Gujarat Ph.: 079-23220410 Email: rcgandhinagar@nios.ac.in	Gujarat
9. Gangtok	Teacher's Guest House Syari, Gangtok - East Sikkim-737102 E-mail: rcgangtok@nios.ac.in	Sikkim, Siliguri and Darjeeling District of West Bengal
10. Guwahati	Building of Assam Publication Board, (Near Assam Board of Secondary Education) Ist Floor, Bamunimaidan, Guwahati-781021 (Assam) Ph. (O): 0361-2650541, 2651201 E-mail: rcguwahati@nios.ac.in	Nagaland, Arunachal Pradesh, Assam, Manipur, Mizoram and Tripura
11. Hyderabad	IV Floor, Sri Krishna Devaraya, Telugu Basha Nilayam, Trust, No 4-4-8, 2 Sultan Bazar, Hyderabad - 500095. Ph.: (O) 040-24162859 E-mail: rchyderabad@nios.ac.in	Telangana
12. Jaipur	5-6, Padmavati Colony-1 Adjacent To Mansarovar, Metro Station Kings Road, Nirman Nagar, Jaipur-302019 Ph.: (O) 0141-2292818, 2290057 E-mail: rcjaipur@nios.ac.in	Rajasthan
13. Jammu	H.No. 187-P/B Sector-1, Trikuta Nagar, Jammu-180020 rcjammu@nios.ac.in	Jammu & Kashmir Leh and Ladakh
14. Kochi	6th Floor, Kerala State House Board Building Panampilly Nagar, Kochi-682036 (Kerala) Ph.: 0484-2310032, 4035540, 0484-2310033 E-mail: rckochi@nios.ac.in	Kerala & Lakshdweep

Name of the Region	Address of Regional Centre & Contact Number	States Covered
15. Kolkata	CL 18A, Sector-2, Salt Lake City, (Near CK Market), Tank No.9 and Aruna Moyee Bus Stand, Kolkata-700091(WB) Ph.: (O) 033-24797714, E-mail: rckolkata@nios.ac.in	West Bengal (Excluding Siliguri and Darjeeling), Andaman and Nicobar Island
16. Prayagraj	19/17, Kasturba Gandhi Marg, Kachahari Road Prayagraj - 211002 (Uttar Pradesh) Ph.: (O) 0532-2548154 e-mail: rcallahabad@nios.ac.in	Uttar Pradesh
17. Patna	Lalit Bhawan, Ground Floor, Jawahar Lal Nehru Marg, Bailey Road, Patna - 800001 (Bihar) Ph.: (O) 0612-2545051 E-mail: rcpatna@nios.ac.in	Bihar
18. Pune	C/o Indian Institute of Education Campus, 128/2 JP Naik Road, Sriniketan Society, (Near Solaris Club) Kothrud, Pune-411029 (Maharashtra) Ph. (O) 020-229994803, Mob.: 8788081955 E-mail: rcpune@nios.ac.in	Maharashtra, Goa, Daman & Diu, Dadar & Nagar Haveli
19. Raipur	DIET Campus BTI Ground Shankar Nagar, Raipur-492007 Phone: 0771-2442147, 2442167 E-mail: rcraipur@nios.ac.in	Chhattisgarh
20. Ranchi	Old B.Ed. Building (Ground Floor) Zill School Campus, Near Shaheed Chowk, Ranchi-834001 E-mail: rcranchi@nios.ac.in Phone No.: 0651-2217030	Jharkhand
<b>NIOS Cell</b>		
21. NIOS Cell Darbhanga	Mohalla Kadirabad Near Bus Stand (West of Pashu Palan Vibhag) Beside Churi Market, Distt. Darbhanga-846004 Phone : 0627-2250628	

Name of the Region	Address of Regional Centre & Contact Number	States Covered
22. Shillong	Directorate of Educational Research & Training Campus (DERT), Laithumkhrum Shillong, Meghalaya-793011 E-mail: shillongcentre@nios.ac.in	Meghalaya
23. Port Blair	Adult Education in the Directorate A&N Administration Shiksha Sadan A&N Island, Port Blair	Port Blair

## NOTES

- 1. In the event of some doubt arising in the interpretation of provisions, practices and rules, the decision of the Chairperson, NIOS will be final.*
- 2. The NIOS reserves the right to amend, modify or alter any of these guidelines and bring them into effect through notification. Once notified, the guidelines would come into force.*
- 3. Every care has been taken to print correct information to the minutest possible level. The NIOS, however, is not responsible for any inadvertent mistakes cropping up during the printing and publishing of the Guidelines.*

**OFFICERS OF THE EVALUATION DEPARTMENT  
TO BE CONTACTED IN EMERGENCY  
Telephone Numbers/EPABX: 0120-4089 800**

Sl. No.	Name/Designation/E-mail	Office Number	Mobile Number
1.	<b>Sh. Karnail Singh</b> Director (Evaluation) direval@nios.ac.in	0120-4089893 0120-4089844	–
2.	<b>Sh. Aditi Ranjan Rout</b> Deputy Director (Eval.) rcell@nios.ac.in	0120-4089850	–
3.	<b>Sh. V. Sathish</b> Assistant Director (Eval.) adsecret@nios.ac.in	0120-4089868	09911611294
4.	Section Officer (Conf.) conf@nios.ac.i	0120-4089867	–
5.	<b>Sh. L.N. Rastogi</b> Section Officer (Result Cell)	0120-4089841	–

**LIST OF REGIONAL DIRECTORS OF NIOS**

Sl. No.	Designation/E-mail	Office Number	Mobile Number
1.	<b>Regional Director Bengaluru</b> rdbengaluru@nios.ac.in	<b>080-23464223</b>	<b>09810565173</b>
2.	<b>Regional Director Bhopal</b> rdbhopal@nios.ac.in	<b>0755-2660331</b>	<b>09707077905</b>
3.	<b>Regional Director Bhubaneswar</b> rdbbsr@nios.ac.in	<b>0674-2302688</b>	<b>09861341959</b>
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