



**ARWACHIN BHARTI BHAWAN SR. SEC. SCHOOL**  
**C- BLOCK, VIVEK VIHAR, DLEHI - 95**

# **SYLLABUS**

## **CLASS – IX & X**

**(SESSION 2025-26)**

**ENGLISH LANGUAGE AND LITERATURE**  
**Subject Code-184**  
**Classes-IX-X (2025-26)**

## **1. Background**

At the secondary stage of English language learning the textual materials and other resources should represent a wide range of learning experience. Literature has always played a significant role in learning language. However, it is felt that pupils should be apprised with contemporary issues, read authentic literature and experiences of people to reflect and build their personality traits.

While there is a trend for inclusion of a wider range of contemporary and authentic texts, accessible and culturally appropriate pieces of literature should play a pivotal role at the secondary stage of education. The English class is meant for reading literature from different perspectives and to engage in activities for developing communicative competence, creativity and enrichment of language skills. It should not be seen as a place merely to read poems and stories in, but an area of activities to develop the learner's imagination as a major aim of language study, and to equip the learner with communicative skills to perform various language functions through speech and writing.

## **2. Objectives:**

Objectives of the course are to enable learners to:

- build greater confidence and proficiency in oral and written communication
- develop the ability and knowledge required in order to engage in independent reflection and inquiry
- make appropriate usage of English language both written and oral
- communicate in various social settings and express agreement and disagreement with logic.
- equip learners with essential language skills to question and to articulate their point of view and arrive at conclusion through discussion and debate.
- build competence in the different aspects of the Language
- develop sensitivity to, and appreciation of world literature representing varieties of English and cultures embedded in it.
- enable the learner to access knowledge and information through reference skills (consulting a dictionary / thesaurus, library, internet, etc.)
- develop curiosity and creativity through extensive reading of literature from different time periods.

- facilitate self-learning to enable them to become independent learners
- review, organise and edit their own work and work done by peers
- give a brief oral description of events / incidents of topical interest and for real life situations.
- retell the contents of authentic audio texts (weather reports, public announcements, simple advertisements, short interviews, etc.)
- participate in conversations, discussions, etc., on topics of mutual interest in non-classroom situations
- narrate a story which has been depicted pictorially or in any other non-verbal mode
- respond, in writing, to business letters, official communications email etc.
- read and identify the main points / significant details of texts like scripts of audio-video interviews, discussions, debates, etc.
- write without prior preparation on a given topic and be able to defend or explain the stand taken / views expressed in the form of article, speech, or a debate
- write a summary of short lectures on familiar topics by making / taking notes
- write an assessment of different points of views expressed in a discussion / debate
- read poems effectively (with proper rhythm and intonation) and understands literary devices.
- transcode information from a graph / chart to a description / report and write a dialogue, short story or report
- develop appreciation for Indian languages (multilingualism), and Indian Literature.

### **3. Language Items**

In addition to consolidating the grammatical items practised earlier, the courses at the secondary level seek to reinforce the following explicitly:

- sequence of tenses
- reported speech in extended texts
- modal auxiliaries (those not covered at upper primary)
- non-finites (infinitives, gerunds, participles)
- conditional clauses
- complex and compound sentences
- phrasal verbs and prepositional phrases
- cohesive devices
- punctuation (semicolon, colon, dash, hyphen, parenthesis or use of brackets and exclamation mark)

#### 4. Methods and Techniques

The methodology is based on a multi-skill, activity-based, learner-centered approach. Care is taken to fulfill the functional (communicative), literary (aesthetic) and cultural (sociological) needs of the learner. In this situation, the teacher is the facilitator of learning, She/he presents language items, create situations which motivates the child to use English for the purposes of communication and expression. Aural-oral teaching and testing is an integral feature of the teaching-learning process. The electronic and print media could be used extensively. A few suggested activities are:

- Role play
- Simulating real life situations
- Dramatising and miming
- Problem solving and decision making
- Interpreting information given in tabular form and schedule
- Using newspaper clippings as a resource for comprehending and analysing issues.
- Borrowing situations and registers from the world around the learners, from books and from other disciplines
- Using language games, riddles, puzzles and jokes
- Interpreting pictures / sketches / cartoons
- Debating and discussing
- Narrating and discussing stories, anecdotes, etc.
- Reciting poems
- Working in pairs and groups
- Using media inputs - computer, television, video cassettes, tapes, software packages

#### ENGLISH LANGUAGE AND LITERATURE SYLLABUS CLASS – IX (2025-26)

Sections		Weightage
A	Reading Skills	20 Marks
B	Writing Skills and Grammar	20 Marks
C	Language through Literature	40 Marks

## **Section A**

### **Reading Skills**

#### **I. Reading Comprehension through Unseen Passage** **20 Marks**

1. Discursive passage of 400-450 words. **10 marks**
2. Case-based factual passage (with visual input- statistical data/chart etc.) of 200-250 words. **10 marks**

**(Total length of two passages to be 600-700 words)**

Multiple Choice Questions / Objective Type Questions/Very Short Answer Questions will be asked to assess comprehension, interpretation, analysis, inference, evaluation and vocabulary.

## **Section B**

### **Writing Skills and Grammar**

#### **II. Grammar** **10 Marks**

- Determiners
  - Tenses
  - Modals
  - Subject – verb concord
  - Reported speech
    - Commands and requests
    - Statements
    - Questions
3. The courses at the secondary level seek to cement high professional grasp of grammatical items and levels of accuracy. Accurate use of spelling, punctuation and grammar will be assessed through Gap Filling/ Editing/Transformation exercises. Ten out of twelve questions will be attempted.

#### **III. Writing Skills** **10 marks**

4. Writing a Descriptive Paragraph (word limit 100-120 words), describing a person / event/ situation, based on visual or verbal cue/s. One out of two questions to be answered. **5 marks**
5. Writing a Story (on a given cue/title)/Diary Entry, in 100-120 words. One out of two questions is to be answered. **5 marks**

**Section C**  
**Language through Literature**

**40 Marks**

**IV. Reference to the Context**

**5+5 = 10 Marks**

6. One extract out of two, from Drama / Prose.
7. One extract out of two, from poetry.

Multiple Choice Questions / Objective Type Questions will be asked to assess interpretation, analysis, inference, evaluation, appreciation and vocabulary.

**V. Short & Long Answer Questions**

- a. Four out of Five Short Answer Type Questions to be answered in 40-50 words from the book BEEHIVE to assess interpretation, analysis, inference and evaluation. **4x3=12 marks**
- b. Two out of Three Short Answer Type Questions to be answered in 40-50 words from the book MOMENTS to assess interpretation, analysis, inference and evaluation. **3x2=6 marks**
- c. One out of two Long Answer Type Questions from BEEHIVE to be answered in about 100-120 words to assess creativity, imagination and extrapolation beyond the text and across the text. This can also be a passage-based question taken from a situation/plot from the text. **6 marks**
- d. One out of two Long Answer Type Questions from MOMENTS, on theme or plot involving interpretation, extrapolation beyond the text and inference or character sketch to be answered in about 100-120 words. **6 marks**

**Prescribed Books: Published by NCERT, New Delhi**

**1.BEEHIVE**

**Prose**

- |                             |                      |
|-----------------------------|----------------------|
| 1. The Fun They Had         | 6. My Childhood      |
| 2. The Sound of Music       | 7. Reach for The Top |
| 3. The Little Girl          | 8. Kathmandu         |
| 4. A Truly Beautiful Mind   | 9. If I were You     |
| 5. The Snake and the Mirror |                      |

**Poems**

- |                               |                                 |
|-------------------------------|---------------------------------|
| 1. The Road Not taken         | 5. A Legend of the Northland    |
| 2. Wind                       | 6. No Men are Foreign           |
| 3. Rain on The Roof           | 7. On Killing a Tree            |
| 4. The Lake Isle of Innisfree | 8. A Slumber Did My Spirit Seal |

## 2. MOMENTS

- |                            |                          |
|----------------------------|--------------------------|
| 1. The Lost Child          | 5. The Happy Prince      |
| 2. The adventures of Toto  | 6. The Last Leaf         |
| 3. Iswaran the Storyteller | 7. A House is not a Home |
| 4. In the kingdom of fools | 8. The Beggar            |

## 3. WORDS AND EXPRESSIONS – I (WORKBOOK FOR CLASS IX) – Units 1 to 6 and Units 8,10 & 11

**NOTE: Teachers are suggested to:**

- (i) encourage classroom interaction among peers, students and teachers through activities such as role play, group work etc.
- (ii) reduce teacher-talk time and keep it to the minimum,
- (iii) take up questions for discussion to encourage pupils to participate and to express their ideas and defend their views.

Besides measuring learning outcome, texts serve the dual purpose of diagnosing mistakes and areas of non-learning. To make evaluation a true index of learners' knowledge, each language skill is to be assessed through a judicious mixture of different types of questions.

### INTERNAL ASSESSMENT

#### Listening and Speaking

Assessment of Listening and Speaking Skills will be for 05 marks.

It is recommended that listening and speaking skills should be regularly practiced.

Art-integrated projects based on activities like Role Play, Skit, Dramatization etc. must be used. Please refer to the Circular no. Acad-33/2020 dated 14<sup>th</sup> May 2020 at the [http://cbseacademic.nic.in/web\\_material/Circulars/2020/33\\_Circular\\_2020.pdf](http://cbseacademic.nic.in/web_material/Circulars/2020/33_Circular_2020.pdf) for details.

**Guidelines for the Assessment of Listening and Speaking Skills are given at Annexure I.**

**ENGLISH LANGUAGE AND LITERATURE**  
**CLASS – IX (2025-26)**

**Marks-80**

<b>Sections</b>	<b>Competencies</b>	<b>Total marks</b>
<b>Reading Comprehension</b>	Conceptual understanding, decoding, analyzing, inferring, interpreting and vocabulary	20
<b>Writing Skills and Grammar</b>	Creative expression of an opinion, reasoning, justifying, illustrating, appropriate style and tone, using appropriate format and fluency. Applying conventions, using integrated structures with accuracy and fluency	20
<b>Language through Literature</b>	Recalling, reasoning, appreciating, applying literary conventions, illustrating and justifying. Extract relevant information, identifying the central theme and sub-theme, understanding the writers' message and writing fluently.	40
<b>Total</b>		<b>80</b>
<p><b>For the details of Internal Assessment of 20 marks, please refer to the circular no. Acad-11/2019, dated March 06, 2019.</b></p>		



**ENGLISH LANGUAGE AND LITERATURE  
CLASS-X (2025-26)**

**SECTION - WISE WEIGHTAGE**

<b>Sections</b>		<b>Weightage</b>
A	Reading Skills	20 Marks
B	Writing Skills with Grammar	20 Marks
C	Language through Literature	40 Marks

**Section A  
Reading Skills**

**I. Reading Comprehension through Unseen Passage** **20 Marks**

1. Discursive passage of 400-450 words. **10 marks**
2. Case-based factual passage (with visual input- statistical data, chart etc.) of 200-250 words. **10 marks**

**(Total length of two passages to be 600-700 words)**

Multiple Choice Questions / Objective Type Questions, and Short Answer Questions (to be answered in 30-40 words) will be asked to assess comprehension, interpretation, analysis, inference, evaluation and vocabulary.

**Section B  
Writing Skills and Grammar**

**II Grammar** **10 Marks**

- Determiners
- Tenses
- Modals
- Subject – verb concord
- Reported speech
  - Commands and requests
  - Statements
  - Questions

3. The courses at the secondary level seek to cement high professional grasp of grammatical items and levels of accuracy. Accurate use of spelling, punctuation and grammar in context will be assessed through Gap Filling/ Editing/Transformation exercises. Ten out of 12 questions will have to be attempted.

### **III. Writing Skills**

**10 marks**

4. Writing a Formal Letter based on a given situation, in 100-120 words. One out of two questions is to be answered. **5 marks**
5. Writing an Analytical Paragraph in 100-120 words on a given Map/ Chart/ Graph/Cue/s. One out of two questions is to be answered. **5 marks**

### **Section C**

**40 Marks**

#### **Language through Literature**

### **IV. Reference to the Context**

**5+5=10 Marks**

6. One extract out of two from Drama / Prose.
7. One extract out of two from poetry.

Multiple Choice Questions / Objective Type Questions Very Short Answer Questions (one word/ One sentence), Short Answer Questions (to be answered in 30-40 words) will be asked to assess inference, analysis, interpretation, evaluation and vocabulary.

### **V. Short & Very Long Answer Questions**

**30 Marks**

8. Four out of Five Short Answer Type Questions to be answered in 40-50 words from the book FIRST FLIGHT to assess interpretation, analysis, inference and evaluation. **4x3=12 marks**
9. Two out of Three Short Answer Type Questions to be answered in 40-50 words each from FOOTPRINTS WITHOUT FEET to assess interpretation, analysis, inference and evaluation. **2x3=6 marks**
10. One out of two Long Answer Type Questions from FIRST FLIGHT to be answered in about 100-120 words each to assess creativity, imagination and extrapolation beyond the text and across the text. This can be a passage-based question taken from a situation/plot from the text. **6 marks**
11. One out of two Long Answer Type Questions from FOOTPRINTS WITHOUT FEET, on theme or plot involving interpretation, extrapolation beyond the text and inference or character sketch to be answered in about 100-120 words. **6 marks**

**Prescribed Books: Published by NCERT, New Delhi**

**1. FIRST FLIGHT**

**A. Prose**

1. A Letter to God
2. Nelson Mandela - Long Walk to Freedom
3. Stories About Flying
4. From the Diary of Anne Frank
5. Glimpses of India
6. Mijbil the Otter
7. Madam Rides the Bus
8. The Sermon at Benares
9. The Proposal (Play)

**B. Poems**

1. Dust of Snow
2. Fire and Ice
3. A Tiger in the Zoo
4. How to Tell Wild Animals
5. The Ball Poem
6. Amanda!
7. The Trees
8. Fog
9. The Tale of Custard the Dragon
10. For Anne Gregory

**2. FOOTPRINTS WITHOUT FEET**

1. A Triumph of Surgery
2. The Thief's Story
3. The Midnight Visitor
4. A Question of Trust
5. Footprints Without Feet
6. The Making of a Scientist
7. The Necklace
8. Bholi
9. The Book that Saved the Earth

**3. WORDS AND EXPRESSIONS – II (WORKBOOK FOR CLASS X) – Units 1 to 4 and Units 7 to 11**

**Note: Teachers are suggested to:**

- (i) encourage interaction among peers, students and teachers through activities such as role play, discussions, group work etc.
- (ii) reduce teacher-talking time and keep it to the minimum,
- (iii) take up questions for discussion to encourage pupils to participate and to marshal their ideas and express and defend their views, and
- (iv) follow the Speaking and Listening activities given in the NCERT books.

Besides measuring learning outcome, texts serve the dual purpose of diagnosing mistakes and areas of non-learning. To make evaluation a true index of learners' knowledge, each language skills to be assessed through a judicious mixture of different types of questions.

**INTERNAL ASSESSMENT**

Listening and Speaking Competencies

Assessment of Listening and Speaking Skills will be for 05 marks.

It is recommended that listening and speaking skills should be regularly practiced.

Art-integrated projects based on activities like Role Play, Skit, Dramatization etc. must be used. Please refer to the Circular no. Acad-33/2020 dated 14th May 2020 at the [http://cbseacademic.nic.in/web\\_material/Circulars/2020/33\\_Circular\\_2020.pdf](http://cbseacademic.nic.in/web_material/Circulars/2020/33_Circular_2020.pdf) for details

**Guidelines for the Assessment of Listening and Speaking Skills are given at Annexure I.**

**ENGLISH LANGUAGE AND LITERATURE**  
**CLASS – X (2025-26)**

**Marks 80**

<b>Sections</b>	<b>Competencies</b>	<b>Total marks</b>
<b>Reading Comprehension</b>	Conceptual understanding, decoding, analyzing, inferring, interpreting and vocabulary	20
<b>Writing Skills and Grammar</b>	Creative expression of an opinion, reasoning, justifying, illustrating, appropriate style and tone, using appropriate format and fluency. Applying conventions, using integrated structures with accuracy and fluency	20
<b>Language through Literature</b>	Recalling, reasoning, appreciating, applying literary conventions illustrating and justifying etc. Extract relevant information, identifying the central theme and sub-theme, understanding the writers' message and writing fluently.	40
<b>Total</b>		<b>80</b>

**For the details of Internal Assessment of 20 marks, please refer to the circular no. Acad-11/2019, dated March 06, 2019.**

### Guidelines for Assessment of Listening and Speaking Skills (ALS)

ALS is a component of the Subject Enrichment Activity under Internal Assessment. ALS must be seen as an integrated component of all four language skills rather than a compartment of two. Suggested activities, therefore, take into consideration an integration of the four language skills but during assessment, emphasis will be given to speaking and listening, since reading and writing are already being assessed in the written exam.

### Assessment of Listening and Speaking Skills: (5 Marks)

i. **Activities:**

- Subject teachers must refer to books prescribed in the syllabus.
- In addition to the above, teachers may plan their own activities and create their own material for assessing the listening and speaking skills.

ii. **Parameters for Assessment:** The listening and speaking skills are to be assessed on the following parameters:

- a. Interactive competence (Initiation & turn taking, relevance to the topic)
- b. Fluency (cohesion, coherence and speed of delivery)
- c. Pronunciation
- d. Language (grammar and vocabulary)

### SUGGESTIVE RUBRIC

Interaction	1.	2.	3.	4.	5.
	<ul style="list-style-type: none"> <li>• Contributions are mainly unrelated to those of other speakers</li> <li>• Shows hardly any initiative in the development of conversation</li> <li>• Very limited interaction</li> </ul>	<ul style="list-style-type: none"> <li>• Contributions are often unrelated to those of the other speaker</li> <li>• Generally passive in the development of conversation</li> </ul>	<ul style="list-style-type: none"> <li>• Develops interaction adequately, makes however minimal effort to initiate conversation</li> <li>• Needs constant prompting to take turns</li> </ul>	<ul style="list-style-type: none"> <li>• Interaction is adequately initiated and developed</li> <li>• Takes turn but needs some prompting</li> </ul>	<ul style="list-style-type: none"> <li>• Initiates &amp; logically develops simple conversation on familiar topics</li> <li>• Takes turns appropriately</li> </ul>

<b>Fluency &amp; Coherence</b>	<ul style="list-style-type: none"> <li>• Noticeably/ long pauses; rate of speech is slow</li> <li>• Frequent repetition and/or self-correction this is all right in informal conversation</li> <li>• Links only basic sentences; breakdown of coherence evident.</li> </ul>	<ul style="list-style-type: none"> <li>• Usually fluent; produces simple speech fluently, but loses coherence in complex communication</li> <li>• Often hesitates and/or resorts to slow speech</li> <li>• Topics partly developed; not always concluded logically</li> </ul>	<ul style="list-style-type: none"> <li>• Is willing to speak at length, however repetition is noticeable</li> <li>• Hesitates and/or self corrects; occasionally loses coherence</li> <li>• Topics developed, but usually not logically concluded</li> </ul>	<ul style="list-style-type: none"> <li>• Speaks without noticeable effort, with a little repetition</li> <li>• Demonstrates hesitation to find words or use correct grammatical structures and/or self-correction</li> <li>• Topics not fully developed to merit.</li> </ul>	<ul style="list-style-type: none"> <li>• Speaks fluently almost with no repetition &amp; minimal hesitation</li> <li>• Develops topic fully &amp; coherently</li> </ul>
<b>Pronunciation</b>	<ul style="list-style-type: none"> <li>• Frequent inaccurate pronunciation</li> <li>• Communication is severely affected</li> </ul>	<ul style="list-style-type: none"> <li>• Frequently unintelligible articulation</li> <li>• Frequent phonological errors</li> <li>• Major communication problems</li> </ul>	<ul style="list-style-type: none"> <li>• Largely correct pronunciation &amp; clear articulation except occasional errors</li> </ul>	<ul style="list-style-type: none"> <li>• Mostly correct pronunciation &amp; clear articulation</li> <li>• Is clearly understood most of the time; very few phonological errors</li> </ul>	<ul style="list-style-type: none"> <li>• Pronounces correctly &amp; articulates clearly</li> <li>• Is always comprehensible</li> <li>• uses appropriate intonation</li> </ul>
<b>Vocabulary &amp; Grammar</b>	<ul style="list-style-type: none"> <li>• Demonstrates almost no flexibility, and mostly struggles for appropriate words</li> <li>• Many Grammatical errors impacting communication</li> </ul>	<ul style="list-style-type: none"> <li>• Is able to communicate on some of the topics, with limited vocabulary.</li> <li>• Frequent errors, but self-corrects</li> </ul>	<ul style="list-style-type: none"> <li>• Is able to communicate on most of the topics, with limited vocabulary. A few grammatical errors</li> </ul>	<ul style="list-style-type: none"> <li>• Is able to communicate on most of the topics with appropriate vocabulary</li> <li>• Minor errors that do not hamper communication</li> </ul>	<ul style="list-style-type: none"> <li>• Is able to communicate on most of the topics using a wide range of appropriate vocabulary, using new words and expressions</li> <li>• No grammatical errors</li> </ul>

iii. **Schedule:**

- The practice of listening and speaking skills should be done throughout the academic year.
- The final assessment of the skills is to be done as per the convenience and schedule of the school.

**द्वितीय भाषा के रूप में हिंदी**  
**विषय कोड - 085**  
**कक्षा 9वीं - 10वीं (2025-26)**

**राष्ट्रीय शिक्षा नीति 2020** तथा केंद्रीय माध्यमिक शिक्षा बोर्ड द्वारा समय-समय पर दक्षता आधारित शिक्षा, कला समेकित अधिगम, अनुभवात्मक अधिगम को अपनाने की प्रेरणा दी गई है, जो शिक्षार्थियों की प्रतिभा को उजागर करने, खेल-खेल में सीखने पर बल देने, आनंदपूर्ण ज्ञानार्जन और विद्यार्जन के विविध तरीकों को अपनाने तथा अनुभव के द्वारा सीखने पर बल देती है।

**दक्षता आधारित शिक्षा** से तात्पर्य है- सीखने और मूल्यांकन करने का एक ऐसा दृष्टिकोण, जो शिक्षार्थी के सीखने के प्रतिफल और विषय में विशेष दक्षता को प्राप्त करने पर बल देता है। दक्षता वह क्षमता, कौशल, ज्ञान और दृष्टिकोण है, जो व्यक्ति को वास्तविक जीवन में कार्य करने में सहायता करती है। इससे शिक्षार्थी यह सीख सकते हैं कि ज्ञान और कौशल को किस प्रकार प्राप्त किया जाए तथा उन्हें वास्तविक जीवन की समस्याओं पर कैसे लागू किया जाए। जीवनोपयोगी बनाना तथा वास्तविक जीवन के अनुभवों से पाठ को समृद्ध करना ही दक्षता आधारित शिक्षा है। इसके लिए उच्च स्तरीय चिंतन कौशल पर विशेष बल देने की आवश्यकता है।

**कला समेकित अधिगम** को शिक्षण-अधिगम प्रक्रिया में सुनिश्चित करना अत्यधिक आवश्यक है। कला के संसार में कल्पना की एक अलग ही उड़ान होती है। कला एक व्यक्ति की रचनात्मक अभिव्यक्ति है। कला समेकित अधिगम से तात्पर्य है- कला के विविध रूपों संगीत, नृत्य, नाटक, कविता, रंगशाला, यात्रा, मूर्तिकला, आभूषण बनाना, गीत लिखना, नुक्कड़ नाटक, कोलाज, पोस्टर, कला प्रदर्शनी को शिक्षण अधिगम की प्रक्रिया का अभिन्न हिस्सा बनाना। किसी विषय को आरंभ करने के लिए आइस ब्रेकिंग गतिविधि के रूप में तथा सामंजस्यपूर्ण समझ पैदा करने के लिए अंतरविषयक या बहुविषयक परियोजनाओं के रूप में कला समेकित अधिगम का प्रयोग किया जाना चाहिए। इससे पाठ अधिक रोचक एवं ग्राह्य हो जाएगा।

**अनुभवात्मक अधिगम या आनुभविक ज्ञानार्जन** का उद्देश्य शैक्षिक वातावरण को शिक्षार्थी केंद्रित बनाने के साथ-साथ स्वयं मूल्यांकन करने, आलोचनात्मक रूप से सोचने, निर्णय लेने तथा ज्ञान का निर्माण कर उसमें पारंगत होने से है। यहाँ शिक्षक की भूमिका सुविधा प्रदाता व प्रेक्षक की रहती है। ज्ञानार्जन-आनुभविक ज्ञानार्जन, सहयोगात्मक तथा स्वतंत्र रूप से होता है और यह शिक्षार्थियों को एक साथ कार्य करने तथा स्वयं के अनुभव द्वारा सीखने पर बल देता है। यह सिद्धांत और व्यवहार के बीच की दूरी को कम करता है।

भारत एक बहुभाषी देश है जिसमें बहुत सी क्षेत्रीय भाषाएँ रची बसी हैं। भाषिक और सांस्कृतिक दृष्टि से भिन्न होने के बावजूद भारतीय परंपरा में बहुत कुछ ऐसा है जो एक दूसरे को जोड़ता है। यही कारण है कि मातृभाषा के रूप में अलग भाषा को पढ़ने वाला विद्यार्थी जब दूसरी भाषा के रूप में हिंदी का चुनाव करता है तो उसके पास अभिव्यक्ति का एक दृढ़ आधार पहली भाषा के रूप में पहले से ही मौजूद होता है। इसलिए छठी से आठवीं कक्षा में सीखी हुई हिंदी का विकास भी वह तेजी से करने लगता है। आठवीं कक्षा तक वह हिंदी भाषा में सुनने, पढ़ने, लिखने और कुछ-कुछ बोलने का अभ्यास कर चुका होता है। हिंदी की बाल पत्रिकाएँ और छिटपुट रचनाएँ पढ़ना भी अब उसे आ गया है। इसलिए जब वह नवीं एवं दसवीं कक्षा में हिंदी पढ़ेगा तो जहाँ एक ओर हिंदी भाषा के माध्यम से सारे देश से जुड़ेगा वहीं दूसरी ओर अपने क्षेत्र और परिवेश को हिंदी भाषा के माध्यम से जानने की कोशिश भी करेगा, क्योंकि किशोरवय के इन बच्चों के मानसिक धरातल का विकास विश्व स्तर तक पहुँच चुका होता है।



## शिक्षण उद्देश्य

- दैनिक जीवन में हिंदी में समझने-बोलने के साथ-साथ लिखने की क्षमता का विकास करना।
- हिंदी के किशोर-साहित्य, अखबार व पत्रिकाओं को पढ़कर समझ पाना और उसका आनंद उठाने की क्षमता का विकास करना।
- औपचारिक विषयों और संदर्भों में बातचीत में भाग ले पाने की क्षमता का विकास करना।
- हिंदी के ज़रिए अपने अनुभव संसार को लिखकर सहज अभिव्यक्ति कर पाने में सक्षम बनाना।
- संचार के विभिन्न माध्यमों (प्रिंट और इलेक्ट्रॉनिक) में प्रयुक्त हिंदी के विभिन्न रूपों को समझने की योग्यता का विकास करना।
- कक्षा में बहुभाषिक, बहुसांस्कृतिक संदर्भों के प्रति संवेदनशील सकारात्मक सोच बनाना।
- अपनी मातृभाषा और परिवेशगत भाषा को साथ रखकर हिंदी की संरचनाओं की समझ बनाना।
- सामाजिक मुद्दों पर समझ बनाना। (जाति, लिंग तथा आर्थिक विषमता)
- कविता, कहानी तथा घटनाओं को रोचक ढंग से लिखना।
- भाषा एवं साहित्य को समझने एवं आत्मसात करने की दक्षता का विकास।

## शिक्षण युक्तियाँ

- द्वितीय भाषा के रूप में पढ़ाई जा रही हिंदी भाषा का स्तर ऐसा होना चाहिए कि उसकी गति धीरे-धीरे बढ़ सके, इसके लिए हिंदी अध्यापकों को बड़े धीरज से अपने अध्यापन कार्यक्रमों को नियोजित करना होगा। किसी भी द्वितीय भाषा में निपुणता प्राप्त करने-कराने का एक ही उपाय है-उस भाषा का लगातार रोचक अभ्यास करना-कराना। ये अभ्यास जितने अधिक रोचक, सक्रिय एवं प्रासंगिक होंगे विद्यार्थियों की भाषिक उपलब्धि भी उतनी ही तेज़ी से हो सकेगी। मुखर भाषिक अभ्यास के लिए वार्तालाप, रोचक कहानी सुनना-सुनाना, घटना-वर्णन, चित्र-वर्णन, संवाद, वाद-विवाद, अभिनय, भाषण प्रतियोगिताएँ, कविता पाठ और अंत्याक्षरी जैसी गतिविधियों का सहारा लिया जा सकता है।
- **काव्य भाषा के मर्म** से विद्यार्थी का परिचय कराने के लिए ज़रूरी होगा कि किताबों में आए काव्यांशों की लयबद्ध प्रस्तुतियों के ऑडियो-वीडियो कैसेट तैयार किए जाएँ। अगर आसानी से कोई **गायक/गायिका** मिले तो कक्षा में मध्यकालीन साहित्य के अध्यापन-शिक्षण में उससे मदद ली जानी चाहिए।
- एनसीईआरटी द्वारा तैयार किए गए **अधिगम प्रतिफल** /सीखने-सिखाने की प्रक्रिया जो इस पाठ्यचर्या के साथ संलग्नक के रूप में उपलब्ध है, को शिक्षक द्वारा क्षमता आधारित शिक्षा का लक्ष्य प्राप्त करने के लिये अनिवार्य रूप से इस्तेमाल करने की आवश्यकता है।
- मानव संसाधन विकास मंत्रालय के विभिन्न संगठनों तथा स्वतंत्र निर्माताओं द्वारा उपलब्ध कराए गए अन्य कार्यक्रम/ई-सामग्री/ वृत्तचित्रों और सिनेमा को शिक्षण-सामग्री के तौर पर इस्तेमाल करने की ज़रूरत है। इनके प्रदर्शन के क्रम में इन पर लगातार बातचीत के ज़रिए **सिनेमा के माध्यम से भाषा के प्रयोग** की विशिष्टता की पहचान कराई जा सकती है और हिंदी की अलग-अलग छटा दिखाई जा सकती है।
- कक्षा में सिर्फ़ एक पाठ्यपुस्तक की उपस्थिति से बेहतर होगा कि शिक्षक के हाथ में विभिन्न प्रकार की पाठ्यसामग्री को विद्यार्थी देखें और कक्षा में अलग-अलग मौकों पर शिक्षक उनका इस्तेमाल कर सकें।

- भाषा लगातार ग्रहण करने की क्रिया में बनती है, इसे प्रदर्शित करने का एक तरीका यह भी है कि शिक्षक खुद यह सिखा सकें कि वे भी **शब्दकोश, साहित्यकोश, संदर्भग्रंथ** की लगातार मदद ले रहे हैं। इससे विद्यार्थियों में इनके इस्तेमाल करने को लेकर तत्परता बढ़ेगी। अनुमान के आधार पर निकटतम अर्थ तक पहुँचकर संतुष्ट होने की जगह वे सटीक अर्थ की खोज करने के लिए प्रेरित होंगे। इससे शब्दों की अलग-अलग रंगत का पता चलेगा, वे शब्दों के बारीक अंतर के प्रति और सजग हो पाएँगे।
- भिन्न क्षमता वाले विद्यार्थियों के लिए उपयुक्त शिक्षण-सामग्री का इस्तेमाल किया जाए तथा किसी भी प्रकार से उन्हें अन्य विद्यार्थियों से कमतर या अलग न समझा जाए।
- कक्षा में अध्यापन को हर प्रकार की विविधताओं (लिंग, धर्म, जाति, वर्ग, भाषा आदि) के प्रति सकारात्मक और संवेदनशील वातावरण निर्मित करना चाहिए।

### **श्रवण (सुनने) और वाचन (बोलने) की योग्यताएँ**

- प्रवाह के साथ बोली जाती हुई हिंदी को अर्थबोध के साथ समझना।
- हिंदी शब्दों का उचित उच्चारण करना तथा हिंदी के स्वाभाविक अनुतान का प्रयोग करना।
- सामान्य विषयों पर बातचीत करना और परिचर्चा में भाग लेना।
- हिंदी कविताओं को उचित लय, आरोह-अवरोह और भाव के साथ पढ़ना।
- सरल विषयों पर कुछ तैयारी के साथ दो-चार मिनट का भाषण देना।
- हिंदी में स्वागत करना, परिचय और धन्यवाद देना।
- अभिनय में भाग लेना।

### **श्रवण तथा वाचन परीक्षा हेतु दिशा-निर्देश**

- **श्रवण (सुनना) (2.5 अंक) :** वर्णित या पठित सामग्री को सुनकर अर्थग्रहण करना, वार्तालाप करना, वाद-विवाद, भाषण, कविता पाठ आदि को सुनकर समझना, विश्लेषण करना, मूल्यांकन करना और तदनुसार अभिव्यक्ति के ढंग को समझना।
- **वाचन (बोलना) (2.5 अंक) :** भाषण, सस्वर कविता-पाठ, वार्तालाप और उसकी औपचारिकता, कार्यक्रम-प्रस्तुति, कथा-कहानी अथवा घटना सुनाना, परिचय देना, भावानुकूल संवाद-वाचन।

### **श्रवण (सुनना) एवं वाचन (बोलना) कौशल :**

- परीक्षक किसी प्रासंगिक विषय पर एक अनुच्छेद का स्पष्ट वाचन करेगा। अनुच्छेद तथ्यात्मक या सुझावात्मक हो सकता है। अनुच्छेद लगभग 120 शब्दों का होना चाहिए।

**या**

- परीक्षक 1-1.5 मिनट का श्रव्य अंश (ऑडियो क्लिप) सुनवाएगा। अंश रोचक होना चाहिए। कथ्य/ घटना पूर्ण एवं स्पष्ट होनी चाहिए। वाचक का उच्चारण शुद्ध, स्पष्ट एवं विराम चिह्नों के उचित प्रयोग सहित होना चाहिए।
- परीक्षार्थी ध्यानपूर्वक परीक्षक/ऑडियो क्लिप को सुनने के पश्चात परीक्षक द्वारा पूछे गए प्रश्नों का अपनी समझ से मौखिक अथवा कार्यपत्रक के माध्यम से उत्तर देंगे।

## कौशलों के अंतरण का मूल्यांकन

(इस बात का निश्चय करना कि क्या विद्यार्थी में श्रवण और वाचन की निम्नलिखित योग्यताएँ हैं)

	श्रवण (सुनना)		वाचन (बोलना)
1	परिचित संदर्भों में प्रयुक्त शब्दों और पदों को समझने की सामान्य योग्यता है।	1	केवल अलग-अलग शब्दों और पदों के प्रयोग की योग्यता प्रदर्शित करता है।
2	छोटे सुसंबद्ध कथनों को परिचित संदर्भों में समझने की योग्यता है।	2	परिचित संदर्भों में शुद्धता से केवल छोटे संबद्ध कथनों का सीमित प्रयोग करता है।
3	परिचित या अपरिचित दोनों संदर्भों में कथित सूचना को स्पष्ट समझने की योग्यता है।	3	अपेक्षाकृत दीर्घ भाषण में जटिल कथनों के प्रयोग की योग्यता प्रदर्शित करता है।
4	दीर्घ कथनों को पर्याप्त शुद्धता से समझता है और निष्कर्ष निकाल सकता है।	4	अपरिचित स्थितियों में विचारों को तार्किक ढंग से संगठित कर धारा-प्रवाह रूप में प्रस्तुत करता है।
5	जटिल कथनों के विचार-बिंदुओं को समझने और विश्लेषित करने की योग्यता प्रदर्शित करने की क्षमता है।	5	उद्देश्य और श्रोता के लिए उपयुक्त शैली को अपना सकता है।

## पठन कौशल

### पढ़ने की योग्यताएँ

- हिंदी में कहानी, निबंध, यात्रा-वर्णन, जीवनी, पत्र, डायरी आदि को अर्थबोध के साथ पढ़ना।
- पाठ्यवस्तु के संबंध में विचार करना और अपना मत व्यक्त करना।
- संदर्भ साहित्य को पढ़कर अपने काम के लायक सूचना एकत्र करना।
- पठित सामग्री के विभिन्न अंशों का परस्पर संबंध समझना।
- पठित वस्तु का सारांश तैयार करना।
- भाषा, विचार एवं शैली की सराहना करना।
- साहित्य के प्रति अभिरुचि का विकास करना।

### लिखने की योग्यताएँ

- लिखते हुए व्याकरण-सम्मत भाषा का प्रयोग करना।
- हिंदी के परिचित और अपरिचित शब्दों की सही वर्तनी लिखना।
- विराम चिह्नों का समुचित प्रयोग करना।
- लेखन के लिए सक्रिय (व्यवहारोपयोगी) शब्द भंडार की वृद्धि करना।
- प्रभावपूर्ण भाषा तथा लेखन-शैली का स्वाभाविक रूप से प्रयोग करना।
- उपयुक्त अनुच्छेदों में बाँटकर लिखना।

- प्रार्थना पत्र, निमंत्रण पत्र, बधाई पत्र, संवेदना पत्र, आदेश पत्र, ईमेल, एस.एम.एस आदि लिखना और विविध प्रपत्रों को भरना।
- विविध स्रोतों से आवश्यक सामग्री एकत्र कर एक अभीष्ट विषय पर अनुच्छेद लिखना।
- देखी हुई घटनाओं का वर्णन करना और उन पर अपनी प्रतिक्रिया प्रकट करना।
- पढ़ी हुई कहानी को संवाद में तथा संवाद को कहानी में परिवर्तित करना।
- समारोह और गोष्ठियों की सूचना और प्रतिवेदन तैयार करना।
- लिखने में सृजनात्मकता लाना।
- अनावश्यक काट-छाँट से बचते हुए सुपाठ्य लेखन कार्य करना
- दो भिन्न पाठों की पाठ्यवस्तु पर चिंतन करके उनके मध्य की संबद्धता (अंतर्संबंधों) पर अपने विचार अभिव्यक्त करने में सक्षम होना।
- रटे-रटाए वाक्यों के स्थान पर अभिव्यक्तिपरक/ स्थिति आधारित/ उच्च चिंतन क्षमता वाले प्रश्नों पर सहजता से अपने मौलिक विचार प्रकट करना।

## रचनात्मक अभिव्यक्ति

### अनुच्छेद लेखन

- **पूर्णता** – संबंधित विषय के सभी पक्षों को अनुच्छेद के सीमित आकार में संयोजित करना।
- **क्रमबद्धता** – विचारों को क्रमबद्ध एवं तर्कसंगत विधि से प्रकट करना।
- **विषय-केंद्रित** – प्रारंभ से अंत तक अनुच्छेद का एक सूत्र में बँधा होना।
- **सामासिकता** – अनावश्यक विस्तार न देकर सीमित शब्दों में यथासंभव विषय संबद्ध पूरी बात कहने का प्रयास करना।

### पत्र लेखन

- अनौपचारिक पत्र द्वारा पारस्परिक संबंधों मैत्रीपूर्ण भावों को व्यक्त करने हेतु सरल, संक्षिप्त लेखन शैली का विकास।
- औपचारिक पत्रों द्वारा दैनंदिनी जीवन की विभिन्न स्थितियों में कार्य, व्यापार, संवाद, परामर्श, अनुरोध तथा सुझाव के लिए प्रभावी एवं स्पष्ट संप्रेषण क्षमता का विकास।
- सरल और बोलचाल की भाषा शैली, उपयुक्त, सटीक शब्दों के प्रयोग, सीधे-सादे ढंग से स्पष्ट और प्रत्यक्ष बात की प्रस्तुति।
- प्रारूप की आवश्यक औपचारिकताओं के साथ सुस्पष्ट, सुलझे और क्रमबद्ध विचार आवश्यक; तथ्य, संक्षिप्तता और संपूर्णता के साथ प्रभावी प्रस्तुति।

### विज्ञापन लेखन

(विज्ञापित वस्तु / विषय को केंद्र में रखते हुए)

- विज्ञापित वस्तु के विशिष्ट गुणों का उल्लेख
- आकर्षक लेखन शैली
- प्रस्तुति में नयापन, वर्तमान से जुड़ाव तथा दूसरों से भिन्नता
- विज्ञापन में आवश्यकतानुसार नारे (स्लोगन) का उपयोग
- विज्ञापन लेखन में बॉक्स, चित्र अथवा रंग का उपयोग अनिवार्य नहीं है, किंतु समय होने पर प्रस्तुति को प्रभावी बनाने के लिए इनका उपयोग किया जा सकता है।

## चित्र-वर्णन

(चित्र में दिखाई दे रहे दृश्य / घटना को कल्पनाशक्ति से अपने शब्दों में लिखना)

- परिवेश की समझ
- सूक्ष्म विवरणों पर ध्यान
- दृश्यानुकूल भाषा
- क्रमबद्धता और तारतम्यता
- प्रभावशाली अभिव्यक्ति

## संवाद लेखन

(दी गई परिस्थितियों के आधार पर संवाद लेखन)

- सीमा के भीतर एक दूसरे से जुड़े सार्थक और उद्देश्यपूर्ण संवाद
- पात्रों के अनुकूल भाषा शैली
- कोष्ठक में वक्ता के हाव भाव का संकेत
- संवाद लेखन के अंत तक विषय मुद्दे पर वार्ता

## सूचना लेखन

(औपचारिक शैली में व्यावहारिक जीवन से संबंधित विषयों पर आधारित सूचना लेखन)

- सरल एवं बोधगम्य भाषा
- विषय की स्पष्टता
- विषय से जुड़ी संपूर्ण जानकारी
- औपचारिक शिष्टाचार का निर्वाह

## ई-मेल लेखन

(विविध विषयों पर आधारित औपचारिक ई-मेल लेखन)

- सरल, शिष्ट व बोधगम्य भाषा
- विषय से संबद्धता
- संक्षिप्त कलेवर, किंतु विषयगत संपूर्ण जानकारी
- व्यावहारिक/कार्यालयी शिष्टाचार व औपचारिकताओं का निर्वाह

## लघुकथा लेखन

(दिए गए विषय/शीर्षक आदि के आधार पर रचनात्मक सोच के साथ लघुकथा लेखन)

- निरंतरता
- कथात्मकता
- प्रभावी संवाद/पात्रानुकूल संवाद
- रचनात्मकता, कल्पनाशक्ति का उपयोग
- जिज्ञासा/रोचकता
- उद्देश्य केंद्रीयता

## हिंदी पाठ्यक्रम -ब

विषय कोड - 085

कक्षा 9वीं (2025-26)

### परीक्षा हेतु पाठ्यक्रम विनिर्देशन

खंड		भारांक
क	अपठित बोध	14
ख	व्यावहारिक व्याकरण	16
ग	पाठ्यपुस्तक एवं पूरक पाठ्यपुस्तक	30
घ	रचनात्मक लेखन	20

- भारांक-{80 (वार्षिक परीक्षा) + 20 (आंतरिक परीक्षा)}

निर्धारित समय- 3 घंटे

भारांक-80

वार्षिक बोर्ड परीक्षा हेतु भार विभाजन				
खंड - क (अपठित बोध)				
	विषयवस्तु		उपभार	कुल भार
1	अपठित गद्यांश पर बोध, चिंतन, विश्लेषण, सराहना आदि पर बहुविकल्पीय, अतिलघूत्तरात्मक एवं लघूत्तरात्मक प्रश्न			
	i	दो अपठित गद्यांश लगभग 200 शब्दों के । एक अंकीय तीन बहुविकल्पी प्रश्न (1×3=3) पूछे जाएँगे अतिलघूत्तरात्मक एवं लघूत्तरात्मक प्रश्न (2×2=4) पूछे जाएँगे	7+7	14
	खंड - ख (व्यावहारिक व्याकरण)			
2	व्याकरण के लिए निर्धारित विषयों पर विषयवस्तु का बोध, भाषिक बिंदु/ संरचना आदि पर अतिलघूत्तरात्मक प्रश्न   (1×16) कुल 20 प्रश्न पूछे जाएँगे, जिनमें से केवल 16 प्रश्नों के उत्तर देने होंगे			
	i	शब्द और पद (2 अंक) (1×2=2) (3 में से 2 प्रश्न)	2	16
	ii	अनुस्वार (1 अंक), अनुनासिक (1 अंक) (3 में से 2 प्रश्न)	2	
	iii	उपसर्ग (2 अंक), प्रत्यय (2 अंक) (5 में से 4 प्रश्न)	4	
	iv	स्वर संधि (3 अंक) (4 में से 3 प्रश्न)	3	

	v	विराम चिह्न (2 अंक) (3 में से 2 प्रश्न)	2	
	vi	अर्थ की दृष्टि से वाक्य भेद (3 अंक) (4 में से 3 प्रश्न)	3	
3	<b>खंड - ग (पाठ्यपुस्तक एवं पूरक पाठ्यपुस्तक)</b>			
	अ	<b>गद्य खंड (पाठ्यपुस्तक)</b>	11	
	1	स्पर्श (भाग-1) से निर्धारित पाठों में से गद्यांश के आधार पर विषयवस्तु का ज्ञान, बोध, अभिव्यक्ति आदि पर एक अंकीय पाँच <b>बहुविकल्पीय</b> प्रश्न पूछे जाएँगे। (1x5)	5	
	2	स्पर्श (भाग-1) से निर्धारित पाठों में से विषयवस्तु का ज्ञान, बोध, अभिव्यक्ति आदि पर तीन प्रश्न पूछे जाएँगे (25-30 शब्द-सीमा) (विकल्प सहित 4 में से 3 प्रश्न करने होंगे) (2x3)	6	
	ब	<b>काव्य खंड (पाठ्यपुस्तक)</b>	11	30
	1	स्पर्श (भाग-1) से निर्धारित कविताओं में से काव्यांश के आधार पर एक अंकीय पाँच <b>बहुविकल्पीय</b> प्रश्न पूछे जाएँगे (1x5)	5	
	2	स्पर्श (भाग-1) से निर्धारित कविताओं के आधार पर विद्यार्थियों का काव्यबोध परखने हेतु तीन प्रश्न पूछे जाएँगे (25-30 शब्द-सीमा)। (विकल्प सहित 4 में से 3 प्रश्न करने होंगे) (2x3)	6	
	स	<b>पूरक पाठ्यपुस्तक कृतिका भाग - 1</b>	8	
		संचयन (भाग-1) से निर्धारित पाठों पर आधारित दो प्रश्न पूछे जाएँगे (50-60 शब्द-सीमा)। (विकल्प सहित 3 में से 2 प्रश्न करने होंगे) (4x2)	8	
	<b>खंड - घ (रचनात्मक लेखन)</b>			
2	<b>लेखन</b>			
	क	विभिन्न विषयों और संदर्भों पर विद्यार्थियों के तर्कसंगत विचार प्रकट करने की क्षमता को परखने के लिए संकेत-बिंदुओं पर आधारित समसामयिक एवं व्यावहारिक जीवन से जुड़े हुए तीन विषयों में से किसी एक विषय पर लगभग 120 शब्दों में अनुच्छेद लेखन (5x1)	5	
	ख	अभिव्यक्ति की क्षमता पर केंद्रित अनौपचारिक विषयों में लगभग 100 शब्दों में किसी एक विषय पर पत्र। (5x1)	5	20
	ग	किसी दृश्य/घटना के चित्र पर आधारित लेखन (5x1) (लगभग 100 शब्दों में) (बिना किसी विकल्प के)	5	

	घ	भाव एवं दृश्य संकेतो के आधार पर संवाद लेखन (लगभग 100 शब्दों में) (5x1) (विकल्प सहित)	5	
		<b>कुल</b>		<b>80</b>
		<b>आंतरिक मूल्यांकन</b>		20
	अ	सामयिक आकलन	5	
	ब	बहुविध आकलन	5	
	स	पोर्टफोलियो	5	
	द	श्रवण एवं वाचन	5	
		<b>कुल</b>		<b>100</b>

निर्धारित पुस्तकें:

1. स्पर्श, भाग-1, एन.सी.ई.आर.टी., नई दिल्ली द्वारा प्रकाशित नवीनतम संस्करण
2. संचयन, भाग-1, एन.सी.ई.आर.टी., नई दिल्ली द्वारा प्रकाशित नवीनतम संस्करण

❖ नोट : निम्नलिखित पाठों से प्रश्न नहीं पूछे जाएँगे-

स्पर्श (भाग -1)	<ul style="list-style-type: none"> <li>• धर्म की आड़ (पूरा पाठ)</li> <li>• आदमीनामा (पूरा पाठ)</li> <li>• एक फूल की चाह (पूरा पाठ)</li> </ul>
संचयन (भाग-1)	<ul style="list-style-type: none"> <li>• हामिद खाँ (पूरा पाठ)</li> <li>• दिये जल उठे (पूरा पाठ)</li> </ul>



हिंदी पाठ्यक्रम -ब

विषय कोड - 085

कक्षा 10वीं (2025-26)

परीक्षा हेतु पाठ्यक्रम विनिर्देशन

खंड		भारांक
क	अपठित बोध	14
ख	व्यावहारिक व्याकरण	16
ग	पाठ्यपुस्तक एवं पूरक पाठ्यपुस्तक	28
घ	रचनात्मक लेखन	22

भारांक- 80 (वार्षिक बोर्ड परीक्षा )+20 (आंतरिक परीक्षा)

निर्धारित समय- 3 घंटे

भारांक-80

वार्षिक बोर्ड परीक्षा हेतु भार विभाजन				
खंड - क (बहुविकल्पी प्रश्न)				
	विषयवस्तु		उप भार	कुल भार
1	अपठित गद्यांश पर बोध, चिंतन, विश्लेषण, सराहना आदि पर बहुविकल्पीय, अतिलघूत्तरात्मक एवं लघूत्तरात्मक प्रश्न			
	अ	दो अपठित गद्यांश लगभग 200 शब्दों के । एक अंकीय तीन बहुविकल्पी प्रश्न (1×3=3) पूछे जाएँगे अतिलघूत्तरात्मक एवं लघूत्तरात्मक प्रश्न (2×2=4) पूछे जाएँगे	7+7	14
खंड - ख (व्यावहारिक व्याकरण)				
2	व्याकरण के लिए निर्धारित विषयों पर विषयवस्तु का बोध, भाषिक बिंदु/ संरचना आदि पर अतिलघूत्तरात्मक/लघूत्तरात्मक प्रश्न। (1×16) (कुल 20 प्रश्न पूछे जाएँगे, जिनमें से केवल 16 प्रश्नों के उत्तर देने होंगे)			
	1	पदबंध (1×4=4) (5 में से 4 प्रश्न करने होंगे)	4	16
	2	रचना के आधार पर वाक्य रूपांतरण (1×4=4) (5 में से 4 प्रश्न करने होंगे)	4	
	3	समास (1×4=4) (5 में से 4 प्रश्न करने होंगे)	4	
	4	मुहावरे (1×4=4) (5 में से 4 प्रश्न करने होंगे)	4	
खंड - ग (पाठ्यपुस्तक एवं पूरक पाठ्यपुस्तक)				
3				

अ	गद्य खंड (पाठ्यपुस्तक)	11	28
	1 स्पर्श (भाग-2) से निर्धारित पाठों में से गद्यांश के आधार पर विषयवस्तु का ज्ञान, बोध, अभिव्यक्ति आदि पर एक अंकीय पाँच बहुविकल्पी प्रश्न पूछे जाएँगे। (1x5)	5	
	2 स्पर्श (भाग-2) से निर्धारित पाठों में से विषयवस्तु का ज्ञान, बोध, अभिव्यक्ति आदि पर तीन प्रश्न पूछे जाएँगे। (विकल्प सहित- 25-30 शब्द-सीमा वाले 4 में से 3 प्रश्न करने होंगे) (2x3)	6	
ब	काव्य खंड (पाठ्यपुस्तक)	11	
	1 स्पर्श (भाग-2) से निर्धारित कविताओं में से काव्यांश के आधार पर एक अंकीय पाँच बहुविकल्पी प्रश्न पूछे जाएँगे (1x5)	5	
	2 स्पर्श (भाग-2) से निर्धारित कविताओं के आधार पर विद्यार्थियों का काव्यबोध परखने हेतु तीन प्रश्न पूछे जाएँगे। (विकल्प सहित-25-30 शब्द-सीमा वाले 4 में से 3 प्रश्न करने होंगे) (2x3)	6	
स	पूरक पाठ्यपुस्तक संचयन भाग - 2	6	
	संचयन (भाग-2) से निर्धारित पाठों पर आधारित दो प्रश्न पूछे जाएँगे। (3x2) (विकल्प सहित-50-60 शब्द-सीमा वाले 3 में से 2 प्रश्न करने होंगे)	6	
खंड - घ (रचनात्मक लेखन)			
i	विभिन्न विषयों और संदर्भों पर विद्यार्थियों के तर्कसंगत विचार प्रकट करने की क्षमता को परखने के लिए संकेत-बिंदुओं पर आधारित समसामयिक एवं व्यावहारिक जीवन से जुड़े हुए तीन विषयों में से किसी एक विषय पर लगभग 120 शब्दों में अनुच्छेद लेखन (5x1)	5	22
ii	अभिव्यक्ति की क्षमता पर केंद्रित औपचारिक विषयों में से किसी एक विषय पर लगभग 100 शब्दों में पत्र (विकल्प सहित) (5x1)	5	
iii	व्यावहारिक जीवन से संबंधित विषयों पर आधारित लगभग 60 शब्दों में सूचना लेखन। (विकल्प सहित) (4x1)	4	
iv	विषय से संबंधित लगभग 40 शब्दों के अंतर्गत विज्ञापन लेखन (विकल्प सहित) (3x1)	3	
v	विविध विषयों पर आधारित लगभग 80 शब्दों में ई-मेल लेखन (5x1) अथवा	5	



**Mathematics**  
**Subject Code – 041 & 241**  
**Classes IX-X (2025 – 26)**

The Syllabus in the subject of Mathematics has undergone changes from time to time in accordance with growth of the subject and emerging needs of the society. The present revised syllabus has been designed in accordance with National Curriculum Framework 2005 and as per guidelines given in the Focus Group on Teaching of Mathematics which is to meet the emerging needs of all categories of students. For motivating the teacher to relate the topics to real life problems and other subject areas, greater emphasis has been laid on applications of various concepts.

The curriculum at Secondary stage primarily aims at enhancing the capacity of students to employ Mathematics in solving day-to-day life problems and studying the subject as a separate discipline. It is expected that students should acquire the ability to solve problems using algebraic methods and apply the knowledge of simple trigonometry to solve problems of height and distances. Carrying out experiments with numbers and forms of geometry, framing hypothesis and verifying these with further observations form inherent part of Mathematics learning at this stage. The proposed curriculum includes the study of number system, algebra, geometry, trigonometry, mensuration, statistics, graphs and coordinate geometry, etc.

The teaching of Mathematics should be imparted through activities which may involve the use of concrete materials, models, patterns, charts, pictures, posters, games, puzzles and experiments.

**Objectives** The broad objectives of teaching of Mathematics at secondary stage are to help the learners to:

- consolidate the Mathematical knowledge and skills acquired at the upper primary stage;
- acquire knowledge and understanding, particularly by way of motivation and visualization of basic concepts, terms, principles and symbols and underlying processes and skills;
- develop mastery of basic algebraic skills;
- develop drawing skills;
- feel the flow of reason while proving a result or solving a problem;
- apply the knowledge and skills acquired to solve problems and wherever possible, by more than one method;
- to develop ability to think, analyze and articulate logically;
- to develop awareness of the need for national integration, protection of environment, observance of small family norms, removal of social barriers, elimination of gender biases;
- to develop necessary skills to work with modern technological devices and mathematical software's.
- to develop interest in mathematics as a problem-solving tool in various fields for its beautiful structures and patterns, etc.
- to develop reverence and respect towards great Mathematicians for their contributions to the field of Mathematics;
- to develop interest in the subject by participating in related competitions;
- to acquaint students with different aspects of Mathematics used in daily life;
- to develop an interest in students to study Mathematics as a discipline.

## COURSE STRUCTURE CLASS – IX

Units	Unit Name	Marks
I	NUMBER SYSTEMS	10
II	ALGEBRA	20
III	COORDINATE GEOMETRY	04
IV	GEOMETRY	27
V	MENSURATION	13
VI	STATISTICS	06
	<b>Total</b>	<b>80</b>

S. No.	Content	Competencies	Explanation
<b>Unit 1: Number Systems</b>			
1.	<b>REAL NUMBERS</b> <ol style="list-style-type: none"> <li>Review of representation of natural numbers, integers, rational numbers on the number line. Representation of terminating/non-terminating recurring decimals on the number line through successive magnification, Rational numbers as recurring/ terminating decimals. Operations on real numbers.</li> <li>Examples of non-recurring/non-terminating decimals. Existence of non-rational numbers (irrational numbers) such as <math>\sqrt{2}, \sqrt{3}</math> and their representation on the number line. Explaining that every real number is represented by a unique point on the number line and conversely, viz. every point on the number line represents a unique real number.</li> <li>Definition of nth root of a real number.</li> <li>Rationalization (with precise meaning) of real numbers of the type <math>\frac{1}{a+b\sqrt{x}}</math> and <math>\frac{1}{\sqrt{x}+\sqrt{y}}</math> (and their combinations), where <math>x</math> and <math>y</math> are natural numbers and <math>a</math> and <math>b</math> are integers.</li> </ol>	<ul style="list-style-type: none"> <li>Develops a deeper understanding of numbers, including the set of real numbers and its properties.</li> <li>Recognizes and appropriately uses powers and exponents.</li> <li>Computes powers and roots and applies them to solve problems.</li> </ul>	<ul style="list-style-type: none"> <li>Differentiates rational and irrational numbers based on decimal representation.</li> <li>Represents rational and irrational numbers on the number line.</li> <li>Rationalizes real number expressions such as <math>\frac{1}{a+b\sqrt{x}}</math> and <math>\frac{1}{\sqrt{x}+\sqrt{y}}</math>, where <math>x, y</math> are natural numbers and <math>a, b</math> are integers.</li> <li>Applies laws of exponents</li> </ul>

	5. Recall of laws of exponents with integral powers. Rational exponents with positive real bases (to be done by particular cases, allowing learner to arrive at the general laws.)		
<b>UNIT II: ALGEBRA</b>			
<b>1.</b>	<b>POLYNOMIALS</b> <ol style="list-style-type: none"> <li>1. Definition of a polynomial in one variable, with examples and counter examples. Coefficients of a polynomial, terms of a polynomial and zero polynomial.</li> <li>2. Degree of a polynomial.</li> <li>3. Constant, linear, quadratic and cubic polynomials. Monomials, binomials, trinomials. Factors and multiples.</li> <li>4. Zeroes of a polynomial.</li> <li>5. Motivate and State the Remainder Theorem with examples.</li> <li>6. Statement and proof of the Factor Theorem. Factorization of <math>ax^2 + bx + c</math>, <math>a \neq 0</math> where a, b and c are real numbers, and of cubic polynomials using the Factor theorem.</li> <li>7. Recall of algebraic expressions and identities. Verification of identities: <math display="block">(x + y + z)^2 = x^2 + y^2 + z^2 + 2xy + 2yz + 2zx</math> <math display="block">(x \pm y)^3 = x^3 \pm y^3 \pm 3xy(x \pm y)</math> <math display="block">x^3 + y^3 = (x + y)(x^2 - xy + y^2)</math> <math display="block">x^3 - y^3 = (x - y)(x^2 + xy + y^2)</math> <math display="block">x^3 + y^3 + z^3 - 3xyz = (x + y + z)(x^2 + y^2 + z^2 - xy - yz - zx)</math> and their use in factorization of polynomials. </li> </ol>	<ul style="list-style-type: none"> <li>• Learns the art of factoring polynomials.</li> </ul>	<ul style="list-style-type: none"> <li>• Defines polynomials in one variable.</li> <li>• Identifies different terms and different types of polynomials.</li> <li>• Finds zeros of a polynomial</li> <li>• Proves factor theorem and applies the theorem to factorize polynomials.</li> <li>• Proves and applies algebraic identities up to degree three.</li> </ul>
<b>2.</b>	<b>LINEAR EQUATIONS IN TWO VARIABLES</b> <ol style="list-style-type: none"> <li>1. Recall of linear equations in one variable.</li> <li>2. Introduction to the equation in two variables. Focus on linear equations of the type <math>ax + by + c = 0</math>.</li> </ol>	<ul style="list-style-type: none"> <li>• Visualizes solutions of a linear equation in two variables as ordered pair of real numbers on its graph</li> </ul>	<ul style="list-style-type: none"> <li>• Describes and plot a linear equation in two variables.</li> </ul>

	Explain that a linear equation in two variables has infinitely many solutions and justify their being written as ordered pairs of real numbers, plotting them and showing that they lie on a line.		
<b>UNIT III: COORDINATE GEOMETRY</b>			
<b>1.</b>	<b>Coordinate Geometry:</b> <ol style="list-style-type: none"> <li>The Cartesian plane, coordinates of a point</li> <li>Names and terms associated with the coordinate plane, notations.</li> </ol>	<ul style="list-style-type: none"> <li>Specifies locations and describes spatial relationships using coordinate geometry.</li> </ul>	<ul style="list-style-type: none"> <li>Describes cartesian plane and its associated terms and notations</li> </ul>
<b>UNIT IV: GEOMETRY</b>			
<b>1.</b>	<b>INTRODUCTION TO EUCLID'S GEOMETRY</b> <ol style="list-style-type: none"> <li>History - Geometry in India and Euclid's geometry. Euclid's method of formalizing observed phenomenon into rigorous Mathematics with definitions, common/obvious notions, axioms/postulates and theorems.</li> <li>The five postulates of Euclid. Equivalent versions of the fifth postulate. Showing the relationship between axiom and theorem, for example:               <ol style="list-style-type: none"> <li>Given two distinct points, there exists one and only one line through them. (Axiom)</li> <li>(Prove) Two distinct lines cannot have more than one point in common. (Theorem)</li> </ol> </li> </ol>	<ul style="list-style-type: none"> <li>Proves theorems using Euclid's axioms and postulates— for triangles, quadrilaterals, and circles and applies them to solve geometric problems.</li> </ul>	<ul style="list-style-type: none"> <li>Understands historical relevance of Indian and Euclidean Geometry.</li> <li>Defines axioms, postulates, theorems with reference to Euclidean Geometry.</li> </ul>
<b>2.</b>	<b>LINES AND ANGLES</b> <ol style="list-style-type: none"> <li>(State without proof) If a ray stands on a line, then the sum of the two adjacent angles so formed is <math>180^\circ</math> and the converse.</li> <li>(Prove) If two lines intersect, vertically opposite angles are equal.</li> <li>(State without proof) Lines which are parallel to a given line are parallel.</li> </ol>	<ul style="list-style-type: none"> <li>derives proofs of mathematical statements particularly related to geometrical concepts, like parallel lines by applying axiomatic approach and solves problems using them.</li> </ul>	<ul style="list-style-type: none"> <li>Visualizes, explains and applies relations between different pairs of angles on a set of parallel lines and intersecting transversal.</li> </ul>

			<ul style="list-style-type: none"> <li>Solves problems based on parallel lines and intersecting transversal.</li> </ul>
3.	<b>TRIANGLES</b> <ol style="list-style-type: none"> <li>(State without proof) Two triangles are congruent if any two sides and the included angle of one triangle is equal (respectively) to any two sides and the included angle of the other triangle (SAS Congruence).</li> <li>(Prove) Two triangles are congruent if any two angles and the included side of one triangle is equal (respectively) to any two angles and the included side of the other triangle (ASA Congruence).</li> <li>(State without proof) Two triangles are congruent if the three sides of one triangle are equal (respectively) to three sides of the other triangle (SSS Congruence).</li> <li>(State without proof) Two right triangles are congruent if the hypotenuse and a side of one triangle are equal (respectively) to the hypotenuse and a side of the other triangle. (RHS Congruence).</li> <li>(Prove) The angles opposite to equal sides of a triangle are equal.</li> <li>(State without proof) The sides opposite to equal angles of a triangle are equal.</li> </ol>	<ul style="list-style-type: none"> <li>Describe relationships including congruency of two-dimensional geometrical shapes (lines, angle, triangles) to make and test conjectures and solve problems.</li> <li>derives proofs of mathematical statements particularly related to geometrical concepts triangles by applying axiomatic approach and solves problems using them.</li> </ul>	<ul style="list-style-type: none"> <li>Visualizes and explains congruence properties of two triangles.</li> <li>Applies congruency criteria to solve problems</li> </ul>
4.	<b>QUADRILATERALS</b> <ol style="list-style-type: none"> <li>(Prove) The diagonal divides a parallelogram into two congruent triangles.</li> <li>(State without proof) In a parallelogram opposite sides are equal, and conversely.</li> <li>(State without proof) In a parallelogram opposite angles are equal, and conversely.</li> </ol>	<ul style="list-style-type: none"> <li>derives proofs of mathematical statements particularly related to geometrical concepts of quadrilaterals by applying axiomatic approach and solves problems using them.</li> </ul>	<ul style="list-style-type: none"> <li>Visualizes and explains properties of quadrilaterals</li> <li>Solves problems based on properties of quadrilaterals.</li> </ul>



	<p>4. (State without proof) A quadrilateral is a parallelogram if a pair of its opposite sides is parallel and equal.</p> <p>5. (State without proof) In a parallelogram, the diagonals bisect each other and conversely.</p> <p>6. (State without proof) In a triangle, the line segment joining the mid points of any two sides is parallel to the third side and is half of it and (State without proof) its converse.</p>		
5.	<p><b>CIRCLES</b></p> <p>1. (Prove) Equal chords of a circle subtend equal angles at the center and (State without proof) its converse.</p> <p>2. (State without proof) The perpendicular from the center of a circle to a chord bisects the chord and conversely, the line drawn through the center of a circle to bisect a chord is perpendicular to the chord.</p> <p>3. (State without proof) Equal chords of a circle (or of congruent circles) are equidistant from the center (or their respective centers) and conversely.</p> <p>4. (Prove) The angle subtended by an arc at the center is double the angle subtended by it at any point on the remaining part of the circle.</p> <p>5. (State without proof) Angles in the same segment of a circle are equal.</p> <p>6. (State without proof) If a line segment joining two points subtends equal angle at two other points lying on the same side of the line containing the segment, the four points lie on a circle.</p> <p>7. (State without proof) The sum of either of the pair of the opposite angles of a cyclic quadrilateral is <math>180^\circ</math> and its converse.</p>	<ul style="list-style-type: none"> <li>Proves theorems about the geometry of a circle, including its chords and subtended angles</li> </ul>	<ul style="list-style-type: none"> <li>Visualizes and explains properties of circles.</li> <li>Solves problems based on properties of circle.</li> </ul>

**UNIT V: MENSURATION**

<b>1.</b>	<b>AREAS</b>  1. Area of a triangle using Heron's formula (without proof)	<ul style="list-style-type: none"><li>Visualizes, represents, and calculates the area of a triangle using Heron's formula.</li></ul>	<ul style="list-style-type: none"><li>States and applies Heron's Formula to find area of a triangle.</li></ul>
<b>2.</b>	<b>SURFACE AREAS AND VOLUMES</b>  1. Surface areas and volumes of spheres (including hemispheres) and right circular cones.	<ul style="list-style-type: none"><li>Visualizes and uses mathematical thinking to discover formulas to calculate surface areas and volumes of solid objects (spheres, hemispheres and right circular cones)</li></ul>	<ul style="list-style-type: none"><li>Solves problems based on surface areas and volumes of three-dimensional shapes (spheres/hemisphere, right circular cones).</li></ul>

**UNIT VI: STATISTICS**

<b>1.</b>	<b>STATISTICS</b>  1. Bar graphs 2. Histograms (with varying base lengths) 3. Frequency polygons.	<ul style="list-style-type: none"><li>Draws and interprets bar graph, histogram and frequency polygon</li></ul>	<ul style="list-style-type: none"><li>Represents data using Bar Graph, Histogram and frequency polygon.</li></ul>
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# MATHEMATICS QUESTION PAPER DESIGN

**CLASS – IX (2025-26)**

**Time: 3 Hrs.**

**Max. Marks: 80**

S. No.	Typology of Questions	Total Marks	% Weightage (approx.)
1	<p><b>Remembering:</b> Exhibit memory of previously learned material by recalling facts, terms, basic concepts, and answers.</p> <p><b>Understanding:</b> Demonstrate understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating main ideas</p>	43	54
2	<p><b>Applying:</b> Solve problems to new situations by applying acquired knowledge, facts, techniques and rules in a different way.</p>	19	24
3	<p><b>Analysing :</b> Examine and break information into parts by identifying motives or causes. Make inferences and find evidence to support generalizations</p> <p><b>Evaluating:</b> Present and defend opinions by making judgments about information, validity of ideas, or quality of work based on a set of criteria.</p> <p><b>Creating:</b> Compile information together in a different way by combining elements in a new pattern or proposing alternative solutions</p>	18	22
	<b>Total</b>	<b>80</b>	<b>100</b>

<b>INTERNAL ASSESSMENT</b>	<b>20 MARKS</b>
Pen Paper Test and Multiple Assessment (5+5)	10 Marks
Portfolio	05 Marks
Lab Practical (Lab activities to be done from the prescribed books)	05 Marks

## CLASS – IX (2025-26)

The following topics are included in the syllabus but will be assessed only formatively to reinforce understanding without adding to summative assessments. This reduces academic stress while ensuring meaningful learning. Schools can integrate these with existing chapters as they align well. Relevant NCERT textual material is enclosed for reference.

S. No.	Content	Competencies	Explanation
<b>UNIT II: ALGEBRA</b>			
1.	<b>LINEAR EQUATIONS IN TWO VARIABLES</b> 1. Graph of linear equations in two variables. 2. Examples, problems from real life, including problems on Ratio and Proportion and with algebraic and graphical solutions being done simultaneously.	<ul style="list-style-type: none"><li>Visualizes solutions of a linear equation in two variables as ordered pair of real numbers on its graph.</li></ul>	<ul style="list-style-type: none"><li>Describes and plot a linear equation in two variables.</li><li>Exemplifies a linear equation in two variables and its possible solutions using real life examples.</li></ul>
<b>UNIT III: COORDINATE GEOMETRY</b>			
1.	<b>Coordinate Geometry:</b> 1. Plotting points in the plane.	<ul style="list-style-type: none"><li>Specifies locations and describes spatial relationships using coordinate geometry, e.g., plotting points in a plane</li></ul>	<ul style="list-style-type: none"><li>Plots/locates points in the plane.</li></ul>
<b>UNIT IV: GEOMETRY</b>			
1.	<b>LINES AND ANGLES</b> 1. (State without proof) Results on corresponding angles, alternate angles, interior angles when a transversal intersects two parallel lines. 2. (Prove) The sum of the angles of a triangle is $180^\circ$ . 3. (State without proof) If a side of a triangle is produced, the exterior angle so formed is equal to the sum of the two interior opposite angles.	<ul style="list-style-type: none"><li>derives proofs of mathematical statements particularly related to geometrical concepts, like parallel lines by applying axiomatic approach and solves problems using them.</li></ul>	<ul style="list-style-type: none"><li>Visualizes, explains and applies relations between different pairs of angles on a set of parallel lines and intersecting transversal.</li><li>Solves problems based on parallel lines and intersecting transversal.</li><li>Visualizes the relation between exterior and interior angles of a triangle.</li></ul>

2.	<p><b>TRIANGLES</b></p> <p>1. (State without proof) Triangle inequalities and relation between 'angle and facing side' inequalities in triangles.</p>	<ul style="list-style-type: none"> <li>Derives proofs of mathematical statements particularly related to geometrical concepts in triangles by applying axiomatic approach and solves problems using them.</li> </ul>	<ul style="list-style-type: none"> <li>Defines and applies triangle inequalities with reference to angles and sides</li> </ul>
3.	<p><b>AREAS OF PARALLELOGRAMS AND TRIANGLES</b></p> <p>Review concept of area, recall area of a rectangle.</p> <p>1. (Prove) Parallelograms on the same base and between the same parallels have equal area.</p> <p>2. (State without proof) Triangles on the same base (or equal bases) and between the same parallels are equal in area.</p>	<ul style="list-style-type: none"> <li>Find areas of all types of triangles by using appropriate formulae and apply them in real life situations</li> </ul>	<ul style="list-style-type: none"> <li>Finds area of rectangle, parallelogram and triangle.</li> </ul>
4.	<p><b>CIRCLES</b></p> <p>1. Through examples, arrive at definition of circle and related concepts-radius, circumference, diameter, chord, arc, secant, sector, segment, subtended angle.</p> <p>2. (State without proof) There is one and only one circle passing through three given non-collinear points.</p>	<ul style="list-style-type: none"> <li>Proves theorems about the geometry of a circle, including its chords and subtended angles</li> </ul>	<ul style="list-style-type: none"> <li>Solves problems based on properties of circle.</li> </ul>
5.	<p><b>CONSTRUCTIONS</b></p> <p>1. Construction of bisectors of line segments and angles of measure <math>60^\circ</math>, <math>90^\circ</math>, <math>45^\circ</math> etc., equilateral triangles.</p> <p>2. Construction of a triangle given its base, sum/difference of the other two sides and one base angle.</p>	<ul style="list-style-type: none"> <li>Constructs different geometrical shapes like bisectors of line segments, angles and their bisectors and triangles satisfying given constraints.</li> </ul>	<ul style="list-style-type: none"> <li>Constructs line-segments, bisectors of line-segments, angles and triangle with given conditions.</li> </ul>

**UNIT V: MENSURATION**

<b>1.</b>	<b>AREAS</b>  1. Application of heron's formula in finding the area of a quadrilateral.	<ul style="list-style-type: none"><li>Visualizes, represents, and calculates the area of a triangle using Heron's formula.</li></ul>	<ul style="list-style-type: none"><li>States and applies Heron's Formula to find area of a quadrilateral.</li></ul>
<b>2.</b>	<b>SURFACE AREAS AND VOLUMES</b>  1. Surface areas and volumes of cubes, cuboids and right circular cylinders.	<ul style="list-style-type: none"><li>Visualizes and uses mathematical thinking to discover formulas to calculate surface areas and volumes of solid objects (cubes, cuboids and right circular cylinders)</li></ul>	<ul style="list-style-type: none"><li>Solves problems based on surface areas and volumes of three-dimensional shapes (cube, cuboid and right circular cylinders).</li></ul>

**UNIT VI: STATISTICS**

<b>1.</b>	<b>STATISTICS</b>  1. Introduction to Statistics: Collection of data, presentation of data — tabular form, ungrouped / grouped data. 2. Mean, median and mode of ungrouped data.	<ul style="list-style-type: none"><li>Applies measures of central tendencies such as mean, median and mode of ungrouped data.</li></ul>	<ul style="list-style-type: none"><li>Organizes raw data in tabular form.</li><li>Calculates mean, median, mode of ungrouped data</li></ul>
<b>2.</b>	<b>PROBABILITY</b>  1. History, Repeated experiments and observed frequency approach to probability. Focus is on empirical probability. (A large amount of time to be devoted to group and to individual activities to motivate the concept); 2. The experiments to be drawn from real - life situations, and from examples used in the chapter on statistics).	<ul style="list-style-type: none"><li>Applies concepts from probability to solve problems on the likelihood of everyday events.</li></ul>	<ul style="list-style-type: none"><li>Conceptualizes probability using repeated experiments and observed frequencies.</li></ul>

## COURSE STRUCTURE CLASS –X

Units	Unit Name	Marks
I	NUMBER SYSTEMS	06
II	ALGEBRA	20
III	COORDINATE GEOMETRY	06
IV	GEOMETRY	15
V	TRIGONOMETRY	12
VI	MENSURATION	10
VII	STATISTICS AND PROBABILITY	11
	<b>TOTAL</b>	<b>80</b>

S. No.	Content	Competencies	Explanation
<b>UNIT I: NUMBER SYSTEMS</b>			
1.	<b>REAL NUMBERS</b>  1. Fundamental Theorem of Arithmetic - statements after reviewing work done earlier and after illustrating and motivating through examples 2. Proofs of irrationality of $\sqrt{2}, \sqrt{3}, \sqrt{5}$	<ul style="list-style-type: none"> <li>Develops understanding of numbers, including the set of real numbers and its properties.</li> <li>Extends the understanding of powers (radical powers) and exponents.</li> <li>Applies Fundamental Theorem of Arithmetic to solve problems related to real life contexts.</li> </ul>	<ul style="list-style-type: none"> <li>Describes Fundamental Theorem of Arithmetic with examples</li> <li>Prove algebraically the Irrationality of numbers like <math>\sqrt{2}, \sqrt{3}, \sqrt{5}, 3 + 2\sqrt{5}</math> etc.</li> </ul>
<b>UNIT II: ALGEBRA</b>			
1.	<b>POLYNOMIALS</b>  1. Zeros of a polynomial 2. Relationship between zeros and coefficients of quadratic polynomials.	<ul style="list-style-type: none"> <li>develops a relationship between algebraic and graphical methods of finding the zeroes of a polynomial.</li> </ul>	<ul style="list-style-type: none"> <li>Find the zeros of polynomial graphically and algebraically and verifying the relation between zeros and coefficients of quadratic polynomials.</li> </ul>

<p><b>2.</b></p>	<p><b>PAIR OF LINEAR EQUATIONS IN TWO VARIABLES</b></p> <ol style="list-style-type: none"> <li>1. Pair of linear equations in two variables and graphical method of their solution, consistency/inconsistency.</li> <li>2. Algebraic conditions for number of solutions.</li> <li>3. Solution of a pair of linear equations in two variables algebraically - by substitution, by elimination. Simple situational problems.</li> </ol>	<ul style="list-style-type: none"> <li>• Describes plotting a pair of linear equations and graphically finding the solution.</li> <li>• Models and solves contextualised problems using equations (e.g., simultaneous linear equations in two variables).</li> </ul>	<ul style="list-style-type: none"> <li>• Find the solution of pair of linear equations in two variables graphically and algebraically (substitution and elimination method)</li> </ul>
<p><b>3.</b></p>	<p><b>QUADRATIC EQUATIONS</b></p> <ol style="list-style-type: none"> <li>1. Standard form of a quadratic equation <math>ax^2 + bx + c = 0, (a \neq 0)</math>.</li> <li>2. Solutions of quadratic equations (only real roots) by factorization, and by using quadratic formula. Relationship between discriminant and nature of roots.</li> <li>3. Situational problems based on quadratic equations related to day-to-day activities to be incorporated</li> </ol>	<ul style="list-style-type: none"> <li>• demonstrates strategies of finding roots and determining the nature of roots of a quadratic equation.</li> </ul>	<ul style="list-style-type: none"> <li>• Solves quadratic equations using factorization and quadratic formula</li> <li>• Determines the nature of roots using discriminant</li> <li>• Formulates and solves problems based on real life context</li> </ul>
<p><b>4.</b></p>	<p><b>ARITHMETIC PROGRESSIONS</b></p> <ol style="list-style-type: none"> <li>1. Motivation for studying Arithmetic Progression</li> <li>2. Derivation of the nth term and sum of the first n terms of AP and their application in solving daily life problems.</li> </ol>	<ul style="list-style-type: none"> <li>• Develops strategies to apply the concept of A.P. to daily life situations.</li> </ul>	<ul style="list-style-type: none"> <li>• Applies concepts of AP to find the nth term and sum of n terms.</li> <li>• Application of AP in real life problems</li> </ul>



### UNIT III: COORDINATE GEOMETRY

<b>1.</b>	<p><b>Coordinate Geometry</b></p> <p><b>1. Review:</b> Concepts of coordinate geometry. Distance formula. Section formula (internal division).</p>	<ul style="list-style-type: none"> <li>Derives formulae to establish relations for geometrical shapes in the context of a coordinate plane, such as, finding the distance between two given points, to determine the coordinates of a point between any two given points.</li> </ul>	<ul style="list-style-type: none"> <li>Solves problems using distance formula and section formula</li> </ul>
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### UNIT IV: GEOMETRY

<b>1.</b>	<p><b>TRIANGLES</b></p> <p>Definitions, examples, counter examples of similar triangles.</p> <ol style="list-style-type: none"> <li>(Prove) If a line is drawn parallel to one side of a triangle to intersect the other two sides in distinct points, the other two sides are divided in the same ratio.</li> <li>State (without proof) If a line divides two sides of a triangle in the same ratio, the line is parallel to the third side.</li> <li>State (without proof) If in two triangles, the corresponding angles are equal, their corresponding sides are proportional and the triangles are similar.</li> <li>State (without proof) If the corresponding sides of two triangles are proportional, their corresponding angles are equal and the two triangles are similar.</li> <li>State (without proof) If one angle of a triangle is equal to one angle of another triangle and the sides including these angles are proportional, the two triangles are similar.</li> </ol>	<ul style="list-style-type: none"> <li>works out ways to differentiate between congruent and similar figures.</li> <li>establishes properties for similarity of two triangles logically using different geometric criteria established earlier such as, Basic Proportionality Theorem, etc.</li> </ul>	<ul style="list-style-type: none"> <li>Prove Basic Proportionality theorem and applying the theorem and its converse in solving questions</li> <li>Prove similarity of triangles using different similarity criteria</li> </ul>
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2.	<b>CIRCLES</b>  Tangent to a circle at point of contact. 1. (Prove) The tangent at any point of a circle is perpendicular to the radius through the point of contact. 2. (Prove) The lengths of tangents drawn from an external point to a circle are equal.	<ul style="list-style-type: none"> <li>derives proofs of theorems related to the tangents of circles.</li> </ul>	<ul style="list-style-type: none"> <li>Prove the theorems based on the tangent to a circle.</li> <li>Applies the concept of tangents of circle to solve various problems.</li> </ul>
<b>UNIT V: TRIGONOMETRY</b>			
1.	<b>INTRODUCTION TO TRIGONOMETRY</b>  1. Trigonometric ratios of an acute angle of a right-angled triangle. Proof of their existence (well defined) 2. Motivate the ratios whichever are defined at $0^\circ$ and $90^\circ$ . Values of the trigonometric ratios of $30^\circ$ , $45^\circ$ and $60^\circ$ . 3. Relationships between the ratios.	<ul style="list-style-type: none"> <li>Understands the definitions of the basic trigonometric functions (including the introduction of the sine and cosine functions).</li> </ul>	<ul style="list-style-type: none"> <li>Evaluates trigonometric ratios</li> <li>Describes trigonometric ratios of standard angles and solving related expressions</li> </ul>
2.	<b>TRIGONOMETRIC IDENTITIES</b>  1. Proof and applications of the identity $\sin^2 A + \cos^2 A = 1$ . 2. Only simple identities to be given.	<ul style="list-style-type: none"> <li>Uses Trigonometric identities to solve problems.</li> </ul>	<ul style="list-style-type: none"> <li>Proves trigonometric identities using <math>\sin^2 A + \cos^2 A = 1</math> and other identities</li> </ul>
3.	<b>HEIGHTS AND DISTANCES: Angle of elevation, Angle of Depression.</b>  1. Simple problems on heights and distances. Problems should not involve more than two right triangles. Angles of elevation / depression should be only $30^\circ$ , $45^\circ$ , and $60^\circ$ .	<ul style="list-style-type: none"> <li>Applies Trigonometric ratios in solving problems in daily life contexts like finding heights of different structures or distance from them.</li> </ul>	<ul style="list-style-type: none"> <li>Find heights and distances in real life word problems using trigonometric ratios</li> </ul>

## UNIT VI: MENSURATION

<b>1.</b>	<b>AREAS RELATED TO CIRCLES</b>  1. Area of sectors and segments of a circle. 2. Problems based on areas and perimeter /circumference of the above said plane figures. (In calculating area of segment of a circle, problems should be restricted to central angle of $60^\circ$ , $90^\circ$ and $120^\circ$ only.	<ul style="list-style-type: none"> <li>Derives and uses formulae to calculate areas of plane figures.</li> </ul>	<ul style="list-style-type: none"> <li>Visualises and evaluates areas of sector and segment of a circle</li> </ul>
<b>2.</b>	<b>SURFACE AREAS AND VOLUMES</b>  1. Surface areas and volumes of combinations of any two of the following: cubes, cuboids, spheres, hemispheres and right circular cylinders/cones.	<ul style="list-style-type: none"> <li>Visualises and uses mathematical thinking to discover formulae to calculate surface areas and volumes of solid objects (cubes, cuboids, spheres, hemispheres, right circular cylinders/cones, and their combinations).</li> </ul>	<ul style="list-style-type: none"> <li>Evaluates the surface areas and volumes of combinations of solids by visualisation</li> </ul>

## UNIT VII: STATISTICS AND PROBABILITY

<b>1.</b>	<b>STATISTICS</b>  1. Mean, median and mode of grouped data (bimodal situation to be avoided).	<ul style="list-style-type: none"> <li>calculates mean, median and mode for different sets of data related with real life contexts.</li> </ul>	<ul style="list-style-type: none"> <li>Computes the mean, of a grouped frequency distribution using direct, assumed mean and step deviation method.</li> <li>Computes the median and mode of grouped frequency distribution by algebraic method</li> </ul>
<b>2.</b>	<b>PROBABILITY</b>  1. Classical definition of probability. 2. Simple problems on finding the probability of an event.	<ul style="list-style-type: none"> <li>Applies concepts from probability to solve problems on the likelihood of everyday events.</li> </ul>	<ul style="list-style-type: none"> <li>Determines the probabilities in simple real-life problems</li> </ul>

**MATHEMATICS- STANDARD (Code – 041)****QUESTION PAPER DESIGN****CLASS – X (2025-26)****Time: 3 Hours****Max. Marks: 80**

<b>S. No.</b>	<b>Typology of Questions</b>	<b>Total Marks</b>	<b>% Weightage (approx.)</b>
<b>1</b>	<b>Remembering:</b> Exhibit memory of previously learned material by recalling facts, terms, basic concepts, and answers.  <b>Understanding:</b> Demonstrate understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating main ideas	<b>43</b>	<b>54</b>
<b>2</b>	<b>Applying:</b> Solve problems to new situations by applying acquired knowledge, facts, techniques and rules in a different way.	<b>19</b>	<b>24</b>
<b>3</b>	<b>Analysing:</b> Examine and break information into parts by identifying motives or causes. Make inferences and find evidence to support generalizations  <b>Evaluating:</b> Present and defend opinions by making judgments about information, validity of ideas, or quality of work based on a set of criteria.  <b>Creating:</b> Compile information together in a different way by combining elements in a new pattern or proposing alternative solutions	<b>18</b>	<b>22</b>
	<b>Total</b>	<b>80</b>	<b>100</b>

<b>INTERNAL ASSESSMENT</b>	<b>20 MARKS</b>
Pen Paper Test and Multiple Assessment (5+5)	10 Marks
Portfolio	05 Marks
Lab Practical (Lab activities to be done from the prescribed books)	05 Marks

**MATHEMATICS-BASIC (Code – 241)****QUESTION PAPER DESIGN****CLASS – X (2025-26)****Time: 3Hours****Max. Marks: 80**

<b>S. No.</b>	<b>Typology of Questions</b>	<b>Total Marks</b>	<b>% Weightage (approx.)</b>
<b>1</b>	<b>Remembering:</b> Exhibit memory of previously learned material by recalling facts, terms, basic concepts, and answers. <b>Understanding:</b> Demonstrate understanding of facts and ideas by organizing, comparing, translating, interpreting, giving descriptions, and stating main ideas	<b>60</b>	<b>75</b>
<b>2</b>	<b>Applying:</b> Solve problems to new situations by applying acquired knowledge, facts, techniques and rules in a different way.	<b>12</b>	<b>15</b>
<b>3</b>	<b>Analysing:</b> Examine and break information into parts by identifying motives or causes. Make inferences and find evidence to support generalizations <b>Evaluating:</b> Present and defend opinions by making judgments about information, validity of ideas, or quality of work based on a set of criteria. <b>Creating:</b> Compile information together in a different way by combining elements in a new pattern or proposing alternative solutions	<b>8</b>	<b>10</b>
	<b>Total</b>	<b>80</b>	<b>100</b>

<b>INTERNAL ASSESSMENT</b>	<b>20 MARKS</b>
Pen Paper Test and Multiple Assessment (5+5)	10 Marks
Portfolio	05 Marks
Lab Practical (Lab activities to be done from the prescribed books)	05 Marks

**PRESCRIBED BOOKS:**

1. Mathematics - Textbook for class IX - NCERT Publication
2. Mathematics - Textbook for class X - NCERT Publication
3. Guidelines for Mathematics Laboratory in Schools, class IX - CBSE Publication
4. Guidelines for Mathematics Laboratory in Schools, class X - CBSE Publication
5. Laboratory Manual - Mathematics, secondary stage - NCERT Publication
6. Mathematics exemplar problems for class IX, NCERT publication
7. Mathematics exemplar problems for class X, NCERT publication.

**संस्कृतम्**  
**विषय-कोड-सङ्ख्या - 122**  
**कक्षा – नवमी-दशमी (2025-26)**  
**पाठ्यक्रम: परीक्षानिर्देशाश्च**

भाष्यते व्यवहारादिषु प्रयुज्यते इति भाषा, मानवः स्वमनसि विद्यमानान् विचारान् भावनाः अनुभूतिं च अर्थयुक्तैः ध्वनिभिः लिखितसङ्केतैः च व्यक्तीकरोति सा भाषा । भाषा अभिप्रायप्रकटनस्य साधनम् । वस्तुतः लोके द्वयोः मनुष्ययोः मध्ये परस्परम् अवबोधनाय, भावग्रहणाय, भावविनिमयाय च भाषया विना न अन्यत् स्पष्टतमं सरलतमं च साधनं विद्यते । लोके बह्व्यः भाषाः सन्ति यासु संस्कृतभाषा अतिप्राचीनतमा समृद्धा च अस्ति । संस्कृतभाषायाम् एव सन्ति ऋग्यजुस्सामाथर्वाः चत्वारः वेदाः, शिक्षा, व्याकरणं, निरुक्तं, ज्योतिषं, छन्दः कल्पः चेति षडङ्गानि, चतुर्दशविद्याः, विज्ञानम्, आयुर्वेदः, योगशास्त्रादयः ग्रन्थाः । अतः संस्कृतं केवलं भाषा न अपितु किञ्चन जीवनदर्शनम् इति । इयं विद्या (भाषा) भारतीयानां प्रतिष्ठात्मिका कामधेनुः समस्तज्ञानप्रदात्री, ऐक्यप्रदात्री, धर्मार्थकाममोक्षप्रदात्री च अस्ति । सृष्टेः आदितः अद्यावधि यत् शिक्षणं ज्ञानविज्ञानं च अस्ति तत् सर्वं अस्यां भाषायामेव सन्निहितम् अस्ति । अतिसूक्ष्मभावनां प्रकटयितुं स्पष्टीकर्तुं संस्कृतं विना नैव अन्यत्र विद्यते सामर्थ्यम् । भारतीयं सर्वस्वं विश्वस्य समग्रं तत्त्वं च अस्यां भाषायाम् अस्ति ।

संस्कृतस्य भाषावैज्ञानिकत्वम् – ऐतिहासिक-वर्णनात्मक-तुलनात्मकाध्ययन-द्वारा भाषायाः प्रकृतेः विकासोत्पत्तेः संरचनायाः अध्ययनपूर्वकं सर्वेषां विषयाणां सैद्धान्तिकः निर्णयः भाषाविज्ञानेन क्रियते । भाषाविज्ञान-नामकशास्त्रे शब्दानाम् उत्पत्तिः, वाक्यानां संरचना इत्यादीनां विषयाणां विचारः क्रियते । भाषाविज्ञानस्य सम्बन्धः सर्वेषां मानवानां भाषाभिः सह अस्ति । एवं भाषाविज्ञाने ध्वनेः, ध्वनि-उच्चारणोपयोगिनां स्वरयन्त्रमुखजिह्वादि-अङ्गानां प्रकृति-प्रत्ययादीनां, संज्ञासर्वनाम-क्रिया-विशेषणादीनां नामाख्यात-उपसर्जननिपातानां पदपदार्थविषयकानां विकारादीनां विकारमूलककारकाणाम् अन्येषां विविधविषयाणाञ्च अध्ययनं क्रियते । भाषाविज्ञाने संस्कृतभाषा-विषयक-वर्णोत्पत्ति-सिद्धान्तस्य अतीव वैज्ञानिकं निरूपणं कृतं वर्तते ।

विश्वस्य सर्वासु भाषासु संस्कृतभाषा प्राचीनतमा अस्ति । प्रायः सर्वासु भाषासु संस्कृतपरकशब्दाः उपलभ्यन्ते । संस्कृतभाषा भारतीयभाषाणां जननी इति कथ्यते । सर्वासु भारतीयभाषासु संस्कृतभाषा अन्तर्लीना अस्ति इति सर्वे अङ्गीकुर्वन्ति ।

भारतदेशः बहुभाषी देशोऽस्ति । अस्मिन् देशे अनेकतायाम् एकतावर्धिनी भाषेयं सामाजिकसमरसतायै जीवनविकासाय च आवश्यकी वर्तते । संस्कृतस्य सांस्कृतिकं महत्त्वं वर्णयन्तः विद्वांसः कथयन्ति “भारतस्य प्रतिष्ठे द्वे संस्कृतं संस्कृतिस्तथा, संस्कृतिमूलं संस्कृतम्, साहित्यं संस्कृतिवाहकञ्च इति ।” एषा संस्कृतिः न केवलं भारतस्य अपि तु विश्वस्य मुकुटायमाना अस्ति । उक्तं च -

सत्यमहिंसादिगुणैः श्रेष्ठा विश्वबन्धुत्वशिक्षिका ।

विश्वशान्तिः सुखधात्री भारतीया हि संस्कृतिः ॥

संस्कृते संस्कृतिर्ज्ञेया संस्कृते सकलाः कलाः ।

संस्कृते सकलं ज्ञानं संस्कृते किन्न विद्यते ॥

एवं संस्कृतभाषा परिनिष्ठिता, दोषरहिता, सरला, गभीरा, यथार्था वैज्ञानिकी च भाषा अस्ति । सम्प्रति युगेस्मिन् प्रमुखैः उद्देश्यैः संस्कृतभाषा शिक्षणीया अस्ति ।

**शिक्षणोद्देश्यानि –**

\* वसुधैव-कुटुम्बकम् इति भावनाविकासः ।

- \* भारतीयभाषाणां संरक्षणम् ।
- \* संस्कृतभाषया सम्प्रेषणकौशलविकासः ।
- \* परस्परं संस्कृतसम्भाषणेन भावविनिमयः ।
- \* संस्कृत-भाषया एव संस्कृत-शिक्षणम् ।
- \* श्रवण-भाषण-पठन-लेखनेति चतुर्णां भाषिक-कौशलानां विकासः ।
- \* बौद्धिकविकासपुरस्सरम् आध्यात्मिकनैतिकज्ञानम् ।
- \* मानसिकविकासानन्दानुभूतिः रसानुभूतिश्च ।
- \* भारतीयसंस्कृतेः संरक्षणं ज्ञानवर्धनञ्च ।
- \* आत्मानुशासनसंस्थापनार्थम्
- \* भाषाशिक्षणकौशलानि वर्धनाय नैपुण्यप्राप्तिः ।
- \* परस्परं वार्तालापमाध्यमेन भावविनिमयः ।
- \* संस्कृतसाहित्यस्य अध्ययनेन ज्ञानानन्दस्य अनुभूतिः ।
- \* मानवजीवनस्य विकासपूर्वकं कल्याणम् ।
- \* संस्कृतभाषया छात्राणां सर्वविधविकासः ।

#### शिक्षणप्रविधयः -

- \* संस्कृतमाध्यमेन सम्भाषणविधिना शनैः शनैः संस्कृतशिक्षणं सम्भविष्यति । गतिवर्धनाय संस्कृताध्यापकैः धैर्येण स्वकीयाध्यापन-कार्यक्रमाणां नियोजनम् । रुचिकरभाषाभ्यासेन भाषिकोपलब्धिः । भाषिकाभ्यासाय वार्तालाप-कथाश्रवण-वादविवाद-संवाद-वर्णनपरकप्रतियोगिताभिः भाषाशिक्षणं कारयितुं शक्यते ।
- \* विभिन्नप्रामाणिकसंस्थानां कार्यक्रमाः साहित्यसामग्र्यश्च प्रयुज्य उत्तमशिक्षणं कर्तुं शक्यते ।
- \* संस्कृतभाषया उपलब्ध-दृश्य-श्रव्य-सामग्री-माध्यमेन भाषाभ्यासः ।
- \* विभिन्नपाठ्यसामग्रीद्वारा शिक्षकः स्वकीयं शिक्षणकार्यं रुचिकरं कर्तुं शक्नोति ।
- \* भाषाशिक्षकः छात्रान् स्नेहपूर्वकम् (आत्मीयभावेन) पाठयेत् ।
- \* अद्यतनपूर्वकं साहित्यकोश-शब्दकोश-सन्दर्भग्रन्थानां सहायतया छात्राणां तत्परतावर्धनम् ।
- \* प्राचीनार्वाचीनयोर्मध्ये समन्वयस्थापनद्वारा नूतनशिक्षणविधिभिश्च संस्कृतशिक्षणम् ।

#### कौशलानि-

- \* **श्रवणकौशलम्** – भावाधिग्रहणाय ध्वन्यात्मकं भाषायाः प्रथमं कौशलम् इदम् । अस्य साधनानि- गुरुमुखम्, आकाशवाणी, दूरवाणी, परिवारसदस्याः, समाजः, कक्षाः, ध्वनिमुद्रणयन्त्रम्, दूरदर्शनम् इत्यादीनि ।
- \* **भाषणकौशलम्**- भावाभिव्यक्तये ध्वन्यात्मकं भाषायाः इदं द्वितीयं कौशलम् । वाग्-रूपं भावप्रकटनम् एव भाषणम्, परिसरप्रभावेण आधारेण वा भाषणशक्तिः जायते ।
- \* **पठनकौशलम्** – भावाधिग्रहणाय लिप्यात्मकं भाषायाः तृतीयं कौशलम् इदम् । (अर्थग्रहणपूर्वकं स्पष्टरूप-वाचनम् इत्यर्थः)
- \* **लेखनकौशलम्**- भावाभिव्यक्तये लिप्यात्मकं भाषायाः चतुर्थं कौशलम् इदम् । (ध्वनिरूपे विद्यमानं भाषांशं लिपिरूपे अवतारणं लेखनम् इति उच्यते)
- \* ज्ञानात्मक-अवबोधनात्मक-अनुप्रयोगात्मक-विश्लेषणात्मक-संश्लेषणात्मक-मूल्याङ्कनात्मक-लक्षिताधिगमनविशेषाः ।



**संस्कृतम्**  
**विषय-कोड्-सङ्ख्या - 122**  
**कक्षा - नवमी (2025-26)**

आहत्याङ्काः – 80+20

वार्षिकमूल्याङ्कनाय निर्मिते प्रश्नपत्रे चत्वारः खण्डाः भविष्यन्ति –

‘क’ खण्डः	अपठितावबोधनम्	10 अङ्काः
‘ख’ खण्डः	रचनात्मककार्यम्	15 अङ्काः
‘ग’ खण्डः	अनुप्रयुक्तव्याकरणम्	25 अङ्काः
‘घ’ खण्डः	पठितावबोधनम्	30 अङ्काः

खण्डानुसारं विषयाः मूल्यभारः च

क्र. सं.	विषयाः	प्रश्नप्रकाराः	मूल्यभारः
<b>‘क’ खण्डः</b> <b>अपठितावबोधनम्</b> <span style="float: right;"><b>10 अङ्काः</b></span>			
1.	एकः गद्यांशः (80-100 शब्दपरिमितः)	अति-लघूत्तरात्मकौ पूर्णवाक्यात्मकौ शीर्षकम् (लघूत्तरात्मकः) भाषिककार्यम् (बहुविकल्पात्मकाः)	2×1=2 2×2=4 1×1=1 3×1=3
		पूर्णभारः	10 अङ्काः
<b>‘ख’ खण्डः</b> <b>रचनात्मककार्यम्</b> <span style="float: right;"><b>15 अङ्काः</b></span>			
2.	औपचारिकम् अथवा अनौपचारिकं पत्रम् (पूर्ण पत्रं लेखनीयम्)	निबन्धात्मकः	5
3.	चित्रवर्णनम् अथवा अनुच्छेदलेखनम्	पूर्णवाक्यात्मकाः / निबन्धात्मकः	5
4.	हिन्दी/आङ्ग्लभाषातः संस्कृतेन अनुवादः	पूर्णवाक्यात्मकः	5×1=5
		पूर्णभारः	15 अङ्काः
<b>‘ग’ खण्डः</b> <b>अनुप्रयुक्तव्याकरणम्</b> <span style="float: right;"><b>25 अङ्काः</b></span>			
5.	सन्धिः	लघूत्तरात्मकाः	4×1=4
6.	शब्दरूपाणि	बहुविकल्पात्मकाः	4×1=4
7.	धातुरूपाणि	बहुविकल्पात्मकाः	4×1=4
8.	कारक-उपपदविभक्तयः	बहुविकल्पात्मकाः	4×1=4
9.	प्रत्ययाः	बहुविकल्पात्मकाः	3×1=3
10.	सङ्ख्याः	लघूत्तरात्मकाः	4×½=2
11.	उपसर्गाः	लघूत्तरात्मकाः	4×½=2
12.	अव्ययानि	बहुविकल्पात्मकौ	2×1=2

		पूर्णभारः	25 अङ्काः
<p style="text-align: center;"><b>‘घ’ खण्डः</b> <b>पठितावबोधनम्</b></p>			
			30 अङ्काः
13.	गद्यांशः	अति-लघूत्तरात्मकौ पूर्णवाक्यात्मकौ लघूत्तरात्मकौ (भाषिककार्यम्)	$2 \times \frac{1}{2} = 1$ $2 \times 1 = 2$ $2 \times 1 = 2$
14.	पद्यांशः	अति-लघूत्तरात्मकौ पूर्णवाक्यात्मकौ लघूत्तरात्मकौ (भाषिककार्यम्)	$2 \times \frac{1}{2} = 1$ $2 \times 1 = 2$ $2 \times 1 = 2$
15.	नाट्यांशः	अति-लघूत्तरात्मकौ पूर्णवाक्यात्मकौ लघूत्तरात्मकौ (भाषिककार्यम्)	$2 \times \frac{1}{2} = 1$ $2 \times 1 = 2$ $2 \times 1 = 2$
16.	प्रश्ननिर्माणम्	पूर्णवाक्यात्मकाः	$4 \times 1 = 4$
17.	अन्वयः अथवा भावार्थः	निबन्धात्मकः	3
18.	घटनाक्रमानुसारं वाक्यलेखनम्	निबन्धात्मकः	$8 \times \frac{1}{2} = 4$
19.	(क) प्रसङ्गानुसारम् अर्थस्य लेखनम् (ख) शब्दानाम् अर्थैः सह मेलनम्	लघूत्तरात्मकाः लघूत्तरात्मकाः	$4 \times \frac{1}{2} = 2$ $4 \times \frac{1}{2} = 2$
		पूर्णभारः	30 अङ्काः

सम्पूर्णभारः 80 अङ्काः

### प्रश्नपत्र-प्रारूपम् / संरचना

संस्कृतम्

विषय-कोड्-सङ्ख्या - 122

कक्षा - नवमी (2025-26)

प्रश्नप्रकारः	प्रश्नानां सङ्ख्या	विभाग-सङ्ख्या	प्रतिप्रश्नम् अङ्कभारः	आहत्याङ्काः
अति-लघूत्तरात्मकाः $\frac{1}{2}$ अङ्कः	$2+2+2=6$	3	$\frac{1}{2}$	3
अति-लघूत्तरात्मकाः 1 अङ्कः	$2=2$	1	1	2
बहुविकल्पात्मकाः 1 अङ्कः	$3+4+4+4+3=18$	5	1	18
लघूत्तरात्मकाः $\frac{1}{2}$ अङ्कः	$4+4+4+4+4=20$	5	$\frac{1}{2}$	10
लघूत्तरात्मकाः 1 अङ्कः	$2+2+2+1+4=11$	5	1	11
दीर्घोत्तरात्मकाः $\frac{1}{2}$ अङ्कः	$8=8$	1	$\frac{1}{2}$	4
दीर्घोत्तरात्मकाः 1 अङ्कः	$5+5+2+2+2+4=20$	6	1	20
दीर्घोत्तरात्मकाः 2 अङ्कौ	$2=2$	1	2	4
निबन्धात्मकाः 3 अङ्काः	$1=1$	1	3	3
निबन्धात्मकाः 5 अङ्काः	$1=1$	1	5	5
			आहत्याङ्काः	80

**संस्कृतम्**  
**विषय-कोड-सङ्ख्या - 122**  
**कक्षा-नवमी (2025-26)**  
**वार्षिक मूल्याङ्कनम्**

<b>‘क’ खण्डः</b> <b>अपठितावबोधनम्</b>		(10 अङ्काः)
1. एकः अपठितः गद्यांशः 80-100 शब्दपरिमितः गद्यांशः, सरलकथा वर्णनं वा ➤ एकपदेन पूर्णवाक्येन च अवबोधनात्मकं कार्यम् (2+4) ➤ शीर्षकलेखनम् (1) ➤ अनुच्छेदाधारितं भाषिकं कार्यम् (3) भाषिककार्याय तत्त्वानि - ✓ वाक्ये कर्तृ-क्रियापदचयनम् ✓ कर्तृ-क्रिया-अन्वितिः ✓ विशेषण-विशेष्यचयनम् ✓ पर्याय-विलोमपदचयनम् ✓ सर्वनामस्थाने संज्ञाप्रयोगः		10
<b>‘ख’ खण्डः</b> <b>रचनात्मककार्यम्</b>		(15 अङ्काः)
2. औपचारिकम् अथवा अनौपचारिकं पूर्णपत्रलेखनम् सम्भावितविषयाः - ➤ औपचारिकम् - अवकाशार्थम्, स्वच्छतायै स्वास्थ्यविभागाय, विद्युद्विभागाय, वित्तकोषाय, आरक्षकालयाय, प्रकाशकाय इत्यादयः । ➤ अनौपचारिकम् - पितृभ्याम्, वर्धापनपत्रम्, निमन्त्रणपत्रम्, परिणामसूचनापत्रम् इत्यादयः ।		5
3. चित्राधारितं वर्णनम् अथवा अनुच्छेदलेखनम् (मञ्जूषायाः सहायतया चित्रवर्णनम् अनुच्छेदलेखनं वा करणीयम्)		5
4. हिन्दीभाषायाम् आङ्ग्लभाषायां वा लिखितानां पञ्चवाक्यानां संस्कृतभाषायाम् अनुवादः		5
<b>‘ग’ खण्डः</b> <b>अनुप्रयुक्तव्याकरणम्</b>		(25 अङ्काः)
5. सन्धिकार्यम् ➤ स्वरसन्धिः - दीर्घः, गुण, वृद्धिः, यण्, अयादि ➤ व्यञ्जनसन्धिः -जश्त्वसन्धिः, ‘म्’ स्थाने अनुस्वारः		4

<p>➤ विसर्गसन्धिः – उत्त्वम्, रत्वम्, लोपः</p> <p>6. शब्दरूपाणि</p> <p>➤ अकारान्तपुंल्लिङ्गशब्दाः – बालकवत्</p> <p>➤ इकारान्तपुंल्लिङ्गशब्दाः – कविवत्</p> <p>➤ उकारान्तपुंल्लिङ्गशब्दाः – साधुवत्</p> <p>➤ ऋकारान्तपुंल्लिङ्गशब्दाः – पितृवत्</p> <p>➤ आकारान्तस्त्रीलिङ्गशब्दाः – लतावत्</p> <p>➤ ईकारान्तस्त्रीलिङ्गशब्दाः – नदीवत्</p> <p>➤ ऋकारान्तस्त्रीलिङ्गशब्दाः – मातृवत्</p> <p>➤ हलन्ताः – राजन्, भवत्, विद्वस्, गुणिन्</p> <p>➤ सर्वनामशब्दाः – अस्मद्, युष्मद्, तत्, इदम्, किम् (त्रिषु लिङ्गेषु)</p>	4
<p>7. धातुरूपाणि</p> <p>➤ पठ्, गम्, वद्, भू, क्रीड्, नी, टश्, शक्, ज्ञा, अस्, कृ, दा, क्री, श्रु, पा (पिब), सेव्, लभ्, रुच् (पञ्चसु लकारेषु)</p>	4
<p>8. कारक-उपपद-विभक्तयः</p> <p>➤ द्वितीया – उभयतः, धिक्, परितः, समया, निकषा, प्रति, विना</p> <p>➤ तृतीया – सह, साकम्, समम्, सार्धम्, विना, अलम्, सदृश, हीन</p> <p>➤ चतुर्थी – रुच्, दा (यच्छ), नमः, कुप्, स्वस्ति</p> <p>➤ पञ्चमी – विना, बहिः, भी, रक्ष्, ऋते</p> <p>➤ षष्ठी – उपरि, अधः, पुरतः, पृष्ठतः, निर्धारणे</p> <p>➤ सप्तमी – स्निह्, निपुणः, विश्वस्, पटु</p>	4
<p>9. प्रत्ययाः</p> <p>➤ क्त्वा, तुमुन्, ल्यप्, क्तवतु, शतृ, शानच्, क्त</p>	3
<p>10. सङ्ख्या – 1-100 (1-4 केवलं प्रथमा-विभक्तौ)</p>	2
<p>11. उपसर्गाः (द्वाविंशतिः)</p>	2
<p>12. अव्ययानि</p> <p>➤ स्थानबोधकानि – अत्र, तत्र, अन्यत्र, सर्वत्र, यत्र, एकत्र, उभयत्र</p> <p>➤ कालबोधकानि – यदा, तदा, सर्वदा, एकदा, पुरा, अधुना, अद्य, श्वः, ह्यः</p> <p>➤ प्रश्नबोधकानि – किम्, कुत्र, कति, कदा, कुतः, कथम्, किमर्थम्</p> <p>➤ अन्यानि – च, अपि, यदि, तर्हि, यथा, तथा, सम्यक्, एव, तु</p>	2
<p style="text-align: center;"><b>‘घ’ खण्डः</b></p> <p style="text-align: center;"><b>पठितावबोधनम्</b></p> <p style="text-align: right;"><b>(30 अङ्काः)</b></p>	
<p>13. गद्यांशम् अधिकृत्य अवबोधनात्मकं कार्यम्</p> <p>प्रश्नप्रकाराः – एकपदेन पूर्णवाक्येन च प्रश्नोत्तराणि</p> <p>भाषिककार्यम् –</p>	5

<ul style="list-style-type: none"> <li>➤ वाक्ये कर्तृ-क्रियापदचयनम्</li> <li>➤ विशेषण-विशेष्यचयनम्</li> <li>➤ पर्याय-विलोमपचयनम्</li> <li>➤ सर्वनामस्थाने संज्ञाप्रयोगः</li> </ul>	
<p>14. पद्यांशम् अधिकृत्य अवबोधनात्मकं कार्यम्</p> <p>प्रश्नप्रकाराः – एकपदेन पूर्णवाक्येन च प्रश्नोत्तराणि भाषिककार्यम् –</p> <ul style="list-style-type: none"> <li>➤ वाक्ये कर्तृ-क्रियापदचयनम्</li> <li>➤ विशेषण-विशेष्यचयनम्</li> <li>➤ पर्याय-विलोमपचयनम्</li> <li>➤ सर्वनामस्थाने संज्ञाप्रयोगः</li> </ul>	5
<p>15. नाट्यांशम् अधिकृत्य अवबोधनात्मकं कार्यम्</p> <p>प्रश्नप्रकाराः – एकपदेन पूर्णवाक्येन च प्रश्नोत्तराणि भाषिककार्यम् –</p> <ul style="list-style-type: none"> <li>➤ वाक्ये कर्तृ-क्रियापदचयनम्</li> <li>➤ विशेषण-विशेष्यचयनम्</li> <li>➤ पर्याय-विलोमपचयनम्</li> <li>➤ सर्वनामस्थाने संज्ञाप्रयोगः</li> </ul>	5
<p>16. वाक्येषु रेखाङ्कितपदानि अधिकृत्य उचितप्रश्ननिर्माणम्</p>	4
<p>17. श्लोकान्वयः/ एकस्य श्लोकस्य संस्कृतेन भावार्थलेखनम्</p>	3
<p>18. घटनाक्रमानुसारं कथालेखनम्</p>	4
<p>19. (क) प्रसङ्गानुसारम् अर्थलेखनम्</p>	2
<p>(ख) शब्दानाम् अर्थैः सह मेलनम्</p> <p>(पाठान् आधृत्य लघूत्तरात्मकाः प्रश्नाः)</p>	2

आहत्याङ्काः - 80

परीक्षायै निर्धारिताः पाठाः

पाठसङ्ख्या	पाठनाम		पाठसङ्ख्या	पाठनाम
प्रथमः पाठः	भारतीवसन्तगीतिः		सप्तमः पाठः	सिकतासेतुः
द्वितीयः पाठः	स्वर्णकाकः		अष्टमः पाठः	जटायोः शौर्यम्
तृतीयः पाठः	गोदोहनम्		नवमः पाठः	पर्यावरणम्
चतुर्थः पाठः	सूक्तिमौक्तिकम्		दशमः पाठः	वाङ्मनः प्राणस्वरूपम्
पञ्चमः पाठः	भ्रान्तो बालः			

निर्धारित – पाठ्यपुस्तकानि –

1. 'शेमुषी' प्रथमो भागः, पाठ्यपुस्तकम् , संशोधितसंस्करणम्  
(प्रकाशनम् – रा.शै.अनु.प्र.परि. द्वारा)
2. 'अभ्यासवान् भव'-प्रथमो भागः – व्याकरणपुस्तकम्  
(प्रकाशनम् – रा.शै.अनु.प्र.परि. द्वारा)
3. 'व्याकरणवीथिः'- व्याकरणपुस्तकम्  
(प्रकाशनम् – रा.शै.अनु.प्र.परि. द्वारा)

अवधेयम् -

- \* अनुप्रयुक्तव्याकरणस्य अंशानां चयनं यथासम्भवं 'शेमुषी-प्रथमो भागः इति' पाठ्यपुस्तकात् करणीयम्। यदि ततः न सम्भवति तर्हि 'अभ्यासवान् भव-प्रथमो भागः' इत्यस्मात् चेतुं शक्यते।

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**संस्कृतम्**  
**विषय-कोड्-सङ्ख्या - 122**  
**कक्षा - दशमी (2025-26)**

वार्षिकमूल्याङ्कनाय निर्मिते प्रश्नपत्रे चत्वारः खण्डाः भविष्यन्ति -

‘क’ खण्डः	अपठित-अवबोधनम्	10 अङ्काः
‘ख’ खण्डः	रचनात्मक-कार्यम्	15 अङ्काः
‘ग’ खण्डः	अनुप्रयुक्त-व्याकरणम्	25 अङ्काः
‘घ’ खण्डः	पठित-अवबोधनम्	30 अङ्काः

खण्डानुसारं विषयाः मूल्यभारः च

क्र. सं.	विषयाः	प्रश्नप्रकाराः	मूल्यभारः
<b>‘क’ खण्डः</b> <b>अपठितावबोधनम् 10 अङ्काः</b>			
1	एकः गद्यांशः 80-100 शब्दपरिमितः	अति-लघूत्तरात्मकौ पूर्णवाक्यात्मकौ शीर्षकम् (लघूत्तरात्मकः) भाषिककार्यम् (बहुविकल्पात्मकाः)	2×1=2 2×2=4 1×1=1 3×1=3
		सम्पूर्णभारः	10 अङ्काः
<b>‘ख’ खण्डः</b> <b>रचनात्मककार्यम् 15 अङ्काः</b>			
2.	औपचारिकम् अथवा अनौपचारिकं पत्रम् (मञ्जूषायाः सहायतया पूर्णं पत्रं लेखनीयम्)	निबन्धात्मकः	5
3.	चित्रवर्णनम् अथवा अनुच्छेदलेखनम्	निबन्धात्मकः	5
4.	हिन्दी/आङ्ग्लभाषातः संस्कृतेन अनुवादः	पूर्णवाक्यात्मकः	5×1=5
		सम्पूर्णभारः	15 अङ्काः
<b>‘ग’ खण्डः</b> <b>अनुप्रयुक्तव्याकरणम् 25 अङ्काः</b>			
5.	सन्धिः	लघूत्तरात्मकाः	4×1=4
6.	समासः	बहुविकल्पात्मकाः	4×1=4
7.	प्रत्ययाः	बहुविकल्पात्मकाः	4×1=4
8.	वाच्यप्रकरणम्	बहुविकल्पात्मकाः	3×1=3
9.	समयः	लघूत्तरात्मकाः	4×1=4
10.	अव्ययपदानि	बहुविकल्पात्मकाः	3×1=3
11.	संशोधनकार्यम्	बहुविकल्पात्मकाः	3×1=3
		सम्पूर्णभारः	25 अङ्काः

<p style="text-align: center;">‘घ’ खण्डः पठितावबोधनम् <span style="float: right;">30 अङ्काः</span></p>			
12.	गद्यांशः	अति-लघूत्तरात्मकौ पूर्णवाक्यात्मकौ लघूत्तरात्मकौ (भाषिककार्यम्)	$2 \times \frac{1}{2} = 1$ $2 \times 1 = 2$ $2 \times 1 = 2$
13.	पद्यांशः	अति-लघूत्तरात्मकौ पूर्णवाक्यात्मकौ लघूत्तरात्मकौ (भाषिककार्यम्)	$2 \times \frac{1}{2} = 1$ $2 \times 1 = 2$ $2 \times 1 = 2$
14.	नाट्यांशः	अति-लघूत्तरात्मकौ पूर्णवाक्यात्मकौ लघूत्तरात्मकौ (भाषिककार्यम्)	$2 \times \frac{1}{2} = 1$ $2 \times 1 = 2$ $2 \times 1 = 2$
15.	प्रश्ननिर्माणम्	पूर्णवाक्यात्मकाः	$4 \times 1 = 4$
16.	अन्वयः अथवा भावार्थः	पूर्णवाक्यात्मकाः	$4 \times 1 = 4$
17.	घटनाक्रमानुसारं वाक्यलेखनम्	पूर्णवाक्यात्मकाः	$8 \times \frac{1}{2} = 4$
18.	प्रसङ्गानुकूलम् अर्थलेखनम्	लघूत्तरात्मकाः	$3 \times 1 = 3$
		पूर्णभारः	30 अङ्काः

सम्पूर्णभारः - 80 अङ्काः

### प्रश्नपत्र-प्रारूपम् / संरचना

संस्कृतम्

विषय-कोड्-सङ्ख्या - 122

कक्षा - दशमी (2025-26)

प्रश्नप्रकारः	प्रश्नानां सङ्ख्या	विभाग- सङ्ख्या	प्रतिप्रश्नम् अङ्कभारः	आहत्याङ्काः
अति-लघूत्तरात्मकाः $\frac{1}{2}$ अङ्कः	$2+2+2=6$	3	$\frac{1}{2}$	3
अति-लघूत्तरात्मकाः 1 अङ्कः	$2=2$	1	1	2
बहुविकल्पात्मकाः 1 अङ्कः	$3+4+4+3+3=17$	5	1	17
लघूत्तरात्मकाः 1 अङ्कः	$2+2+2+1+4+4+3+3=21$	8	1	21
दीर्घोत्तरात्मकाः $\frac{1}{2}$ अङ्कः	$10+8=18$	2	$\frac{1}{2}$	9
दीर्घोत्तरात्मकाः 1 अङ्कः	$5+5+2+2+2+4+4=24$	7	1	24
दीर्घोत्तरात्मकाः 2 अङ्कौ	$2=2$	1	2	4
			आहत्याङ्काः	80



## 80 अंका:

<p style="text-align: center;"><b>‘क’ खण्डः</b></p> <p style="text-align: center;"><b>अपठितावबोधनम्</b></p> <p style="text-align: right;">(10 अङ्काः)</p>		
<p>1. एकः अपठितः गद्यांशः</p> <p style="text-align: right;">80-100 शब्दपरिमितः गद्यांशः, सरलकथा, वर्णनं वा</p> <p style="text-align: right;">2+4+1</p> <ul style="list-style-type: none"> <li>➤ एकपदेन पूर्णवाक्येन च अवबोधनात्मकं कार्यम्</li> <li>➤ शीर्षकलेखनम्</li> <li>➤ अनुच्छेदाधारितं भाषिकं कार्यम्</li> </ul> <p>भाषिककार्याय तत्त्वानि -</p> <p style="text-align: right;">3</p> <ul style="list-style-type: none"> <li>✓ वाक्ये कर्तृ-क्रियापदचयनम्</li> <li>✓ कर्तृ-क्रिया-अन्वितिः</li> <li>✓ विशेषण-विशेष्यचयनम्</li> <li>✓ पर्याय-विलोमपदचयनम्</li> <li>✓ सर्वनामस्थाने संज्ञाप्रयोगः</li> </ul>		10
<p style="text-align: center;"><b>‘ख’ खण्डः</b></p> <p style="text-align: center;"><b>रचनात्मककार्यम्</b></p> <p style="text-align: right;">(15 अङ्काः)</p>		
<p>2. औपचारिकम् अथवा अनौपचारिकं पूर्णपत्रलेखनम्</p> <p>सम्भावितविषयाः –</p> <ul style="list-style-type: none"> <li>➤ औपचारिकम् - संस्कृतभाषा-संवर्धनाय, शिक्षामन्त्रालयाय, नाम संशोधनाय नगरनिगमाय, धनादेश- अप्राप्तेः सूचनायै पत्रालयविभागाय, शुल्कनिवारणार्थं प्रधानाचार्याय, प्रकाशकाय इत्यादयः ।</li> <li>➤ अनौपचारिकम् - कुशलक्षेमपत्रम्, वर्धापनपत्रम्, निमन्त्रणपत्रम्, परिणामसूचनापत्रम्, विद्यालयवर्णनम् इत्यादयः ।</li> </ul>		5
<p>3. चित्राधारितं वर्णनम् अथवा अनुच्छेदलेखनम्</p> <p>(मञ्जूषायाः सहायतया चित्रवर्णनम् अनुच्छेदलेखनं वा करणीयम्)</p>		5
<p>4. हिन्दीभाषायाम् आङ्ग्लभाषायां वा लिखितानां पञ्चवाक्यानां संस्कृतभाषायाम् अनुवादः</p>		5
<p style="text-align: center;"><b>‘ग’ खण्डः</b></p> <p style="text-align: center;"><b>अनुप्रयुक्तव्याकरणम्</b></p> <p style="text-align: right;">(25 अङ्काः)</p>		
<p>5. सन्धिकार्यम्</p> <p style="text-align: right;">(1+1+2)</p>		4

<ul style="list-style-type: none"> <li>➤ स्वरसन्धिः - यण्, अयादि, पूर्वरूपसन्धिः</li> <li>➤ व्यञ्जनसन्धिः - वर्गीयप्रथमवर्णस्य तृतीयवर्णे परिवर्तनम्, प्रथमवर्णस्य पञ्चमवर्णे परिवर्तनम्</li> <li>➤ विसर्गसन्धिः - विसर्गस्य उत्त्वम्, रत्वम्, विसर्गलोपः, विसर्गस्य स्थाने स्, श्, ष्</li> </ul>	
<p>6. समासः - वाक्येषु समस्तपदानां विग्रहः विग्रहपदानां च समासः (1+1+1+1)</p> <ul style="list-style-type: none"> <li>➤ तत्पुरुषः - (विभक्ति-तत्पुरुषः, उपपद- तत्पुरुषः, कर्मधारयः)</li> <li>➤ बहुव्रीहिः</li> <li>➤ अव्ययीभावः (अनु, उप, सह, निर्, प्रति, यथा)</li> <li>➤ द्वन्द्वः</li> </ul>	4
<p>7. प्रत्ययाः (1+2+1)</p> <ul style="list-style-type: none"> <li>➤ कृत्प्रत्ययाः - तव्यत्, अनीयर्, क्त, क्तवतु</li> <li>➤ तद्धिताः - मतुप्, ठक्, त्व, तल्</li> <li>➤ स्त्रीप्रत्ययौ - टाप्, डीप्</li> </ul>	4
<p>8. वाच्यपरिवर्तनम् - केवलं लट्लकारे ( कर्तृ-कर्म-क्रिया)</p>	3
<p>9. समयः - अङ्कानां स्थाने शब्देषु समयलेखनम् (सामान्य-सपाद-सार्ध-पादोन)</p>	4
<p>10. अव्ययपदानि</p> <p>उच्चैः, च, श्वः, ह्यः, अद्य, अत्र-तत्र, यत्र-कुत्र, इदानीम्, (अधुना, सम्प्रति, साम्प्रतम्)</p> <p>यदा, तदा, कदा, सहसा, वृथा, शनैः, अपि, कुतः, इतस्ततः, यदि-तर्हि, यावत्-तावत्</p>	3
<p>11. अशुद्धि-संशोधनम् (वचन-लिङ्ग-पुरुष-लकार-विभक्तिदृष्ट्या संशोधनम्)</p>	3
<p><b>‘घ’ खण्डः</b></p>	
<p><b>पठितावबोधनम्</b></p>	
<p><b>(30 अङ्काः)</b></p>	
<p>12. गद्यांशम् अधिकृत्य अवबोधनात्मकं कार्यम्</p> <p>प्रश्नप्रकाराः - एकपदेन पूर्णवाक्येन च प्रश्नोत्तराणि</p> <p>भाषिककार्यम् -</p> <ul style="list-style-type: none"> <li>➤ वाक्ये कर्तृ-क्रियापदचयनम्</li> <li>➤ विशेषण-विशेष्यचयनम्</li> <li>➤ पर्याय-विलोमपदचयनम्</li> <li>➤ सर्वनामस्थाने संज्ञाप्रयोगः</li> </ul>	5
<p>13. पद्यांशम् अधिकृत्य अवबोधनात्मकं कार्यम्</p> <p>प्रश्नप्रकाराः - एकपदेन पूर्णवाक्येन च प्रश्नोत्तराणि</p> <p>भाषिककार्यम् -</p> <ul style="list-style-type: none"> <li>➤ वाक्ये कर्तृ-क्रियापदचयनम्</li> <li>➤ विशेषण-विशेष्यचयनम्</li> <li>➤ पर्याय-विलोमपदचयनम्</li> <li>➤ सर्वनामस्थाने संज्ञाप्रयोगः</li> </ul>	5

14. नाट्यांशम् अधिकृत्य अवबोधनात्मकं कार्यम् प्रश्नप्रकाराः – एकपदेन पूर्णवाक्येन च प्रश्नोत्तराणि भाषिककार्यम् – ➤ वाक्ये कर्तृ-क्रियापदचयनम् ➤ विशेषण-विशेष्यचयनम् ➤ पर्याय-विलोमपदचयनम् ➤ सर्वनामस्थाने संज्ञाप्रयोगः	5
15. वाक्येषु रेखाङ्कितपदानि अधिकृत्य चतुर्णां प्रश्नानां निर्माणम्	4
16. श्लोकान्वयः/ एकस्य श्लोकस्य संस्कृतेन भावार्थलेखनम्	4
17. घटनाक्रमानुसारं कथालेखनम्	4
18. प्रसङ्गानुकूलम् अर्थलेखनम् (पाठान् आधृत्य लघूत्तरात्मकाः प्रश्नाः )	3

आहत्याङ्काः - 80

### परीक्षायै निर्धारिताः पाठाः

पाठसङ्ख्या	पाठनाम
प्रथमः पाठः	शुचिपर्यावरणम्
द्वितीयः पाठः	बुद्धिर्बलवती सदा
तृतीयः पाठः	शिशुलालनम्
चतुर्थः पाठः	जननी तुल्यवत्सला
पञ्चमः पाठः	सुभाषितानि
षष्ठः पाठः	सौहार्दं प्रकृतेः शोभा
सप्तमः पाठः	विचित्रः साक्षी
अष्टमः पाठः	सूक्तयः
दशमः पाठः	अन्योक्तयः

### निर्धारित-पाठ्यपुस्तकानि –

1. “शेमुषी” पाठ्यपुस्तकम् भाग-2” , संशोधितसंस्करणम् (प्रकाशनम् – रा.शै.अनु.प्र.परि. द्वारा)
2. “अभ्यासवान् भव-द्वितीयो भागः” – व्याकरणपुस्तकम् (प्रकाशनम् – रा.शै.अनु.प्र.परि. द्वारा)
3. “व्याकरणवीथिः”- व्याकरणपुस्तकम् (प्रकाशनम् – रा.शै.अनु.प्र.परि. द्वारा)

### अवधेयम् -

- \* अनुप्रयुक्तव्याकरणस्य अंशानां चयनं यथासम्भवं ‘शेमुषी-द्वितीयो भागः इति’ पाठ्यपुस्तकात् करणीयम् । यदि ततः न सम्भवति तर्हि ‘अभ्यासवान् भव- द्वितीयो भागः’ इत्यस्मात् चेतुं शक्यते ।

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**नवमी/दशमी**  
**आन्तरिक-मूल्याङ्कनम् - 20 अङ्काः**

**उद्देश्यानि**

- ❖ छात्राणां सृजनात्मकक्षमतायाः विकासः ।
- ❖ श्रवण-भाषण-पठन-लेखनकौशलानां विकासः ।
- ❖ चिन्तनक्षमतायाः आत्मविश्वासस्य च संवर्धनम् ।

क्र. सं.	गतिविधयः	उदाहरणानि	अङ्काः	निर्देशाः	मूल्याङ्कनविन्दवः
1.	आवधिक-परीक्षा: (पीरियोडिक - असैस्मैट)	लिखितपरीक्षा	05	विद्यालयेन समये समये लिखितपरीक्षाणाम् आयोजनं करणीयं भवति ।	परीक्षासु यत्र विद्यार्थिनः श्रेष्ठाः अङ्काः स्युः तयोः द्वयोः परीक्षयोः एव अधिभारः ग्रहीतव्यः । अपि च आवधिकपरीक्षासु अपि प्रश्नेषु आन्तरिकविकल्पाः देयाः । मूल्याङ्कनसमये यदि छात्रः सर्वान् प्रश्नान् उत्तरति तर्हि छात्रहिताय यत्र अधिकाः अङ्काः सन्ति तेषाम् एव मूल्याङ्कनं करणीयम् ।
2	बहुविधमूल्याङ्कनम्	<ul style="list-style-type: none"> <li>❖ कक्षायां पाठितस्य पाठस्य लघुमूल्याङ्कनम्</li> <li>❖ निर्गतपत्राणि</li> <li>❖ प्रश्नोत्तरी</li> <li>❖ मौखिकी परीक्षा</li> <li>❖ प्रतियोगिताः</li> <li>❖ प्रश्नमञ्चस्यायोजनम्</li> </ul>	05	कक्षायां पाठित-पाठस्य विषयस्य वा बहुविधं मूल्याङ्कनम् अपेक्षितम् अस्ति । अनेन विद्यार्थिनां विविधकौशलानां मूल्याङ्कनं भवेत् ।	<ul style="list-style-type: none"> <li>❖ मौलिकता</li> <li>❖ विषयसम्बद्धता</li> <li>❖ शुद्धता</li> <li>❖ समयबद्धता</li> <li>❖ प्रस्तुतीकरणम्</li> </ul>
3.	निवेशसूचिका (पोर्टफोलियो)	<ul style="list-style-type: none"> <li>❖ कक्षाकार्यम्</li> <li>❖ सामूहिक-मूल्याङ्कनम्</li> <li>❖ स्वमूल्याङ्कनम्</li> <li>❖ विद्यार्थिनः विषयगताः उपलब्धयः</li> </ul>	05	विद्यार्थिभिः कक्षायां कृतानां कार्याणाम् उपलब्धीनां च संरक्षणं संयोजनं च सञ्चिकायां पत्रावल्यां वा करणीयम् । एतेन समग्रं मूल्याङ्कनं प्रामाणिकत्वेन भवितुं शक्नोति ।	<ul style="list-style-type: none"> <li>❖ सुलेखः</li> <li>❖ तथ्यात्मकता</li> <li>❖ प्रामाणिकता</li> <li>❖ समयबद्धता</li> </ul>

4.	भाषा-संवर्धनाय गतिविधयः (क) श्रवण- भाषण-कौशलम्	<ul style="list-style-type: none"> <li>❖ कथा</li> <li>❖ संवादः/ वार्तालापः</li> <li>❖ भाषणम्</li> <li>❖ नाटकम्</li> <li>❖ वार्ताः</li> <li>❖ आशुभाषणम्</li> <li>❖ संस्कृतगीतानि</li> <li>❖ श्लोकोच्चारणम्</li> <li>❖ प्रहेलिकाः</li> </ul>	05	<ul style="list-style-type: none"> <li>❖ छात्राः कामपि कथां श्रावयितुं शक्नुवन्ति ।</li> <li>❖ शिक्षकः कमपि विषयं सूचयित्वा परस्परं संवादं कारयितुं शक्नोति ।</li> <li>❖ दूरदर्शने वार्तावली इत्याख्यः संस्कृत-कार्यक्रमः प्रसारितः भवति तं द्रष्टुं छात्राः प्रेरणीयाः ।</li> <li>❖ श्रवण-कौशल-मूल्याङ्कनाय शिक्षकः स्वयम् अपि कथां श्रावयित्वा ततः सम्बद्ध-प्रश्नान् प्रष्टुं शक्नोति ।</li> </ul>	<ul style="list-style-type: none"> <li>❖ उच्चारणम्</li> <li>❖ शुद्धता</li> <li>❖ समयबद्धता</li> <li>❖ प्रस्तुतीकरणम् (आरोहावरोह-गतियति-प्रयोगः)</li> </ul>
	(ख) लेखनकौशलम्	<ul style="list-style-type: none"> <li>❖ विविधविषयान् आधृत्य मौलिकलेखनम् यथा- देशः, माता, पिता, गुरुः, विद्या पर्यावरणम्, योगः, समयस्य सदुपयोगः, शिक्षा, अनुशासनम् इत्यादयः ।</li> <li>❖ शैक्षिकभ्रमणस्य संस्कृतेन प्रतिवेदनलेखनम् ।</li> <li>❖ दैनन्दिनीलेखनम् ।</li> <li>❖ सङ्केताधारितं कथालेखनम् ।</li> <li>❖ भित्तिपत्रिकायाः निर्माणम् ।</li> <li>❖ श्रुतलेखः ।</li> <li>❖ सूक्तिलेखनम् ।</li> </ul>		<ul style="list-style-type: none"> <li>❖ छात्राः यथाशक्यं कक्षायामेव लेखनकार्यं कुर्युः ।</li> <li>❖ टिप्पणी- पुस्तिकायाः निर्माणम् ।</li> <li>❖ वैयक्तिकपरीक्षणम् ।</li> </ul>	<ul style="list-style-type: none"> <li>❖ विषय-सम्बद्धता</li> <li>❖ शुद्धता (विशेषतः पञ्चमवर्णस्यप्रयोगः)</li> <li>❖ समयबद्धता</li> <li>❖ सुलेखः</li> <li>❖ प्रस्तुतीकरणम्</li> </ul>
	<b>अवधातव्यम्</b> –उपर्युक्त-गतिविधयः उदाहरणरूपेण प्रदत्ताः सन्ति । एतदतिरिच्य एतादृशाः अन्यगतिविधयः अपि भवितुमर्हन्ति ।				

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**SCIENCE**  
**Subject Code – 086**  
**Classes IX and X (2025-26)**

Science Education aims to achieve Scientific understanding of the natural and physical world; Capacities for scientific inquiry; Understanding the evolution of scientific knowledge; Interdisciplinary understanding between science and other curricular areas; Understanding of the relationship between Science, Technology and, Society; Scientific temper and Creativity.

The present syllabus has been designed around seven broad themes viz. Food; Materials; The World of the Living; How Things Work; Moving Things, People and Ideas; Natural Phenomenon and Natural Resources.

The Curricular Goals of Science at the Secondary Stage move from the concrete nature of the Middle Stage towards abstraction - from perceptual and practical concepts to theoretical concepts.

The Learning Standards (Curricular Goals and Competencies) for Science as an integrated curricular area, in alignment with the National Curriculum Framework 2023 are as follows:

CG-1 Explores the world of matter, its interactions, and properties at the atomic level	<p>C-1.1 Describes classification of elements in the Periodic Table, and explains how compounds (including carbon compounds) are formed based on atomic structure (Bohr's model) and properties (valency)</p> <p>C-1.2 Investigates the nature and properties of chemical substances (distillation, crystallisation, chromatography, centrifugation, types and properties of mixtures, solutions, colloids, and suspensions)</p> <p>C-1.3 Describes and represents chemical interactions and changes using symbols and chemical equations (acid and base, metal, and non-metal, reversible, and irreversible)</p>
CG-2 Explores the physical world around them, and understands scientific principles and laws based on observations and analysis	<p>C-2.1 Applies Newton's laws to explain the effect of forces (change in state of motion – displacement and direction, velocity and acceleration, uniform circular motion, acceleration due to gravity) and analyses graphical and mathematical representations of motion in one dimension</p> <p>C-2.2 Explains the relationship between mass and weight using universal law of gravitation and connect it to laws of motion</p> <p>C-2.3 Manipulates the position of object and properties of lenses (focus, centre of curvature) to observe image characteristics and correspondence with a ray diagram, and extends this understanding to a combination of lenses (telescope, microscope)</p> <p>C-2.4 Manipulates and analyses different characteristics of the circuit (current, voltage, resistance) and mathematises their relationship (Ohm's law), and applies it to everyday usage (electricity bill, short circuit, safety measures)</p> <p>C-2.5 Defines work in scientific terms, and represents the relationship</p>

	<p>between potential and kinetic energy (conservation of energy) in mathematical expressions</p> <p>C-2.6 Demonstrates the principle of mechanical advantage by constructing simple machines (system of levers and pulleys)</p> <p>C-2.7 Describes the origin and properties of sound (wavelength, frequency, amplitude) and differences in what we hear as it propagates through different instruments</p>
<p>CG-3</p> <p>Explores the structure and function of the living world at the cellular level</p>	<p>C-3.1 Explains the role of cellular components (nucleus, mitochondria, endoplasmic reticulum, vacuoles, chloroplast, cell wall), including the semi-permeability of cell membrane in making cell the structural basis of living organisms and functional basis of life processes</p> <p>C-3.2 Analyses similarities and differences in the life processes involved in nutrition (photosynthesis in plants; absorption of nutrients in fungi; digestion in animals), transport (transport of water in plants; circulation in animals), exchange of materials (respiration and excretion), and reproduction</p> <p>C-3.3 Describes mechanisms of heredity (in terms of DNA, genes, chromosomes) and variation (as changes in the sequence of DNA)</p>
<p>CG-4</p> <p>Explores interconnectedness between organisms and their environment</p>	<p>C-4.1 Applies the knowledge of cellular diversity in organisms along with the ecological role organisms play (autotrophic or heterotrophic nutrition) to classify them into five-kingdoms</p> <p>C-4.2 Illustrates different levels of organisations of living organisms (from molecules to organisms)</p> <p>C-4.3 Analyses different levels of biological organisation from organisms to ecosystems and biomes along with interactions that take place at each level</p> <p>C-4.4 Analyses patterns of inheritance of traits in terms of Mendel's laws and its consequences at a population level (using models and/or simulations)</p> <p>C-4.5 Analyses evidences of biological evolution demonstrating the consequences of the process of natural selection in terms of changes: in allele frequency in population, structure, and function of organisms</p>
<p>CG-5</p> <p>Draws linkages between scientific knowledge and knowledge across other curricular areas</p>	<p>C-5.1 Explores how literature and the arts have influenced Science</p> <p>C-5.2 Examines a case study related to the use of Science in human life from the perspective of Social Sciences and ethics (e.g., Marie Curie, Jenner, treatment of patients with mental illness, the story of the atomic bomb, green revolution and GMOs, conservation of biodiversity)</p> <p>C-5.3 Applies scientific principles to explain phenomena in other subjects (sound pitch, octave, and amplitude in music; use of muscles in dance form and sports)</p>
<p>CG-6</p> <p>Understands and appreciates the contribution of India through history and the present times to the overall</p>	<p>C-6.1 Knows and explains the significant contributions of India to all matters (concepts, explanations, methods) that are studied within the curriculum in an integrated manner</p>

field of Science, including the disciplines that constitute it	
CG-7 Develops awareness of the most current discoveries, ideas, and frontiers in all areas of scientific knowledge in order to appreciate that Science is ever evolving, and that there are still many unanswered questions	<p>C-7.1 States concepts that represent the most current understanding of the matter being studied, ranging from mere familiarity to conceptual understanding of the matter as appropriate to the developmental stage of the students</p> <p>C-7.2 States questions related to matters in the curriculum for which current scientific understanding is well recognised to be inadequate</p>
CG-8 Explores the nature of Science by doing Science	<p>C-8.1 Develops accurate and appropriate models (including geometric, mathematical, graphical) to represent real-life events and phenomena using scientific principles and use these models to manipulate variables and predict results</p> <p>C-8.2 Designs and implements a plan for scientific inquiry (formulates hypotheses, makes predictions, identifies variables, accurately uses scientific instruments, represents data, primary and secondary, in multiple modes, draws inferences based on data and understanding of scientific concepts, theories, laws, and principles, communicates findings using scientific terminology)</p>

It is important to note that the Curricular Goals are interdependent, and not separate curricular pieces of study.

(Reference: National Curriculum Framework for School Education – 2023.)

The competencies, as defined by the NCFSE 2023, are designed to encompass the entire secondary stage (classes IX-XII). Attainment of the competencies shall be done through transaction of the curriculum using appropriate pedagogy; these shall be assessed through an integrated evaluation scheme.

### **General Instructions for Assessment:**

1. There will be an Annual Examination based on the entire syllabus.
2. The Annual Examination will be of 80 marks and 20 marks weightage shall be for Internal Assessment.
3. For Internal Assessment:
  - i) There will be Periodic Assessment that would include:
    - For 5 marks- Three periodic tests conducted by the school. Average of the best two tests to be taken that will have a weightage of 05 marks towards the final result.
    - For 5 marks - Diverse methods of assessment as per the need of the class dynamics and curriculum transaction. These may include - short tests, oral test, quiz, concept maps, projects, posters, presentations and enquiry based



scientific investigations etc. and use of rubrics for assessing them objectively.

This will also have a weightage of 05 marks towards the final result.

- ii) For 5 marks - Practical / Laboratory work that is done throughout the year. The students should maintain record of the same. Practical Assessment should be continuous. All practical work listed in the syllabus must be completed.
- iii) For 5 marks - Portfolio that includes classwork and other sample of student's work.

**COURSE STRUCTURE**  
**CLASS IX (2025-26)**  
**(Annual Examination)**

**Time: 03 Hours**

**Marks: 80**

Unit No.	Unit	Marks
I	Matter - Its Nature and Behaviour	25
II	Organization in the Living World	22
III	Motion, Force and Work	27
IV	Food; Food Production	06
	<b>Total</b>	<b>80</b>
	<b>Internal assessment</b>	<b>20</b>
	<b>Grand Total</b>	<b>100</b>

**Theme: Materials**

**Unit I: Matter-Nature and Behaviour**

**Matter in Our Surroundings:** Definition of matter; Particulate Nature of Matter; States of Matter: solid, liquid and gas and their characteristics; change of state- melting (absorption of heat), freezing, evaporation (cooling by evaporation), condensation, sublimation.

**Is Matter Around Us Pure:** Elements, compounds and mixtures. Heterogeneous and homogenous mixtures, colloids and suspensions. Physical and chemical changes (excluding separating the components of a mixture); Pure and Impure substances.

**Atoms and Molecules:** Atoms and molecules, Law of Chemical Combination, Chemical formula of common compounds, Atomic and molecular masses.

**Structure of atom:** Sub-atomic particles: Electrons, protons and neutrons, Models of atom; Valency, Atomic Number and Mass Number, Isotopes and Isobars.

## Theme: The World of the Living

### Unit II: Organization in the Living World

**Cell - Basic Unit of life:** Cell as a basic unit of life; prokaryotic and eukaryotic cells, multicellular organisms; cell membrane and cell wall, cell organelles and cell inclusions; chloroplast, mitochondria, vacuoles, endoplasmic reticulum, Golgi apparatus; nucleus, chromosomes - basic structure, number.

#### **Tissues, Organs, Organ System, Organism:**

Structure and functions of animal and plant tissues (only four types of tissues in animals; Meristematic and Permanent tissues in plants).

*The following topics are included in the syllabus but will be assessed only formatively to reinforce understanding without adding to summative assessments. This reduces academic stress while ensuring meaningful learning. Schools can integrate these with existing chapters as they align well. Relevant NCERT textual material is enclosed for reference.*

**Health and Diseases:** Health and its failure. Infectious and Non-infectious diseases, their causes and manifestation. Diseases caused by microbes (Virus, Bacteria and Protozoans) and their prevention; Principles of treatment and prevention. Pulse Polio programmes.

## Theme: Moving Things, People and Ideas

### Unit III: Motion, Force and Work

**Motion:** Distance and displacement, velocity; uniform and non-uniform motion along a straight line; acceleration, distance-time and velocity-time graphs for uniform motion and uniformly accelerated motion, elementary idea of uniform circular motion.

**Force and Newton's laws:** Force and Motion, Newton's Laws of Motion, Action and Reaction forces, Inertia of a body, Inertia and mass, Momentum, Force and Acceleration.

*The following topic is included in the syllabus but will be assessed only formatively to reinforce understanding without adding to summative assessments. This reduces academic stress while ensuring meaningful learning. Schools can integrate this with existing chapters as they align well. Relevant NCERT textual material is enclosed for reference.*

Elementary idea of conservation of Momentum

**Gravitation:** Gravitation; Universal Law of Gravitation, Force of Gravitation of the earth (gravity), Acceleration due to Gravity; Mass and Weight; Free fall.

**Floatation:** Thrust and Pressure. Archimedes' Principle; Buoyancy.

**Work, Energy and Power:** Work done by a Force, Energy, power; Kinetic and Potential energy; Law of conservation of energy (excluding commercial unit of Energy).

**Sound:** Nature of sound and its propagation in various media, speed of sound, range of hearing in humans; ultrasound; reflection of sound; echo.

## **Theme: Food**

### **Unit IV: Food Production**

Plant and animal breeding and selection for quality improvement and management; Use of fertilizers and manures; Protection from pests and diseases; Organic farming.

**Note for Teachers:** The NCERT text books present information in boxes across the book. These help students to get conceptual clarity. However, the information in these boxes would not be assessed in the year-end examination.

## **PRACTICALS**

**Practicals should be conducted alongside the concepts taught in theory classes.**

### **(LIST OF EXPERIMENTS)**

- |    |  |               |
|----|--|---------------|
| 1. | Preparation of:  | <b>Unit-I</b> |
|    | a) a true solution of common salt, sugar and alum  |               |
|    | b) a suspension of soil, chalk powder and fine sand in water   |               |
|    | c) a colloidal solution of starch in water and egg albumin/milk in water and distinguish between these on the basis of |               |
|    | • transparency   |               |
|    | • filtration criterion   |               |
|    | • stability  |               |
| 2. | Preparation of   | <b>Unit-I</b> |
|    | a) A mixture   |               |
|    | b) A compound  |               |
|    | using iron filings and sulphur powder and distinguishing between these on the basis of:                                |               |
|    | • appearance, i.e., homogeneity and heterogeneity  |               |

- behaviour towards a magnet
- behaviour towards carbon disulphide as a solvent
- effect of heat

3. Perform the following reactions and classify them as physical or chemical changes:

**Unit-I**

- Iron with copper sulphate solution in water
- Burning of magnesium ribbon in air
- Zinc with dilute sulphuric acid
- Heating of copper sulphate crystals
- Sodium sulphate with barium chloride in the form of their solutions in water

4. Preparation of stained temporary mounts of (a) onion peel, (b) human cheek cells & to record observations and draw their labeled diagrams

**Unit - II**

5. Identification of Parenchyma, Collenchyma and Sclerenchyma tissues in plants, striped, smooth and cardiac muscle fibers and nerve cells in animals, from prepared slides. Draw their labeled diagrams.

**Unit-II**

6. Determination of the melting point of ice and the boiling point of water.

**Unit-I**

7. Verification of the laws of reflection of sound.

**Unit-III**

8. Determination of the density of solid (denser than water) by using a spring balance and a measuring cylinder.

**Unit-III**

9. Establishing the relation between the loss in weight of a solid when fully immersed in

**Unit-III**

- Tap water
- Strongly salty water with the weight of water displaced by it by taking at least two different solids.

10. Determination of the speed of a pulse propagated through a stretched string/ slinky (helical spring).

**Unit-III**

11. Verification of the law of conservation of mass in a chemical reaction.

**Unit-III**

**COURSE STRUCTURE**  
**CLASS X (2025-26)**  
**(Annual Examination)**

**Time: 03 Hours**

**Marks: 80**

Unit No.	Unit	Marks
I	Chemical Substances-Nature and Behaviour	25
II	World of Living	25
III	Natural Phenomena	12
IV	Effects of Current	13
V	Natural Resources	05
	<b>Total</b>	<b>80</b>
	<b>Internal assessment</b>	<b>20</b>
	<b>Grand Total</b>	<b>100</b>

**Theme: Materials**

**Unit I: Chemical Substances - Nature and Behaviour**

**Chemical Reactions and Equations:** Chemical reactions, Chemical equation, Balanced chemical equation, types of chemical reactions: combination, decomposition, displacement, double displacement, precipitation, endothermic exothermic reactions, oxidation and reduction.

**Acids, Bases and Salts:** Acids and Bases – definitions in terms of furnishing of  $H^+$  and  $OH^-$  ions, identification using indicators, chemical properties, examples and uses, neutralization, concept of pH scale (Definition relating to logarithm not required), importance of pH in everyday life; preparation and uses of Sodium Hydroxide, Bleaching powder, Baking soda, Washing soda and Plaster of Paris.

**Metals and Non-metals:** Properties of metals and non-metals; Reactivity series; Formation and properties of ionic compounds; Basic metallurgical processes; Corrosion and its prevention.

**Carbon and its Compounds:** Covalent bonds – formation and properties of covalent compounds, Versatile nature of carbon, Hydrocarbons – saturated and unsaturated Homologous series. Nomenclature of alkanes, alkenes, alkyne and carbon compounds containing functional groups (halogens, alcohol, ketones, aldehydes). Chemical properties of carbon compounds (combustion, oxidation, addition and substitution reaction). Ethanol and Ethanoic acid (only properties and uses), soaps and detergents.

## **Theme: The World of the Living**

### **Unit II: World of Living**

**Life processes:** 'Living Being'. Basic concept of nutrition, respiration, transport and excretion in plants and animals.

**Control and co-ordination in animals and plants:** Tropic movements in plants; Introduction of plant hormones; Control and co-ordination in animals: Nervous system; Voluntary, involuntary and reflex action; Chemical co-ordination: animal hormones.

**Reproduction:** Reproduction in animals and plants (asexual and sexual) reproductive health - need and methods of family planning. Safe sex vs HIV/AIDS. Child bearing and women's health.

**Heredity and Evolution:** Heredity; Mendel's contribution- Laws for inheritance of traits: Sex determination; brief introduction.

## **Theme: Natural Phenomena**

### **Unit III: Natural Phenomena**

Reflection of light by curved surfaces; Images formed by spherical mirrors, centre of curvature, principal axis, principal focus, focal length, mirror formula (Derivation not required), magnification.

Refraction; Laws of refraction, refractive index.

Refraction of light by spherical lens; Image formed by spherical lenses; Lens formula (Derivation not required); Magnification. Power of a lens.

Functioning of a lens in human eye, defects of vision and their corrections, applications of spherical mirrors and lenses.

Refraction of light through a prism, dispersion of light, scattering of light, applications in daily life (excluding colour of the sun at sunrise and sunset).

## **Theme: How Things Work**

### **Unit IV: Effects of Current**

Electric current, potential difference and electric current. Ohm's law; Resistance, Resistivity, Factors on which the resistance of a conductor depends. Series combination of resistors, parallel combination of resistors and its applications in daily life. Heating effect of electric current and its applications in daily life. Electric power, Interrelation between P, V, I and R.

**Magnetic effects of current:** Magnetic field, field lines, field due to a current carrying conductor, field due to current carrying coil or solenoid; Force on current carrying

conductor, Fleming's Left Hand Rule, Direct current. Alternating current: frequency of AC. Advantage of AC over DC. Domestic electric circuits.

### **Theme: Natural Resources**

#### **Unit V: Natural Resources**

**Our environment:** Eco-system, Environmental problems, Ozone depletion, waste production and their solutions. Biodegradable and non-biodegradable substances.

#### **Note for the Teachers:**

The NCERT text books present information in boxes across the book. These help students to get conceptual clarity. However, the information in these boxes would not be assessed in the year-end examination.

### **PRACTICALS**

**Practical should be conducted alongside the concepts taught in theory classes.**

#### **LIST OF EXPERIMENTS**

1. A. Finding the pH of the following samples by using pH paper/universal indicator: **Unit-I**
  - a) Dilute Hydrochloric Acid
  - b) Dilute NaOH solution
  - c) Dilute Ethanoic Acid solution
  - d) Lemon juice
  - e) Water
  - f) Dilute Hydrogen Carbonate solution

B. Studying the properties of acids and bases (HCl & NaOH) on the basis of their reaction with: **Unit-I**

  - a) Litmus solution (Blue/Red)
  - b) Zinc metal
  - c) Solid sodium carbonate
2. Performing and observing the following reactions and classifying them into: **Unit-I**
  - a) Combination reaction
  - b) Decomposition reaction
  - c) Displacement reaction
  - d) Double displacement reaction
    - Action of water on quicklime
    - Action of heat on ferrous sulphate crystals
    - Iron nails kept in copper sulphate solution
    - Reaction between sodium sulphate and barium chloride solutions

3. Observing the action of Zn, Fe, Cu and Al metals on the following salt solutions: **Unit-I**
  - a)  $\text{ZnSO}_4$  (aq)
  - b)  $\text{FeSO}_4$  (aq)
  - c)  $\text{CuSO}_4$  (aq)
  - d)  $\text{Al}_2(\text{SO}_4)_3$  (aq)

Arranging Zn, Fe, Cu and Al (metals) in the decreasing order of reactivity based on the above result.
4. Studying the dependence of potential difference (V) across a resistor on the current (I) passing through it and determine its resistance. Also plotting a graph between V and I. **Unit-IV**
5. Determination of the equivalent resistance of two resistors when connected in series and parallel. **Unit-IV**
6. Preparing a temporary mount of a leaf peel to show stomata. **Unit- II**
7. Experimentally show that carbon dioxide is given out during respiration. **Unit-II**
8. Study of the following properties of acetic acid (ethanoic acid): **Unit- I**
  - a) Odour
  - b) solubility in water
  - c) effect on litmus
  - d) reaction with Sodium Hydrogen Carbonate
9. Study of the comparative cleaning capacity of a sample of soap in soft and hard water. **Unit- I**
10. Determination of the focal length of: **Unit-III**
  - a) Concave mirror
  - b) Convex lens by obtaining the image of a distant object.
11. Tracing the path of a ray of light passing through a rectangular glass slab for different angles of incidence. Measure the angle of incidence, angle of refraction, angle of emergence and interpret the result. **Unit - III**
12. Studying (a) binary fission in *Amoeba*, and (b) budding in yeast and Hydra with the help of prepared slides. **Unit-II**
13. Tracing the path of the rays of light through a glass prism. **Unit-III**
14. Identification of the different parts of an embryo of a dicot seed (pea, gram or red kidney bean). **Unit-II**



**PRESCRIBED BOOKS:**

- Science-Textbook for class IX-NCERT Publication
- Science-Text book for class X- NCERT Publication
- Assessment of Practical Skills in Science-Class IX - CBSE Publication
- Assessment of Practical Skills in Science- Class X- CBSE Publication
- Laboratory Manual-Science-Class IX, NCERT Publication
- Laboratory Manual-Science-Class X, NCERT Publication
- Exemplar Problems Class IX – NCERT Publication
- Exemplar Problems Class X – NCERT Publication
- Reading Material – Science – Class IX – CBSE

**Question Paper Design (Theory)**

**Class X (2025-26)**

**Science (086)**

**Theory (80 marks)**

<b>Competencies</b>	<b>Total</b>
<b>Demonstrate Knowledge and Understanding</b>	50 %
<b>Application of Knowledge/Concepts</b>	30 %
<b>Formulate, Analyze, Evaluate and Create</b>	20 %

**Note:**

- Typology of Questions: VSA including objective type questions, Assertion – Reasoning type questions; SA; LA; Source-based/ Case-based/ Passage-based/ Integrated assessment questions.
- An internal choice of approximately 33% would be provided.

**Internal Assessment (20 Marks)**

- **Periodic Assessment** - 05 marks + 05 marks
  - **Subject Enrichment** (Practical Work) - 05 marks
  - **Portfolio** - 05 marks
- 

**Suggestive verbs for various competencies**

- **Demonstrate Knowledge and Understanding**  
State, name, list, identify, define, suggest, describe, outline, summarize, etc.
- **Application of Knowledge/Concepts**  
Calculate, illustrate, show, adapt, explain, distinguish, etc.
- **Formulate, Analyze, Evaluate and Create**  
Interpret, analyze, compare, contrast, examine, evaluate, discuss, construct, etc.

**SOCIAL SCIENCE**  
**Subject Code-087**  
**Classes - IX & X (2025-26)**

## **RATIONALE**

The purpose of the education system is to develop good human beings capable of rational thought and action, possessing compassion and empathy, courage and resilience, scientific temper, and creative imagination, with sound ethical moorings and values. It aims at producing engaged, productive, and contributing citizens for building an equitable, inclusive, and plural society as envisaged by our Constitution. [NEP 2020, pages 4-5]

Social Science is a compulsory subject in secondary stage of school education. It is an integral component of general education. Social Science can play a unique role within the school curriculum to enable Knowledge, Capacities, and Values and Dispositions that underpin the purpose of education as committed to in NEP.

Social Science plays an important role in developing an integrated understanding of the human world and its functioning, including its deep interrelationships with nature and environment in the quest to continuously improve a society. In the study of this subject, students learn methods of observing and interpreting the human world, which help them lead their own lives and also contribute as members of society.

It also helps in developing some of the Values and Dispositions that are essential for democratic participation- building and sustaining cooperation among communities that strive for peace, harmony, equity, and justice for all. It encourages them to understand and appreciate the feeling of Indianness 'Bhartiyata' by valuing the rich cultural heritage and tradition of the country.

The role of the subject in developing a comprehensive sense of the human world and its functioning in an individual student is significant. This understanding is critical to help students see how things around them are changing and are interdependent in the world today what are the causes of the change, and how the change impacts human societies.

It also helps them realise the need for interdependence, collaboration, and an appreciation for the diversity of human culture and societies. The subject also teaches students the method of observing and interpreting the world wearing the hat of a social scientist. It does so by building core skills such as observing what is going on around them, analysing causes of various phenomena (historical, geographical, socio-political, or economic) using evidence, asking questions, making connections, forming viewpoints based on conceptual understanding and evidence, recognizing patterns and generalizations, and arriving at logical conclusions.

These skills prepare the students to contribute to the nation as responsible citizens of society.

## AIMS & OBJECTIVE

As per NCF- 2023, the aims of teaching Social Science in school education can be summarised as follows:

- a. Develop disciplinary knowledge and understanding of how society functions through an interplay of historical, geographical, social, economic, and political factors.

This can be enabled through:

- i. an understanding of continuity and change in human civilisation, its causation and effect, and its impact on modern life,
  - ii. an understanding of the interaction between nature and human beings, the spatial patterns arising out of this interaction, and its effect on human life,
  - iii. an awareness and understanding of the diversity of people and their practices in different societies, regions, and cultures within societies,
  - iv. an awareness of various social, political, and economic institutions, their origin, functioning and transformations over time.
- b. Develop an understanding and appreciation for the methods of enquiry relevant to Social Science and deepen students' skills to engage with the key questions and issues confronting society.

These could be specifically seen as:

- i. Skills in sourcing evidence, interpreting them, confirming through multiple sources and evidence, and constructing a coherent narrative,
  - ii. Skills in recognizing spatial patterns, map-reading, interpretation and analysis of various interconnected concepts and processes,
  - iii. Skills of creative and analytical thinking to form informed opinions, demonstrate logical decision-making, and incline towards a problem- solving attitude,
  - iv. Skills to collect, organize, analyse, represent, and present data and information on various historical, geographical, and socio-political issues,
  - v. Skills to question unsubstantiated ideas, biases, stereotypes, and assumptions to foster scientific temper and propose meaningful responses to contemporary concerns of society.
- c. Foster ethical, human, and Constitutional values:

As the NEP 2020 emphasises, to foster a “democratic outlook and commitment to liberty and freedom; equality, justice, and fairness; embracing diversity, plurality, and inclusion; humaneness and fraternal spirit; social responsibility and the spirit of service; ethics of integrity and honesty; scientific temper and commitment to rational and public dialogue; peace; social action through Constitutional means; unity and integrity of the nation, and a true rootedness and pride in India with a forward-looking spirit to continuously improve as a nation.

**NOTE-**Refer to NCF-2023-Page no-320-323

## **CURRICULAR GOALS-CG**

As per NCF 2023 - At the Secondary Stage, students will go into details to understand India's past and appreciate its complexity, diversity, and unity brought about by cultural integration and the sharing of knowledge traditions across geographical and linguistic boundaries. P-154

- CG -2 Analyse the important phases in world history and draw insight to understand the present-day world
- CG-3 Understand the idea of a nation and the emergence of the modern Indian Nation
- CG -4 Develops an understanding of the inter-relationship between human beings and their physical environment and how that influences the livelihoods, cultural diversity, and biodiversity of the region
- CG -5 Understand the Indian Constitution and explores the essence of Indian democracy and the characteristics of a democratic government.
- CG -6 Understand and analyse social, cultural, and political life in India over time – as well as the underlying historical Indian ethos and philosophy of unity in diversity – and recognises challenges faced in these areas in the past and present and the efforts (being) made to address them
- CG -7 Develop an understanding of the inter-relationship between human beings and their physical environment and how that influences the livelihoods, cultural diversity, and biodiversity of the region
- CG -8 Evaluate the economic development of a country in terms of its impact on the lives of its people and nature
- CG-9 Understand and appreciate the contribution of India through history and present times, to the overall field of Social Science, and the disciplines that constitute it

## **COMPETENCIES**

Competencies are specific learning achievements that are observable and can be assessed systematically. In NCF, Competencies are directly derived from a Curricular Goal and are expected to be attained by the end of a Stage. The following competencies need to be developed in students to achieve the curricular goals at secondary stage.

- C-2.1 Explain historical events and processes with different types of sources with specific examples from India and world history.
- C-2.3 Trace aspects of continuity and change in different phases of world history (including cultural trends, social and religious reforms, and economic and political transformations)
- C-2.4 Explain the growth of new ideas and practices across the world and how they affected the course of world history.
- C-2.5 Recognise the various practices that arose, such as those in C- 2.4, and came to be condemned later on (such as racism, slavery, colonial invasions, conquests, and plunder, genocides, exclusion of women from democratic and other institutions), all of which have also impacted the course of world history and have left unhealed wounds.
- C3.2 Identify and analyse important phases of the Indian national freedom struggle against British colonial rule, with special reference to the movement led by Mahatma Gandhi and other important figures as well as those that led to independence, and

understands the specific Indian concepts, values, and methods (such as Swaraj, Swadeshi, passive resistance, fight for dharma self- sacrifice, ahimsa) that played a part in achieving Independence.

- C-4.1 Locate physiographic regions of India and the climatic zones of the world on a globe/map.
- C-4.2 Explain important geographical concepts, characteristics of key landforms, their origin, and other physical factors of a region
- C-4.3 Draw inter- linkages between various components of the physical environment, such as climate and relief, climate and vegetation, vegetation, and wildlife.
- C-4.4 Analyse and evaluate the inter- relationship between the natural environment and human beings and their cultures across regions and, in the case of India, the special environmental ethos that resulted in practices of nature conservation
- C-4.5 Critically evaluate the impact of human interventions on the environment, including climate change, pollution, shortages of natural resources (particularly water), and loss of biodiversity; identifies practices that have led to these environmental crises and the measures that must be taken to reverse them
- C-4.6 Develop sensitivity towards the judicious use of natural resources (by individuals, societies, and nations) and suggests measures for their conservation
- C-5.1 Understand that the Indian Constitution draws from the great cultural heritage and common aspirations of the Indian nation, and recalls India's early experiments with democracy (assemblies in *Mahajanapadas*, kingdoms and empires at several levels of the society, guilds *sanghas* and *ganas*, village councils and committees, *Uthiramerur* inscriptions)
- C-5.2 Appreciate fundamental Constitutional values and identify their significance for the prosperity of the Indian nation.
- C-5.3 Explain that fundamental rights are the most basic human rights, and they flourish when people also perform their fundamental duties
- C-5.4 Analyse the basic features of a democracy and democratic government – and its history in India and across the world – and compares this form of government with other forms of government.
- C-5.5- Analyse the critical role of non-state and non-market participants in the functioning of a democratic government and society, such as the media, civil society, socio-religious institutions, and community institutions
- C-6.1 Understands how the Indian ethos and the cultural integration across India did not attempt uniformity, but respected and promoted a rich diversity in Indian society, and how this harmonisation and unity in diversity, with a historical respect for all cultures, women have counted among India's great strengths by promoting peaceful coexistence
- C-6.2 Understand that despite C-6.1, forms of inequality, injustice, and discrimination have occurred in different sections of society at different times (due to internal as well as outside forces such as colonisation), leading to political, social, and cultural efforts, struggles, movements, and mechanisms at various levels towards equity, inclusion, justice, and harmony, with varying outcomes and degrees of success.
- C-7.1 Defines key features of the economy, such as, production, distribution, demand, supply, trade, and commerce, and factors that influence these aspects (including technology)

- C-7.2 Evaluates the importance of the three sectors of production (primary, secondary, and tertiary) in any country's economy, especially India
- C-7.3 Distinguishes between 'unorganised' and 'organised' sectors of the economy and their role in production for the local market in small, medium, and large-scale production centres (industries), and recognises the special importance of the so-called 'unorganised' sector in Indian economy and its connections with the self-organising features of Indian society
- C-7.4 Trace the beginning and importance of large- scale trade and commerce (including e- commerce) between one country and another - the key items of trade in the beginning, and the changes from time to time.
- C-8.1 Gather, comprehend, and analyse data related to income, capital, poverty, and employment in one's locality, region and at the national level. Markets.
- C-8.3 Understand these features in the context of ancient India, with its thriving trade, both internal and external, and its well- established trade practices and networks, business conventions, and diverse industries, all of which made India one of the world's leading economies up to the colonial period
- C-8.4 Describes India's recent path towards again becoming one of the three largest economies of the world, and how individuals can contribute to this economic progress.
- C-8.5 Appreciates the connections between economic development and the environment, and the broader indicators of societal wellbeing beyond GDP growth and income.

In Grades 9 and 10 of the Secondary Stage, the study of Social Science is organised within the disciplines of History, Geography, Political Science, and Economics. The concepts and content are chosen to develop an in-depth understanding in each discipline.

### CLASS IX (2025-26) COURSE STRUCTURE

History-India and the Contemporary World - I			Marks-20 inclusive of Map pointing
Section	Chapter No	Chapter Name	Marks
<b>I Events and Process</b>	<b>I</b>	The French Revolution	<b>18+2 map pointing</b>
	<b>II</b>	Socialism in Europe and the Russian Revolution	
	<b>III</b>	Nazism and the Rise of Hitler	
<b>II Livelihood, Economies and Societies</b>	<b>IV</b>	Forest, Society and Colonialism <b>Interdisciplinary project as part of multiple assessments</b> (Internally assessed for 5 marks)	
	<b>V</b>	Pastoralists in the Modern World <b>(assessed as part of Periodic Assessment only)</b>	

<b>Geography-Contemporary India - I</b>		<b>Marks-20 inclusive of Map pointing</b>
<b>Chapter No.</b>	<b>Chapter Name</b>	<b>Marks</b>
1	India – Size and Location	<b>17+3 map pointing*</b>
2	Physical Features of India	
3	Drainage	
4	Climate	
	Natural Vegetation and Wildlife <b>(Only map pointing to be evaluated in the annual examination.)</b>	
5	Population	* Marks as mentioned
6	Interdisciplinary project as part of multiple assessments (Internally assessed for 5 marks)	
<b>Political Science- Democratic Politics - I</b>		<b>20 Marks</b>
<b>Chapter No.</b>	<b>Chapter name</b>	<b>Marks</b>
1	What is Democracy?	20
	Why Democracy?	
2	Constitutional Design	
3	Electoral Politics	
4	Working of Institutions	
5	Democratic Rights	
<b>Economics</b>		<b>20 Marks</b>
<b>Chapter No.</b>	<b>Chapter name</b>	<b>Marks</b>
1	The Story of Village Palampur <b>(To be assessed as part of Periodic Assessment only)</b>	20
2	People as Resource	
3	Poverty as a Challenge	
4	Food Security in India	

**CLASS IX**  
**History-India and the Contemporary World - I**

**Section I: Events and Processes**

**Chapter-1 The French Revolution**

**Learning Outcomes-**The students will be able to

- Infer how the French Revolution had an impact on the European countries in the making of nation states in Europe and elsewhere.



- Illustrate that, the quest for imperialism triggered the First World War.
- Examine various sources to address imbalances that may lead to revolutions

## **Chapter 2- Socialism in Europe and the Russian Revolution**

**Learning Outcomes-** The students will be able to

- Compare the situations that led to the rise of Russian and French Revolutions.
- Examine the situations that led to the establishment of Lenin's communism and Stalin's collectivization.
- Analyse the role played by the varied philosophers and leaders that shaped the revolution.

## **Chapter 3-Nazism and the Rise of Hitler.**

**Learning Outcomes-** The students will be able to

- Analyse the role of "Treaty of Versailles" in the rise of Hitler to power.
- Analyse the genocidal war waged against the "undesirables" by Hitler.
- Compare and contrast the characteristics of Hitler and Gandhi

## **Section II: Livelihoods, Economies and Societies**

### **Chapter 4- Forest Society and Colonialism**

Interdisciplinary Project with Chapter 5 of Geography "Natural Vegetation and Wildlife"

**Learning Outcomes-** Refer Annexure II

### **Chapter 5- Pastoralists in the Modern World**

**Learning Outcomes-** The students will be able to

- Examine the situations that have created nomadic societies highlighting the key factors played by the climatic conditions and topography.
- Analyse varying patterns of developments within pastoral societies in different places in India.
- Comprehend the impact of colonialism on Pastoralists in India and Africa.

## **Geography- Contemporary India - I**

### **Chapter 1- India – Size and Location**

**Learning Outcomes-** The students will be able to

- Examine how the location of an area impacts its climate and time with reference to longitude and latitude.
- Explore and analyses the trading and cultural relationships of India with its neighbouring countries.
- Evaluate the situation & reasons that made 82.5E\* longitude as Time meridian of India.
- Examine how location of India enables its position as a strategic partner in the subcontinent.
- Justify the reasons for the differences in climatic conditions, local and standard time.

## **Chapter 2- Physical Features of India**

**Learning Outcomes-** The students will be able to

- Justify how the Physical Features of India influences the livelihoods, culture, and the biodiversity of the region.
- Examine the geological process that played a crucial role in the formation of diverse physical features in India.
- Analyse the conditions and relationships of the people living in different physiographic areas.

## **Chapter 3- Drainage**

**Learning Outcomes-** The students will be able to

- Examine the information about different lakes and infer on their contribution to Indian ecology.
- Present creative solutions to overcome the water pollution and also to increase the contribution of water bodies to the Indian economy.
- Identify the river systems of the country and explain the role of rivers in human society

## **Chapter 4- Climate**

**Learning Outcomes-** The students will be able to

- Analyse and infer the effect of monsoon winds on rainfall of the Indian subcontinent.
- Analyse the temperatures between plateau region, Himalayan region, desert region and coastal region.
- Enumerate and summarise the reasons for the wide difference between temperatures at different geographical locations of India

## **Chapter 5- Natural Vegetation and Wildlife**

Interdisciplinary project with chapter no IV of History “Forest, Society and Colonialism

**Learning Outcomes- -Refer annexure II**

## **Chapter-6. Population**

**Learning Outcomes-** The students will be able to

- Analyse and infer the reasons behind the uneven distribution of population in India with specific reference to UP & Rajasthan and Mizoram and Karnataka
- Enlist the factors that affect the population density

## **Political Science-Democratic Politics - I**

### **Chapter 1- What is Democracy? Why Democracy?**

**Learning Outcomes-** The students will be able to

- Examine the concept of structural components of Democracy and its forms/ features.

- Compare and Contrast working of democracies of India and some other countries and discuss differences and similarities in each country.
- Analyse and infer on the different historical processes and forces that have contributed for the promotion of democracy

## **Chapter 2- Constitutional Design**

**Learning Outcomes-** The students will be able to

- Discuss and describe the situation that led to creation of Indian Constitution
- Enumerate the essential features that need to be kept in mind while drafting a constitution.
- Examine the guiding values that created the Indian constitution
- Comprehend the roles and responsibilities as citizens of India.

## **Chapter 3- Electoral Politics**

**Learning Outcomes-** The students will be able to

- Analyse the implications of power of vote and power of recall.
- Summarise the essential features of the Indian Electoral system.
- Examine the rationale for adopting the present Indian Electoral System.

## **Chapter 4- Working of Institutions**

**Learning Outcomes-** The students will be able to

- Examine the roles, responsibilities, and interdependency of all the 3 organs of the Government.
- Appreciate the parliamentary system of executive's accountability to the legislature.
- Summarise and evaluate the rule of law in India.

## **Chapter 5- Democratic Rights**

**Learning Outcomes-** The students will be able to

- Summarise the importance of fundamental rights and duties in the light of the nation's glory.
- Analyse and recognise the role of a responsible citizen while performing their prescribed duties versus claiming rights.

# **ECONOMICS**

## **Chapter 1- The Story of Village Palampur**

**Learning Outcomes-** The students will be able to

- Enlist the requirements of production and comprehend the interdependence of these requirements.
- Correlate farming and non-farming activities to economic growth.
- Comprehend how the significance of conditions of farming and the factors of production impact economic development.
- Find solutions to foster an equitable society.

## Chapter 2- People as Resource

**Learning Outcomes-** The students will be able to

- Evaluate the reasons that contribute to the quality of population.
- Observe different government schemes and see their effect on the people there.

## Chapter 3- Poverty as a Challenge

**Learning Outcomes-** The students will be able to

- Comprehend the reasons for poverty in the rural and urban areas.
- Evaluate the efficacy of the government to eradicate poverty.
- Correlate the link between education and poverty.

## Chapter 4- Food Security in India

**Learning Outcomes-** The students will be able to

- Comprehend various aspects of food security that will ensure continuity of supply
- Enumerate the different features of PDS that directly address FSI.
- Analyse and infer the impact of the Green Revolution.
- Analyse causes and effect of famines in food security during pre and post independent India.

### CLASS IX (2025-26) MAP WORK

Subject	Chapter	List of Areas to be located /labeled/identified on the map
History	French Revolution	Outline political map of France. Locate/label/ identify. <ul style="list-style-type: none"><li>● Bordeaux, Nantes, Paris and Marseille</li></ul>
	Socialism in Europe and the Russian Revolution	Outline political map of the World. Locate/label/identify Major countries of First World War: Central Powers: Germany, Austria-Hungary, Turkey (Ottoman Empire). Allied Powers – France, England, Russia and USA
	Nazism and the Rise of Hitler	Outline Political Map of World. Locate/label/ identify Major countries of Second World War Axis: Powers – Germany, Italy, Japan Allied Powers – UK, France, Former USSR, USA
Geography	India : size and location	<ul style="list-style-type: none"><li>● India - States and Capitals</li><li>● Tropic of Cancer, Standard Meridian (Location and Labeling)</li><li>● Neighbouring Countries</li></ul>
	India physical features	<ul style="list-style-type: none"><li>● Mountain Ranges: The Karakoram, The Zaskar, The Shivalik, The Aravali, The Vindhya, The Satpura, Western and Eastern Ghats</li><li>● Mountain Peaks-K2, Kanchan Junga, Anai Mudi</li></ul>

		<ul style="list-style-type: none"> <li>• Plateau - Deccan Plateau, Chota Nagpur Plateau, Malwa Plateau</li> <li>• Coastal Plains – Konkan, Malabar, Coromandel &amp; Northern Circar (Location and Labelling)</li> </ul>
	Drainage system	Rivers (Identification only) <ul style="list-style-type: none"> <li>• The Himalayan River Systems - Indus, Ganges &amp; Sutlej</li> <li>• The Peninsular Rivers – The Narmada, The Tapi, The Kaveri, The Krishna, The Godavari, The Mahanadi</li> <li>• Lakes - Wular, Pulicat, Sambhar, Chilika</li> </ul>
	Climate	<ul style="list-style-type: none"> <li>• Annual rainfall in India, Monsoon wind direction</li> </ul>
	Population	<ul style="list-style-type: none"> <li>• Population density of all states</li> <li>• The state having highest and lowest density of population</li> </ul>

**Note-** The Maps available in the website of Govt. of India may be used.

**CLASS IX (2025-26)**  
**INTERNAL ASSESSMENT: 20 MARKS**

Type of Assessment	Description	Marks
Periodic Assessment	Pen Paper Test	5
Multiple Assessment	Quiz, debate, role play, viva-voce, group discussion, visual expression, interactive bulletin boards, gallery walks, exit cards, concept maps, peer assessment, self- assessment etc. through interdisciplinary project	5
Subject Enrichment Activity	Project work (Interdisciplinary)-Disaster Management	5
Portfolio	Classroom, work done (activities/assignments) reflections, narrations, journals etc. Achievements of the student in the subject throughout the year. Participation of the student in different activities like Heritage India quiz etc.	5

**CLASS IX**  
**PRESCRIBED TEXT BOOKS**

S. No.	Subject	Name of the Book	Publisher
1	History	India and the Contemporary World-I	NCERT
2	Political Science	Democratic Politics-I	NCERT
3	Geography	Contemporary India-I	NCERT
4	Economics	Economics	NCERT
5	Disaster Management	Together, towards a safer India- Part II	CBSE

**CLASS X -2025-26  
COURSE STRUCTURE**

History (India and the Contemporary World-II)			20 Marks inclusive of map pointing Marks
Section	Chapter No.	Chapter name	
I Events and processes	I	The Rise of Nationalism in Europe	18+2 map pointing
	II	Nationalism in India	
II Livelihoods, Economies and Societies	III	The Making of a Global World <b>(To be evaluated in the Board Examination</b> Subtopics: 1 to 1.3 Pre Modern World to Conquest, disease and trade)	
		<b>Interdisciplinary project as part of multiple assessments</b> (Internally assessed for 5 marks) Subtopics 2 to 4.4 –The nineteenth century (1815-1914) to end of Bretton Woods & the beginning of “Globalisation”	
	IV	The Age of Industrialisation <b>(To be assessed as part of Periodic Assessment only)</b>	
III. Everyday Life, Culture and politics	V	Print Culture and the Modern world	
Geography (Contemporary India-II)			Marks-20 inclusive map pointing
Chapter No.	Chapter Name		Marks
1	Resources and Development		17+3 map pointing
2	Forest and Wildlife Resources		
3	Water resources		
4	Agriculture		
5	Minerals and energy Resources		
6	Manufacturing Industries		
7	Lifelines of National Economy (Only map pointing to be evaluated in the Board Examination)		

	Interdisciplinary project as part of multiple assessments (Internally assessed for 5 marks)		
Political Science (Democratic Politics-II)			20
Unit No.	Chapter No.	Chapter name	Marks
I	1	Power-sharing	20
	2	Federalism	
II	3	Gender, Religion and Caste	
III	4	Political Parties	
IV	5	Outcomes of Democracy	
Economics (Understanding Economic Development)			20
Chapter No.	Chapter name		Marks
1	Development		20
2	Sectors of the Indian Economy		
3	Money and Credit		
4	<ul style="list-style-type: none"><li>Globalisation and the Indian Economy to be evaluated in the Board Examination</li><li>What is Globalisation?</li><li>Factors that have enabled Globalisation</li></ul>		
	<ul style="list-style-type: none"><li>Interdisciplinary project as part of multiple assessment (Internally assessed for 5 marks)</li><li>Production across the countries</li><li>Chinese toys in India</li><li>World Trade Organisation</li><li>The Struggle for a Fair Globalisation</li></ul>		
5	Consumer Rights (Project Work)		

**CLASS X (2025-26)**  
**COURSE CONTENT**

**HISTORY: India and the Contemporary World - II**

**Chapter I -The Rise of Nationalism in Europe**

**Learning outcome-** The students will be able to

- Infer how French Revolution had an impact on the European countries in the making of a nation state.
- Comprehend the nature of the diverse social movements of the time.
- Analyse and infer the evolution of the idea of nationalism which led to the formation of nation states in Europe and elsewhere.
- Evaluate the reasons which led to the First World War.

## **Chapter 2 Nationalism in India**

**Learning outcome-** The students will be able to

- Illustrate various facets of Nationalistic movements that ushered in the sense of Collective Belonging.
- Evaluate the effectiveness of the strategies applied by Gandhiji and other leaders in the movements organised by him.
- Summarise the effects of the First World War that triggered the two defining movements (Khilafat & Non-Cooperation Movement) in India

## **Chapter 3-. The Making of a Global World**

Subtopic 1. The pre-modern world

Subtopic 2. 19<sup>th</sup> century 1815-1914

Subtopic 3. The inter-war economy

Subtopic 4. Rebuilding of world economy: the post war era.

**Inter disciplinary Project** with chapter 7 of Geography: Lifelines of National Economy and chapter 4 of Economics: Globalisation and the Indian Economy

Refer Annexure III B

**Learning outcome-** The students will be able to

- Summarise the changes that transformed the world in different areas.
- Depict the global interconnectedness from the Pre-modern to the present day.
- Enumerate the destructive impact of colonialism on the livelihoods of colonised people.

## **Chapter 4-The Age of Industrialisation**

**Learning outcome-** The students will be able to

- Enumerate economic, political, social features of Pre and Post Industrialization.
- Analyse and infer how the industrialization impacted colonies with specific focus on India

## **Chapter 5. Print culture and the Modern World**

**Learning Outcome-** The students will be able to

- Enumerate the development of Print from its beginnings in East Asia to its expansion in Europe and India.
- Compare and contrast the old tradition of handwritten manuscripts versus print technology.
- Summarise the role of Print revolution and its impact



## **Geography: Contemporary India – II**

### **Chapter 1- Resources and Development**

**Learning Outcome-** The students will be able to

- Enumerates how the resources are interdependent, justify how planning is essential in judicious utilisation of resources and the need to develop them in India.
- Infer the rationale for development of resources.
- Analyse and evaluate data and information related to non-optimal land, utilization in India
- Suggest remedial measures for optimal utilization of underutilized resources

### **Chapter 2- Forest and Wildlife Resources**

**Learning Outcome-** The students will be able to

- Examine the importance of conserving forests and wildlife and their interdependency in maintaining the ecology for the sustainable development of India.
- Analyse the role of grazing and wood cutting in the development and degradation
- Summarise the reasons for conservation of biodiversity under sustainable development.
- Discuss how developmental works, grazing wood cutting have impacted the forests
- Use art integration to summarise and present the reasons for conservation of biodiversity in India under sustainable development.

### **Chapter 3-Water Resources**

**Learning Outcome-** The students will be able to

- Examine the reasons for conservation of water resource in India.
- Analyse and infer how the multipurpose projects are supporting the requirement of water.

### **Chapter 4- Agriculture**

**Learning Outcome**

- Examine the crucial role played by agriculture in our economy and society.
- Analyse the challenges faced by the farming community in India.
- Identifies various aspects of agriculture, including crop production, types of farming etc.

### **Chapter 5- Minerals and Energy Resources**

**Learning Outcome-** The students will be able to

- Enumerate the impact of manufacturing industries on the environment and develop strategies for sustainable development of the manufacturing sector.
- Differentiate between various types of manufacturing industries based on their input materials, processes, and end products, and analyse their significance in the Indian economy.
- Analyse the relation between the availability of raw material and location of the industry

### **Chapter 7- Life Lines of National Economy**

Interdisciplinary project with chapter 3 of History: The making of a Global world and chapter 4 of Economics: Globalisation and the Indian Economy

## **Political Science: Democratic Politics - II**

### **Chapter 1- Power – sharing**

**Learning Outcome-** The students will be able to

- Enumerate the need for power sharing in democracy.
- Analyse the challenges faced by countries like Belgium and Sri Lanka ensuring effective power sharing.
- Compare and contrast the power sharing of India with Sri Lanka and Belgium.
- Summarise the purpose of power sharing in preserving the unity and stability of a country

### **Chapter 2-Federalism**

**Learning Outcome-** The students will be able to

- Infer how federalism is being practised in India.
- Analyse the policies and politics that has strengthened federalism in practice.

### **Chapter 3- Gender, Religion and Caste**

**Learning Outcome-** The students will be able to

- Examine the role and differences of Gender, religion and Caste in practicing Democracy.
- Analyse that different expressions based on the differences, are healthy or otherwise in a democracy

### **Chapter 4- Political Parties**

**Learning Outcome-** The students will be able to

- Understand the process of parties getting elected.
- Know the significance of the right to vote and exercise the duties as citizens of a nation.
- Examine the role, purpose and no. of Political Parties in Democracy.

### **Chapter 5- Outcomes of Democracy**

**Learning Outcome-** The students will be able to

- Enumerates how the success of democracy depends on quality of government, economic well- being, inequality, social differences, conflict, freedom and dignity.

## **Economics: Understanding Economic Development**

### **Chapter- 1. Development**

**Learning Outcome-** The students will be able to

- Enumerate and examine the different processes involved in setting developmental Goals.
- Analyse and infer how the per capita income depicts the economic condition of the nation.

- Evaluate the development goals with reference to their efficacy, implemental strategies, relevance to current requirements of the nation.
- Compare the per capita income of some countries and infer reasons for the variance.
- Analyse the multiple perspectives on the need of development.

## **Chapter 2- Sectors of the Indian Economy**

**Learning Outcome-** The students will be able to

- Analyse and infer how the economic activities in different sectors contribute to the overall growth and development of the Indian economy.
- Propose solutions to identified problems in different sectors based on their understanding.
- Summarise how the organised and unorganised sectors are providing employment
- Enumerate the role of the unorganised sector in impacting Per Capita Income currently and propose suggestive steps to reduce the unorganised sector for more productive contributions to GDP.
- Enumerate and infer the essential role of the Public and Private sectors

## **Chapter 3- Money and Credit**

**Learning Outcome-** The students will be able to

- Enumerate how money plays as a medium exchange in all transactions of goods and services from ancient times to the present times.
- Analyse and infer various sources of Credit.
- Summarise the significance and role of self-help groups in the betterment of the economic condition of rural people/ women.

## **Chapter- 4. Globalisation and the Indian Economy**

**Subtopics:** What is Globalisation?

Factors that have enabled Globalisation.

**Interdisciplinary Project** with chapter 3 of History: “The making of a Global World”. And chapter 7 of Geography: “Lifelines of National Economy”

**Subtopics:**

- Production across the countries
- World Trade Organisation
- The Struggle for a Fair Globalisation

Refer Annexure III-B

**Learning Outcome-** The students will be able to

- Enumerate the concept of globalisation and its definition, evolution, and impact on the global economy.
- Evaluate the key role of the key major drivers of globalisation and their role in shaping the global economic landscape in various countries.
- Comprehend the significance of role of G20 and its significance in the light of India's role.

## **5. Project work - Consumer Rights OR Social Issues OR Sustainable Development**

**Learning Outcome-** Refer Annexure III

**CLASS X (2025-26)**  
**MAP WORK**

Subject	Name of the Chapter	List of areas to be located/ labeled/ identified on the map		
History	Nationalism in India	<b>I. Congress sessions:</b> <ul style="list-style-type: none"><li>• 1920 Calcutta</li><li>• 1920 Nagpur</li><li>• 1927 Madras session</li></ul> <b>II. 3 Satyagraha movements:</b> <ul style="list-style-type: none"><li>• Kheda</li><li>• Champaran</li><li>• Ahmedabad mill workers</li></ul> <b>III. Jallianwala Bagh</b> <b>IV. Dandi March</b>		
Geography	Resources and Development	Identify Major Soil Types		
	Water Resources	<b>Locating and Labeling:</b> <table><tr><td><ul style="list-style-type: none"><li>• Salal</li><li>• Bhakra Nangal</li><li>• Tehri</li><li>• Rana Pratap Sagar</li></ul></td><td><ul style="list-style-type: none"><li>• Sardar Sarovar</li><li>• Hirakund</li><li>• Nagarjun Sagar</li><li>• Tungabhadra</li></ul></td></tr></table>	<ul style="list-style-type: none"><li>• Salal</li><li>• Bhakra Nangal</li><li>• Tehri</li><li>• Rana Pratap Sagar</li></ul>	<ul style="list-style-type: none"><li>• Sardar Sarovar</li><li>• Hirakund</li><li>• Nagarjun Sagar</li><li>• Tungabhadra</li></ul>
	<ul style="list-style-type: none"><li>• Salal</li><li>• Bhakra Nangal</li><li>• Tehri</li><li>• Rana Pratap Sagar</li></ul>	<ul style="list-style-type: none"><li>• Sardar Sarovar</li><li>• Hirakund</li><li>• Nagarjun Sagar</li><li>• Tungabhadra</li></ul>		
	Agriculture	<b>Identify:</b> <ul style="list-style-type: none"><li>• Major areas of Rice and Wheat</li><li>• Largest/Major producer states of Sugarcane, Tea, Coffee,</li><li>• Rubber, Cotton and Jute</li></ul>		
Minerals and Energy Resources	<b>Identify:</b> <table><tr><td><b>Iron Ore Mines</b> Mayurbhanj Durg Bailadila Bellary Kudremukh</td><td><b>Coal Mines</b> Raniganj Bokaro Talcher Neyveli</td><td><b>Oil Fields</b> Digboi Naharkatia Mumbai High Bassien Kalol Ankaleshwar</td></tr></table>	<b>Iron Ore Mines</b> Mayurbhanj Durg Bailadila Bellary Kudremukh	<b>Coal Mines</b> Raniganj Bokaro Talcher Neyveli	<b>Oil Fields</b> Digboi Naharkatia Mumbai High Bassien Kalol Ankaleshwar
<b>Iron Ore Mines</b> Mayurbhanj Durg Bailadila Bellary Kudremukh	<b>Coal Mines</b> Raniganj Bokaro Talcher Neyveli	<b>Oil Fields</b> Digboi Naharkatia Mumbai High Bassien Kalol Ankaleshwar		
		<b>Locate and label: Power Plants</b> <table><tr><td><b>Thermal</b><ul style="list-style-type: none"><li>• Namrup</li><li>• Singrauli</li><li>• Ramagundam</li></ul></td><td><b>Nuclear</b><ul style="list-style-type: none"><li>• Narora</li><li>• Kakrapara</li><li>• Tarapur</li><li>• Kalpakkam</li></ul></td></tr></table>	<b>Thermal</b> <ul style="list-style-type: none"><li>• Namrup</li><li>• Singrauli</li><li>• Ramagundam</li></ul>	<b>Nuclear</b> <ul style="list-style-type: none"><li>• Narora</li><li>• Kakrapara</li><li>• Tarapur</li><li>• Kalpakkam</li></ul>
<b>Thermal</b> <ul style="list-style-type: none"><li>• Namrup</li><li>• Singrauli</li><li>• Ramagundam</li></ul>	<b>Nuclear</b> <ul style="list-style-type: none"><li>• Narora</li><li>• Kakrapara</li><li>• Tarapur</li><li>• Kalpakkam</li></ul>			

	Manufacturing Industries	<ul style="list-style-type: none"><li>• Manufacturing Industries (Locating and labeling only)</li><li>• Cotton textile Industries: a. Mumbai, b. Indore, c. Surat, d. Kanpur, e. Coimbatore</li><li>• Iron and Steel Plants: a. Durgapur, b. Bokaro, c. Jamshedpur, d. Bhilai, e. Vijayanagar, f. Salem</li><li>• Software technology Parks: a. Noida, b. Gandhinagar, c. Mumbai, d. Pune, e. Hyderabad, f. Bengaluru, g. Chennai, h. Thiruvananthapuram</li></ul>		
	Lifelines of National Economy	<p>Locating and Labeling</p> <p><b>a. Major Sea Ports</b></p> <table><tr><td><ul style="list-style-type: none"><li>• Kandla</li><li>• Mumbai</li><li>• Marmagao</li><li>• New Mangalore</li><li>• Kochi</li></ul></td><td><ul style="list-style-type: none"><li>• Tuticorin</li><li>• Chennai</li><li>• Visakhapatnam</li><li>• Paradip</li><li>• Haldia</li></ul></td></tr></table> <p><b>b. International Airports</b></p> <ul style="list-style-type: none"><li>• Amritsar (Raja Sansi-Sri Guru Ram Das ji)</li><li>• Delhi (Indira Gandhi)</li><li>• Mumbai (Chhatrapati Shivaji)</li><li>• Chennai (Meenambakkam)</li><li>• Kolkata (Netaji Subhash Chandra Bose)</li><li>• Hyderabad (Rajiv Gandhi)</li></ul>	<ul style="list-style-type: none"><li>• Kandla</li><li>• Mumbai</li><li>• Marmagao</li><li>• New Mangalore</li><li>• Kochi</li></ul>	<ul style="list-style-type: none"><li>• Tuticorin</li><li>• Chennai</li><li>• Visakhapatnam</li><li>• Paradip</li><li>• Haldia</li></ul>
<ul style="list-style-type: none"><li>• Kandla</li><li>• Mumbai</li><li>• Marmagao</li><li>• New Mangalore</li><li>• Kochi</li></ul>	<ul style="list-style-type: none"><li>• Tuticorin</li><li>• Chennai</li><li>• Visakhapatnam</li><li>• Paradip</li><li>• Haldia</li></ul>			

### Note

1. Items of Locating and Labelling may also be given for Identification.
2. The Maps available in the website of Govt. of India may be used.

**CLASS X**  
**QUESTION PAPER DESIGN**  
**Subject Wise Weightage**

Subject	Syllabus	Marks (80)	Percentage
History	<ul style="list-style-type: none"> <li>• The Rise of Nationalism in Europe.</li> <li>• Nationalism in India:</li> <li>• The Making of a Global World Sub topics 1 to 1.3</li> <li>• Print Culture and the Modern World</li> <li>• Map pointing</li> </ul>	18+2	25%
Political Science	<ul style="list-style-type: none"> <li>• Power – sharing</li> <li>• Federalism</li> <li>• Gender, Religion and Caste</li> <li>• Political Parties</li> <li>• Outcomes of Democracy</li> </ul>	20	25%
Geography	<ul style="list-style-type: none"> <li>• Resources and Development</li> <li>• Forest and Wildlife Resources</li> <li>• Water Resources</li> <li>• Agriculture</li> <li>• Mineral&amp; Energy resources</li> <li>• Manufacturing industries.</li> <li>• Lifelines of National Economy (map pointing)</li> <li>• Map pointing</li> </ul>	17+3	25%
Economics	<ul style="list-style-type: none"> <li>• Development</li> <li>• Sectors of the Indian Economy</li> <li>• Money and Credit</li> <li>• Globalisation and The Indian Economy</li> </ul> <p>Sub topics:</p> <ul style="list-style-type: none"> <li>➤ What is Globalisation?</li> <li>➤ Factors that have enabled Globalisation</li> </ul>	20	25%

### Weightage to Type of Questions

Type of Questions	Marks (80)	Percent age
<b>1 Mark- MCQs (20x1)</b> (Inclusive Of Assertion, Reason, Differentiation & Stem)	20	25%
<b>2 Marks- Long Answer Questions (4x2)</b> (Knowledge, Understanding, Application, Analysis, Evaluation, Synthesis & Create)	8	10%
<b>3 Marks- Long Answer Questions (5x3)</b> (Knowledge, Understanding, Application, Analysis, Evaluation, Synthesis & Create)	15	18.75%
<b>4 Marks- Case Study Questions (3x4)</b> (Knowledge, Understanding, Application, Analysis, Evaluation, Synthesis & Create)	12	15%
<b>5 Mark- Long Answer Questions (4x5)</b> (Knowledge, Understanding, Application, Analysis, Evaluation, Synthesis & Create)	20	25%
<b>Map Pointing</b>	5	6.25%

### Weightage to Competency Levels

Sr. No.	Competencies	Marks (80)	Percent-age
1	<b>Remembering and Understanding:</b> Exhibiting memory of previously learned material by recalling facts, terms, basic concepts, and answers; Demonstrating understanding of facts and ideas by organizing, translating, interpreting, giving descriptions and stating main ideas.	24	30%
2	<b>Applying:</b> Solving problems to new situations by applying acquired knowledge, facts, techniques and rules in a different way.	11	13.25%
3	<b>Analysing, Evaluating and Creating:</b>  Examining and breaking information into parts by identifying motives or causes; Making inferences and finding evidence to support generalizations; Presenting and defending opinions by making judgments about information, validity of ideas, or quality of work based on a set of criteria.  Compiling information together in a different way by combining elements in a new pattern or proposing alternative solutions.	40	50%
4	Map Skill	5	6.25%
	<b>Total</b>	<b>80</b>	<b>100%</b>

**CLASS X (2025-26)**  
**GUIDELINES FOR INTERNAL ASSESSMENT: 20 MARKS**

Type of Assessment	Description	Marks
Periodic Assessment	Pen Paper Test.	5
Multiple Assessment	Quiz, debate, role play, viva, group discussion, visual expression, interactive bulletin boards, gallery walks, exit cards, concept maps, peer assessment, Self-assessment etc. through Interdisciplinary project	5
Subject Enrichment Activity	Project Work on Consumer Rights OR Social Issues OR Sustainable Development (Interdisciplinary)	5
Portfolio	Classwork, Work done (activities/ assignments) reflections, narrations, journals, etc. Achievements of the student in the subject throughout the year Participation of the student in different activities like heritage India quiz	5

**CLASS X**  
**PRESCRIBED TEXTBOOKS**

S.No.	Subject	Name of the Book	Publisher
1	History	India and the Contemporary World-II	NCERT
2	Political Science	Democratic Politics-II	NCERT
3	Geography	Contemporary India-II	NCERT
4	Economics	Understanding Economic Development	NCERT
5	Disaster Management	Together, towards a safer India- Part III	CBSE



## Project Work: Class IX

Project work	Competencies
<p>Every student must undertake one project on Disaster Management</p> <p><b>Objectives:</b> The main objectives of giving project work on Disaster Management to the students are to:</p> <ul style="list-style-type: none"> <li>• To create awareness in them about different disasters, their consequences and management</li> <li>• To prepare them in advance to face such situations</li> <li>• To ensure their participation in disaster risk reduction plans</li> <li>• To enable them to create awareness and preparedness among the community.</li> <li>• The project work helps in enhancing the Life Skills of the students.</li> <li>• Various forms of art must be integrated in the project work.</li> </ul>	<p>The students will develop the following competencies:</p> <ul style="list-style-type: none"> <li>• Collaboration</li> <li>• Use analytical skills.</li> <li>• Evaluate the situations during disasters.</li> <li>• Synthesize the information.</li> <li>• Find creative solutions.</li> <li>• Strategies the order of solutions.</li> <li>• Use the right communication skills.</li> </ul>

### Guidelines:

To realise the expected objectives, it would be required of the principals / teachers to muster support from various local authorities and organisations like the Disaster Management Authorities, Relief, Rehabilitation and the Disaster Management Departments of the States, Office of the District Magistrate/ Deputy Commissioners, Fire Service, Police, Civil Defence etc. in the area where the schools are located.

The project carried out by the students should subsequently be shared among themselves through interactive sessions such as exhibitions, panel discussions, etc.

**The distribution of marks over different rubrics relating to Project Work is as follows:**

S.no	Aspects	Marks
a	Content accuracy and originality	2
b	Competencies exhibited and Presentation	2
c	Viva-Voce	1

- All documents pertaining to assessment under this activity should be meticulously maintained by the schools.
- A Summary Report should be prepared highlighting:
  - objectives realized through individual work and group interactions.
  - calendar of activities.
  - innovative ideas generated in the process.
  - list of questions asked in viva voce.

- It is to be noted here by all the teachers and students that the projects and models prepared should be made from eco-friendly products without incurring too much expenditure.
- The Project Report can be handwritten or digital.
- The Project Work needs to enhance cognitive, affective and psychomotor skills of the learners. It will include self-assessment and peer assessment, and progress of the child in project-based and inquiry-based learning, art integrated activities, experiments, models, quizzes, role plays, group work, portfolios, etc., along with teacher assessment. (NEP-2020)
- The Project work can culminate in the form of PowerPoint Presentation/Exhibition/Skit/albums/files/song and dance or culture show /story telling/debate/panel discussion, paper presentation and whichever is suitable to Visually Impaired Candidates.)
- The record of the project work (internal assessment) should be kept for a period of three months for verification, if any.

## Class-IX

## Interdisciplinary Project

Subject and Chapter No	Name of the Chapter	Suggested Teaching Learning Process	Learning Outcomes with Specific Competencies	Time Schedule For Completion
History Chapter IV	Forest Society and Colonialism	<p>Interdisciplinary project Teachers can make use of the pedagogies in facilitating the students in completion of Interdisciplinary Project Constructivism Inquiry based learning Cooperative Learning Research based learning. Experiential learning. Art integration</p> <p><b>Multiple Assessment:</b> Ex. Surveys / Interviews / Research work/ Observation/ Story based Presentation/ Art integration/ Quiz/ Debate/ role play/ viva, /group discussion, /visual expression/ interactive bulletin boards/ gallery walks/ exit cards/ concept maps/ peer assessment/ art integration /Self-assessment/ integration of technology etc.</p>	<p>Compare the forest situations prevailed in the pre- colonial, colonial and post-colonial era.</p> <p>Evaluate the growth &amp; role of commercial forestry in different types of Vegetation.</p> <p>Analyse the reasons for rebellions in forest areas of south East-Asia with specification to JAVA.</p> <p>To defend the role of government and the local communities in protecting the forest cover.</p>	The schools to do IDP between the months of April and September at the School under the guidance of a teacher. (Carryover of project to home must be strictly avoided)
Geography Chapter 5	Natural Vegetation and Wildlife		To devise ways to protect the forest vegetation and wildlife in India.	

**Guidelines for Interdisciplinary Project:**

It involves combining 2 or more disciplines into one activity-more coherent and integrated. The generally recognized disciplines are economics, History, Geography, Political Science. A sample plan has been enclosed. Kindly access the link given below-  
[https://docs.google.com/document/d/1668TKkRt80r4-kbjJ\\_Y7zg4mF3Vq1Y9k/edit](https://docs.google.com/document/d/1668TKkRt80r4-kbjJ_Y7zg4mF3Vq1Y9k/edit)

**Plan of the project:**

A suggestive 10 days' plan given below which you may follow, or you can create on your own, based on the templates provided below.

**Process:**

Initial collaboration among students to arrange their roles, areas of integration, area of investigation and analysis, roles of students.

Team leader: Main collaborator
Team members:
Note: Teacher to allocate the roles as per the abilities of the students.

- Final submission based on course deliverables as given in the template below the 10-day plan.
- Assessment Plan: to be done by the teacher clearly mentioning the Rubrics.
- Report, poster and video acknowledgements: reflections & expression of gratitude as given in the template given below

Class IX Interdisciplinary project	
10 days suggestive plan	10 periods
<p><b>Day 1-2: Colonialism and Forest Society</b></p> <p>Discuss the impact of colonialism on forest societies and explore the concept of forest as a resource in colonialism. Group project: Research and present a PPT on the colonial forest policy and its impact on forest societies.</p> <p><b>Day 3-4: "Rebellion in the Forest"</b></p> <p>Analyse the causes and effects of forest-based rebellions in history. Watch the following film Group discuss about forest tribes of your state and the exploitations they face. Refer Annexure V for Rubrics. <a href="https://www.youtube.com/watch?v=N6SR0REa_YA">https://www.youtube.com/watch?v=N6SR0REa_YA</a></p> <p><b>Day 5-6: Forest Transformations in Java, Tropical Evergreen Forests</b></p> <ul style="list-style-type: none"> <li>• Examine the impact of human activity on forests in Java.</li> <li>• Explore how changes in land use, agriculture, and industry have impacted the forests. Students can research the history of forest transformations in Java and their impact on the environment.</li> <li>• Study the transformation of forests in Java, from pre-colonial to post-colonial times. Compare and contrast the conversion of forest into agricultural land and the need. Through group discussions find solutions. Present an art integrated project.</li> <li>• Discuss the characteristics of tropical evergreen forests, including their climate, soil, and flora/fauna.</li> <li>• Students can research specific examples of tropical evergreen forests and the challenges they face, such as deforestation and climate change.</li> </ul> <p><i>Group project: watch the video through the link <a href="https://www.youtube.com/watch?v=Ml0xvHsBigI">https://www.youtube.com/watch?v=Ml0xvHsBigI</a></i></p> <ul style="list-style-type: none"> <li>• Analyse and present the impact of forest transformations on society, economy and environment in Java. Compare and contrast it with India.</li> <li>• Present a PPT of your learnings. Refer Annexure V for rubrics</li> </ul> <p><b>Day 7-8:</b> Discuss how colonialism has affected the forest's biodiversity and the survival of indigenous communities living in and around the forest</p> <p><b>Group activity:</b> Divide the group into smaller teams and assign them tasks related to identifying the impact of colonialism on different types of forests. For example, one team can research the impact of colonialism on forest fires, while another team can research the impact of colonialism on the survival of indigenous plants and animals. Make the students use cartoon strips to present their findings. Day 9-10: Make the students compile all the findings of 8 days' work and present them in PPT and through the template given in Annexure IV.</p>	

Class X - Project	
10 periods	5 marks
<p>Every student must undertake one project on ...</p> <p><b>Consumer Awareness OR Social Issues OR Sustainable Development</b></p> <p><b>Objectives:</b></p> <ul style="list-style-type: none"> <li>The objective of the project work is to help students gain an insight and pragmatic understanding of the theme and see all the Social Science disciplines from an interdisciplinary perspective.</li> <li>It should also help in enhancing the Life Skills of the students.</li> <li>Students are expected to apply the Social Science concepts that they have learnt over the years to prepare the project report</li> <li>If required, students may go out for collecting data and use different primary and secondary resources to prepare the project.</li> <li>If possible, various forms of art may be integrated in the project work.</li> </ul>	<p>The students will develop the following competencies:</p> <ul style="list-style-type: none"> <li>Collaboration</li> <li>Use analytical skills.</li> <li>Evaluate the situations during disasters.</li> <li>Synthesize the information.</li> <li>Find creative solutions.</li> <li>Strategize the order of solutions</li> <li>Use right communication skills</li> </ul>

**Guidelines:**

The distribution of marks over different rubrics relating to Project Work is as follows:

S.no	Rubrics	Marks
a	Content accuracy and originality	2
b	Competencies exhibited and Presentation	2
c	Viva-Voce	1

The project carried out by the students should subsequently be shared among themselves through interactive sessions such as exhibitions, panel discussions, etc.

- All documents pertaining to assessment under this activity should be meticulously maintained by the schools.
- A Summary Report should be prepared highlighting:
  - objectives realized through individual work and group interactions.
  - calendar of activities.
  - innovative ideas generated in the process
  - list of questions asked in viva voce.
- It is to be noted here by all the teachers and students that the projects and models prepared should be made from eco-friendly products without incurring too much expenditure.
- The Project Report can be handwritten or digital.
- The Project Work needs to enhance cognitive, affective and psychomotor skills of the learners. It will include self-assessment and peer assessment, and progress of the child in project-based and inquiry-based learning, art integrated activities, experiments, models, quizzes, role plays, group work, portfolios, etc., along with teacher assessment. (NEP- 2020)

6. Must be done at school only as specific periods are allocated for project work.
7. The Project work can culminate in the form of Power Point Presentation/ Exhibition/ Skit/ albums/files/song and dance or culture show/story telling/debate/panel discussion, paper presentation and whichever is suitable to Visually Impaired Candidates.
8. Records pertaining to projects (internal assessment) of the students will be maintained for a period of three months from the date of declaration of result for verification at the discretion of the Board. Subjudice cases, if any or those involving RTI / Grievances may however be retained beyond three months.

## B

### Interdisciplinary Project: Class X

Subject and Chapter No.	Name of the Chapter	Suggested Teaching Learning Process	Learning Outcomes with Specific Competencies	Time Schedule For Completion
History Chapter III  Geography Chapter 7	Making of a Global World  Lifelines of National Economy	The teachers may use the following pedagogies in facilitating the students in completion of Interdisciplinary Project. 1) Constructivism 2) Inquiry based learning 3) Cooperative learning 4) Learning station 5) Collaborative learning 6) Videos/ Visuals/ documentaries/ movie clippings 7) Carousel technique 8) Art integrated learning Group Discussions Multiple Assessment: Ex. Surveys/ Interviews/ Research work/ Observation/ Story based	<ul style="list-style-type: none"> <li>➤ Analyse the implication of globalisation for local economies.</li> <li>➤ Discuss how globalisation is experienced differently by different social groups. Enumerates how transportation works as a lifeline of the economy.</li> <li>➤ Analyse and infer the impact of roadways and railways on the national economy.</li> <li>➤ Analyses and infers the challenges faced by the roadways and railway sector in India</li> </ul>	The schools do IDP between the months of April and September at the School under the guidance of a teacher. (Carryover of project to home must be strictly avoided)
Economics Chapter 4	Globalisation on and the Indian Economy	Presentation/ Art integration/ Quiz/ Debate/ role play/ viva, /group discussion, /visual expression/ interactive bulletin	<ul style="list-style-type: none"> <li>➤ Integrate various dimensions of globalisation in terms of cultural / political/ social /economical aspects)</li> </ul>	

		boards/ gallery walks/ exit cards/ concept maps/ peer assessment/ art integration /Self - assessment/integration of technology etc.	<ul style="list-style-type: none"> <li>➤ Appraise the evolution of Globalisation and the global trends</li> <li>➤ Investigate the factors that facilitated the growth on MNC 's</li> </ul>	
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### Guidelines:

- It involves combining 2 or more disciplines into one activity-more coherent and integrated. The generally recognized disciplines are economics, History, Geography, Political Science, a sample plan has been enclosed) Kindly access the link given below
- Methodology (A sample interdisciplinary project plan Link has been provided to get an insight about IDP.
- Topic: The Making of a Global World, Globalisation and Lifelines of Economy

<https://docs.google.com/document/d/1dlwwFeaSrExJHMTkzcEuq3ehh-7FtHM/edit>

### Plan of the project:

A suggestive 10 days' plan given below which you may follow, or you can create on your own, based on the templates provided below

### Process:

Initial collaboration among students to arrange their roles, areas of integration, area of investigation and analysis, roles of students

## Class X: 10-day Suggestive plan for Interdisciplinary Project

### Day 1: Introduction to the Interdisciplinary Project and Setting the Context:

Brief overview of the project and its objectives to be given by the teachers.

History teacher to Introduce the historical context of World War II and its aftermath through inquiry methods.

Make the students to Group discuss the impact of World War II on the global economy. Teacher to refer annexure III for rubrics)

### Day 2: The Great Depression:

Students to watch a video from the link, <https://www.youtube.com/watch?v=62DxELjuRec> and <https://www.youtube.com/watch?v=gqx2E5qIV9s> and discuss the causes and consequences of the Great Depression and the role of mass production and consumption in the Great Depression. Present a group PPT /report on consequences of the Great Depression on the global economy.

### Day 3: India and the Great Depression:

Students to collect material related to India's economic condition during the Great Depression and relate it to the present economic condition of India and US. Students may collect information through a visit to the library.

As a group activity they need to present a collage of their findings. (Refer Annexure V for



#### **Day 4: Rebuilding the World Economy and Interlinking Production across countries**

- Teachers to use Jigsaw method to make the students to sit in groups and to give each group a part of the handout with information about process taken to rebuild economy and how the production across countries got interlinked. Make the groups to compile the information by moving from group to group.
- Make them discuss the post-war recovery efforts and their impact on the global economy
- Study the role of the Bretton Woods Institutions in rebuilding the world economy and present their learnings through Art Integrated Project. Refer Annexure V for rubrics.

#### **Day 5: The Early Post-War Years: The role of roadways, railways, waterways and airways in building the national economy**

- The teacher distributes the Handout 1 given below to the groups and asks them to find answers to the questions posed at the end of Hand out and present it in groups using Café conversations mode. Refer Annexure III for rubrics.
- Study the challenges faced by the world in the early post-war years

#### **Day 6: Post war settlement and Bretton Woods institutions**

- Make the students read the material available online/in library and debate the impact of Bretton Woods institutions in the post war economy. Refer Annexure V for Rubrics.

#### **Day 7: Decolonization and Independence - The Role of World Trade Organization:**

- The students will read the handout 2 given below and present a role play of the support rendered by the World Trade Organisation in building new nations. Refer Annexure V for rubrics
- Introduction to the World Trade Organization
- Study the role of the WTO in promoting fair trade practices
- Discuss the efforts made towards decolonization and independence of nations

#### **Day 8: End of Bretton Woods and the Beginning of Globalisation:**

- The students will read material given in the link  
<https://www.imf.org/external/about/histend.htm#:~:text=End%20of%20Bretton%20Woods%20system,-The%20system%20dissolved&text=In%20August%201971%2C%20U.S.%20President,the%20breakdown%20of%20the%20system>
- Organise an interview with a financial expert/economist/ lecturer/professor. Based on the information they gathered, the students can submit a report on the findings.
- Discuss the reasons for the end of the Bretton Woods system

#### **Day 9: Impact of Globalization in India and role of waterways and airways**

<https://www.jagranjosh.com/general-knowledge/new-economic-policy-of-1991-objectives-features-and-impacts-1448348633-1>

- The students will read the material given in the above link and design a report on what would have happened to India if this stand wasn't taken and present it as a radio talk show. They will link the role of waterways and airways in the achievement of India in globalisation.
- Study the impact of globalisation on the Indian economy
- Discuss the challenges faced by India in the process of globalisation

#### **Day 10. Final presentation**

Conclude the interdisciplinary project and summarize the key takeaways.



## **Handout 1 for Day 4 of Inter Disciplinary Project of Class X**

### **Title: The Role of Waterways and Airways in Post-World War II- World and India**

**Introduction:** After the end of World War II, the world faced significant economic, social, and political changes. The role of waterways and airways in shaping the post-war world and India is crucial to understand. In this handout, we will discuss the impact of waterways and airways on the global economy and how it helped India in its development.

**Waterways:** In the post-World War II era, waterways played a crucial role in the movement of goods and people. The improvement of ports and waterways allowed for more efficient transportation of goods and helped to spur economic growth.

The increased demand for goods and services, combined with the development of shipping technologies, allowed for the expansion of international trade. This helped to boost the world economy and allowed for the growth of industries in many countries, including India.

In India, the development of waterways and ports helped to improve the country's economy. The country's long coastline and several rivers made it an ideal location for the transportation of goods. The growth of ports and waterways in India allowed for the movement of goods from one part of the country to another, helping to spur economic growth and development.

**Airways:** After World War II, the development of air transportation revolutionized the world's economy. The expansion of air travel allowed for faster and more efficient transportation of goods and people, which helped to boost the world economy.

In India, the growth of airways helped to connect different parts of the country and made it easier for people and goods to move from one place to another. This helped to spur economic growth and development in India.

The growth of air transportation in India also allowed for the expansion of international trade. Indian businesses could now easily access foreign markets, which helped to boost the country's economy.

**Conclusion:**

The role of waterways and airways in the post-World War II world and India was crucial in shaping the economic and social landscape of these countries. The development of these transportation modes helped to spur economic growth and allowed for the expansion of international trade. Understanding the impact of waterways and airways on the world and India is crucial in understanding the economic and social changes that took place after World War II.

### **Questions:**

1. Mention the role of major ports in imports and exports.
2. Emergence of Deccan airways changed the entire functionalities of domestic airways. Substantiate the statement
3. The waterways and airways contribute to the economic growth of India. Substantiate your answer.

## **Handout 2 for day 7 of Inter Disciplinary Project of Class X**

### **Title The Role of the World Trade Organization (WTO) in Building New Nations Post-Colonialization**

**Introduction:** After the end of colonialism, many countries faced significant economic and political challenges as they worked to establish themselves as independent nations. The World Trade Organization (WTO) played a crucial role in helping these countries to rebuild their economies and participate in the global economy. In this handout, we will discuss the role of the WTO in building new nations post- colonialization.

#### **What is the WTO?**

The WTO is an international organization that was established in 1995 to promote international trade and help countries participate in the global economy.

The WTO provides a forum for countries to negotiate and enforce international trade agreements and helps to ensure that trade is conducted in a fair and predictable manner. The organization also provides technical assistance and advice to help countries improve their trade policies and participate in the global economy.

#### **How has the WTO helped new nations post-colonialization?**

After colonial rule ended, many countries faced significant economic challenges as they worked to establish themselves as independent nations. The WTO helped these countries to participate in the global economy by providing a forum for trade negotiations and by helping to enforce international trade agreements.

The WTO also provided technical assistance and advice to help these countries improve their trade policies and participate in the global economy. This helped to spur economic growth and development in these countries and allowed them to become more integrated into the global economy.

By participating in the global economy, new nations post-colonialisation was able to expand their markets, attract foreign investment, and improve their economic performance. The WTO played a crucial role in helping these countries to build their economies and establish themselves as stable, independent nations.

#### **Conclusion:**

The WTO played a crucial role in building new nations post-colonialization by helping these countries to participate in the global economy. The organization's trade negotiations, enforcement of international trade agreements, and technical assistance helped to spur economic growth and development in these countries. Understanding the role of the WTO in building new nations post-colonialization is important in understanding the economic and political changes that took place after the end of colonial rule.

### Suggested Template for Presentation by the Students - Class IX & X

<b>Name of the Students (Team):</b>	
<b>Class :</b>	<b>Section:</b>
<b>Topics of Interdisciplinary Project:</b>	
<b>Title of the Project:</b>	
<b>Objectives:</b>	
<b>Multiple Assessment:</b> Ex. Surveys / Interviews / Research work/ Observation/ Story based Presentation/ Art integration/ Quiz/ Debate/ role play/ viva, /Group discussion /visual expression/ interactive bulletin boards/ gallery walks/ exit cards/ concept maps/ peer assessment/ art integration /Self-assessment/ integration of technology etc.	
Evidences: Photos, Excerpts from Interviews, observations, Videos, Research References, etc.	
Overall presentation: Link of PPT, shared documents, can be digital/handwritten, as per the convenience of the school.	
<b>Acknowledgement:</b>	
<b>References</b> (websites, books, newspaper etc.)	
<b>Reflections:</b>	

### Rubrics for Interdisciplinary Project

Rubrics	Marks allocated
Research Work	1
Collaboration & Communication	1
Presentation & Content relevance	1
Competencies- Creativity, Analytical skills, Evaluation, Synthesizing,	2
<b>Total</b>	<b>5</b>

# **CBSE | DEPARTMENT OF SKILL EDUCATION**

## **CURRICULUM FOR SESSION 2025-2026**

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### **INFORMATION TECHNOLOGY (SUB. CODE – 402)**

#### **JOB ROLE: DOMESTIC DATA ENTRY OPERATOR**

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#### **CLASS – IX**

#### **COURSE OVERVIEW:**

A Data Entry Operator/Analyst is a person who is responsible for entering data into different applications and computer databases, manage and maintain effective record keeping. In addition, S/he is responsible for organizing files, collecting and managing data to be entered into the computer. S/he is also responsible for security of data and safeguard of the computer network.

With every office and organization seeking to become computerized, the demand for data entry operators/analysts is on a rise. Data entry operators/analysts usually work in an indoor, office setting using a computer and other electronic machines. To be in the profession of data entry/analysis, one has to have computer literacy, high typing speed, organization skills, concentration skills, communication skills and an ability to sit for long periods of time entering and computing data.

#### **OBJECTIVES OF THE COURSE:**

In this course, the students will be introduced to the fundamental concepts of digital documentation, digital spreadsheet, digital presentation, database management and internet security.

The following are the main objectives of this course:

- To familiarize the students with the world of IT and IT enabled services.
- To provide an in-depth training in use of data entry, internet and internet tools.
- To develop practical knowledge of digital documentation, spreadsheets and presentation.
- To enable the students to understand database management system and have updated knowledge about digital record keeping.

- To make the students capable of getting employment in Private Sector, Public Sector, Ministries, Courts, House of Parliament and State Legislative Assemblies.
- To develop the following skills:
  - Data Entry and Keyboarding skills
  - The concept of Digital Documentation
  - The concept of Digital Presentation
  - The concept of Electronic Spreadsheet
  - The concept of Databases
  - Internet Technologies

## **SALIENT FEATURES**

To be a data entry operator/analyst, one requires a lot of hard work and practical hands-on experience. One should have an intensive knowledge of Office applications, computer operations, and knowledge of clerical, administrative techniques and data analysis. Along with this, as a data entry operator/analyst, you will be expected to have fast typing speed, accuracy, and efficiency to perform tasks.

As a data entry operator/analyst, one should improve their computer skills, numerical and literacy skills. These skills can help one expand into a new career path in the future.

## **SCHEME OF UNITS**

This course is a planned sequence of instructions consisting of units meant for developing employability and vocational competencies of students of Class IX opting for skill subject along with other education subjects. The unit-wise distribution of hours and marks for class IX is as follows:

**INFORMATION TECHNOLOGY (SUBJECT CODE - 402)****CLASS – IX (Session 2025-2026)****Total Marks: 100 (Theory-50 + Practical-50)**

	<b>UNITS</b>	<b>NO. OF HOURS for Theory and Practical</b>		<b>MAX. MARKS for Theory and Practical</b>
<b>Part A</b>	<b>Employability Skills</b>			
	Unit 1 : Communication Skills-I	10		2
	Unit 2 : Self-Management Skills-I	10		3
	Unit 3 : ICT Skills-I	10		1
	Unit 4 : Entrepreneurial Skills-I	15		3
	Unit 5 : Green Skills-I	05		1
	<b>Total</b>	<b>50</b>		<b>10</b>
<b>Part B</b>	<b>Subject Specific Skills</b>	<b>Theory</b>	<b>Practical</b>	<b>Marks</b>
	Unit 1: Introduction to IT- ITeS industry	2	4	4
	Unit 2: Data Entry & Keyboarding Skills	4	10	6
	Unit 3: Digital Documentation	10	26	10
	Unit 4:Electronic Spreadsheet	18	35	10
	Unit 5: Digital Presentation	10	31	10
	<b>Total</b>	<b>44</b>	<b>106</b>	<b>40</b>
<b>Part C</b>	<b>Practical Work</b>			
	Practical Examination			15
	Written Test			10
	Viva Voce			10
	<b>Total</b>			<b>35</b>
<b>Part D</b>	<b>Project Work/ Field Visit</b>			
	Practical File/ Student Portfolio			10
	Viva Voce			05
	<b>Total</b>			<b>15</b>
	<b>GRAND TOTAL</b>	<b>200</b>		<b>100</b>

## **DETAILED CURRICULUM/TOPICS:**

### **Part-A: EMPLOYABILITY SKILLS**

<b>S. No.</b>	<b>Units</b>	<b>Duration in Hours</b>
1.	Unit 1: Communication Skills-I	10
2.	Unit 2: Self-Management Skills-I	10
3.	Unit 3: Basic Information and Communication Technology Skills-I	10
4.	Unit 4: Entrepreneurial Skills-I	15
5.	Unit 5: Green Skills-I	05
	<b>TOTAL</b>	<b>50</b>

**NOTE:** Detailed Curriculum/ Topics to be covered under Part A: Employability Skills can be downloaded from CBSE website.

### **Part-B – SUBJECT SPECIFIC SKILLS**

- Unit 1: Introduction to IT- ITeS industry
- Unit 2: Data Entry & Keyboarding Skills
- Unit 3: Digital Documentation
- Unit 4: Electronic Spreadsheet
- Unit 5: Digital Presentation

### **UNIT 1: INTRODUCTION TO IT–ITeS INDUSTRY**

<b>S. No.</b>	<b>LEARNING OUTCOMES</b>	<b>THEORY</b>	<b>PRACTICAL</b>
1	Appreciate the applications of IT	<ul style="list-style-type: none"><li>• Introduction to IT and ITeS, BPO services,</li><li>• BPM industry in India,</li><li>• Structure of the IT-BPM industry,</li><li>• Applications of IT in home computing, everyday life, library, workplace, education, entertainment, communication, business, science and engineering, banking, insurance, marketing, health care, IT in the government and public service</li></ul>	<ul style="list-style-type: none"><li>- Identify and list the various IT enabled services, Observe the application of IT in various areas.</li></ul>

## UNIT 2: DATA ENTRY AND KEYBOARDING SKILLS

S. No.	LEARNING OUTCOMES	THEORY	PRACTICAL
1.	Use keyboard and mouse for data entry	<ul style="list-style-type: none"> <li>Keyboarding Skills,</li> <li>Types of keys on keyboard, Numeric keypad,</li> <li>Home keys, Guide keys,</li> <li>Typing and deleting text,</li> <li>Typing ergonomics,</li> <li>Positioning of fingers on the keyboard, Allocation of keys to fingers on four different rows,</li> <li>Pointing device – Mouse, Mouse operations.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the keys and its use on the keyboard,</li> <li>Demonstrate to use various keys on the keyboard,</li> <li>Demonstrate to type the text, numbers, special character using appropriate keys on the keyboard,</li> <li>Practice the correct typing ergonomics,</li> <li>Practice to place fingers on correct key in four different row of keyboard,</li> <li>Practice various mouse operations.</li> </ul>
2.	Use typing software	<ul style="list-style-type: none"> <li>Introduction to Rapid Typing Tutor,</li> <li>Touch typing technique,</li> <li>User interface of Typing Tutor,</li> <li>Typing text and interpret results,</li> <li>Working with lesson editor,</li> <li>Calculating typing speed,</li> <li>Typing rhythm.</li> </ul>	<ul style="list-style-type: none"> <li>Identify the user interface of typing tutor,</li> <li>Practice to type text in typing tutor software and interpret the results,</li> <li>Practice to work in lesson editor,</li> <li>Calculate the typing speed</li> <li>Practice to improve typing</li> <li>Using typing tutor software.</li> </ul>

## UNIT 3: DIGITAL DOCUMENTATION

S. No.	LEARNING OUTCOMES	THEORY	PRACTICAL
1.	Create a document using a word processor	<ul style="list-style-type: none"> <li>Introduction to word processing,</li> <li>Word processing applications,</li> <li>Introduction to Word Processing tool</li> <li>Creating a document, Parts of a Word Processor Window,</li> </ul>	<ul style="list-style-type: none"> <li>List the available word processing applications.</li> <li>Introduce with the parts of the main window.</li> <li>Change document views.</li> <li>Start a new document.</li> <li>Open an existing document.</li> <li>Save a document.</li> <li>Close a document.</li> </ul>
2.	Apply Editing features	<ul style="list-style-type: none"> <li>Text editing – Undo and Redo,</li> <li>Moving and copying text,</li> <li>Copy and Paste,</li> <li>Selecting text,</li> <li>Selection criteria,</li> </ul>	<ul style="list-style-type: none"> <li>Editing of text in a document</li> <li>Demonstrate to use undo and redo option,</li> <li>Use the keyboard and mouse options to select, cut, copy, paste, and move text.</li> </ul>



S. No.	LEARNING OUTCOMES	THEORY	PRACTICAL
		<ul style="list-style-type: none"> <li>Selecting non-consecutive text items,</li> <li>Selecting a vertical block of text,</li> <li>Find and replace option,</li> <li>Jumping to the page number,</li> <li>Non-printing characters,</li> <li>Checking spelling and grammar,</li> <li>Using Synonyms and Thesaurus.</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate to select nonconsecutive text items, vertical block of text,</li> <li>Search and replace text in a document.</li> <li>Jump to the given page number in a document,</li> <li>Insert non-printing characters in a document,</li> <li>Apply Spelling and grammar option of document.</li> <li>Demonstrate to use Synonyms and Thesaurus.</li> </ul>
3.	Apply formatting features	<ul style="list-style-type: none"> <li>Page style dialog</li> <li>Formatting text – Removing manual formatting, Common text formatting, Changing text case, Superscript and Subscript</li> <li>Formatting paragraph – Indenting paragraphs, Aligning paragraphs, Font colour, highlighting, and background colour, Using bullets and numbering, Assigning colour, border and background to paragraph.</li> <li>Page formatting – setting up basic page layout using styles, Inserting page break, Creating header/footer and page numbers,</li> <li>Defining borders and backgrounds, Inserting images shapes, special characters in a document, Dividing page into columns, Formatting the shape or image.</li> </ul>	<ul style="list-style-type: none"> <li>Apply various text formatting options for the text,</li> <li>Demonstrate to format paragraphs – indent/align paragraphs, assign font colour, highlighting, and background colour,</li> <li>Assign number or bullets to the lists items</li> <li>Demonstrate to assign colour, border and background to paragraph</li> <li>Demonstrate the page formatting – set up basic page layout using styles,</li> <li>Insert page break, Create header/footer and page numbers</li> <li>Define borders and backgrounds</li> <li>Insert images, shapes, special characters in a document</li> <li>Divide page into columns,</li> <li>Format the shape or image.</li> </ul>
4.	Create and work with tables	<ul style="list-style-type: none"> <li>Creating table in Word Processor</li> <li>Inserting row and column in a table</li> <li>Deleting rows and columns</li> <li>Splitting and merging tables</li> <li>Deleting a table</li> <li>Copying a table</li> <li>Moving a table.</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate and do the following in Word Processor:</li> <li>Create table,</li> <li>Insert and delete rows and column in a table,</li> <li>Split and merge tables,</li> <li>Delete a table,</li> <li>Copy or move from one location to another location of document.</li> </ul>

S. No.	LEARNING OUTCOMES	THEORY	PRACTICAL
5.	Use Print Options	<ul style="list-style-type: none"> <li>• Printing options in Word Processor.</li> <li>• Print preview,</li> <li>• Controlling printing,</li> <li>• Printing all pages, single and multiple pages.</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate to print the document, selected pages in the document</li> <li>• Print the document with various options,</li> <li>• Preview pages before printing.</li> </ul>
6.	Understand and apply mail merge	<ul style="list-style-type: none"> <li>• Introduction to mail merge</li> <li>• Concept of data source for mail merge.</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate to print the letters using mail merge,</li> <li>• Do the following to achieve</li> <li>• Create a main document,</li> <li>• Create the data source,</li> <li>• Enter data in the fields,</li> <li>• Merge the data source with main document,</li> <li>• Edit individual document,</li> <li>• Print the merged letter,</li> <li>• Save the merged letter.</li> </ul>

#### UNIT 4: ELECTRONIC SPREADSHEET

S. No.	LEARNING OUTCOMES	THEORY	PRACTICAL
1.	Create a Spreadsheet	<ul style="list-style-type: none"> <li>• Introduction to spreadsheet application</li> <li>• Starting a spreadsheet</li> <li>• Parts of a spreadsheet</li> <li>• Worksheet – Rows and Columns, Cell and Cell Address,</li> <li>• Range of cells – column range, row range, row and column range.</li> </ul>	<ul style="list-style-type: none"> <li>• Start the spreadsheet,</li> <li>• Identify the parts of Calc,</li> <li>• Identify the rows number, column number, cell address,</li> <li>• Define the range of cell,</li> <li>• Identify row range, column range, row &amp; column range</li> </ul>
2.	Apply formula and functions in spreadsheet	<ul style="list-style-type: none"> <li>• Different types of data,</li> <li>• Entering data – Label, Values, Formula</li> <li>• Formula, how to enter formula,</li> <li>• Mathematical operators used in formulae,</li> <li>• Simple calculations using values and operators,</li> <li>• Formulae with cell addresses and operators,</li> <li>• Commonly used basic functions in a spreadsheet – SUM, AVERAGE, MAX, MIN, Count</li> <li>• Use of functions to do calculations.</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate to enter the text, numeric data in a cell,</li> <li>• Identify the label, values and formula in the cell,</li> <li>• Demonstrate to enter formula in a cell,</li> <li>• Construct the formula using mathematical operators,</li> <li>• Identify formulae with cell addresses and operators,</li> <li>• Identify the correct syntax of formula,</li> <li>• Use the basic functions to perform calculations on data.</li> </ul>

S. No.	LEARNING OUTCOMES	THEORY	PRACTICAL
3.	Format data in the spreadsheet	<ul style="list-style-type: none"> <li>• Formatting tool,</li> <li>• Use of dialog boxes to format values,</li> <li>• Formatting a range of cells with decimal places,</li> <li>• Formatting a range of cells to be seen as labels,</li> <li>• Formatting of a cell range as scientific,</li> <li>• Formatting a range of cells to display times,</li> <li>• Formatting alignment of a cell range,</li> <li>• Speeding up data entry using the fill handle,</li> <li>• Uses of fill handle to copy formulae.</li> </ul>	<ul style="list-style-type: none"> <li>• Identify the formatting tool,</li> <li>• Demonstrate to use of dialog boxes to format values,</li> <li>• Demonstrate to format range of cells with decimal places,</li> <li>• Demonstrate to format a range of cells to labels,</li> <li>• Demonstrate to format of a cell range as scientific,</li> <li>• Demonstrate to format a range of cells to display time,</li> <li>• Demonstrate to align cell data range,</li> <li>• Demonstrate to create number series using fill handle,</li> <li>• Copy formula by dragging the formula using fill handle.</li> </ul>
4.	Understand and apply Referencing	<ul style="list-style-type: none"> <li>• Concept of referencing,</li> <li>• Relative referencing,</li> <li>• Mixed referencing,</li> <li>• Absolute referencing.</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate to use Relative referencing in spreadsheet,</li> <li>• Demonstrate to use Mixed referencing in spreadsheet,</li> <li>• Demonstrate to use Absolute referencing in spreadsheet.</li> </ul>
5.	Create and insert different types of charts in a spreadsheet	<ul style="list-style-type: none"> <li>• Importance of chart in spreadsheet</li> <li>• Types of chart</li> </ul>	<ul style="list-style-type: none"> <li>• Create different types of charts supported by a spreadsheet,</li> <li>• Illustrate the example of chart in a spreadsheet.</li> </ul>

## UNIT 5: DIGITAL PRESENTATION

S. No.	LEARNING OUTCOMES	THEORY	PRACTICAL
1.	Understand features of an effective presentation	<ul style="list-style-type: none"> <li>• Concept of presentation,</li> <li>• Elements of presentation,</li> <li>• Characteristics of an effective presentation</li> </ul>	<ul style="list-style-type: none"> <li>• Identify and list the elements of presentation,</li> <li>• List the characteristics of an effective presentation.</li> </ul>
2.	Create a presentation	<ul style="list-style-type: none"> <li>• Introduction to presentation software,</li> <li>• Opening a presentation software</li> <li>• Parts of presentation window,</li> <li>• Closing a presentation</li> <li>• Creating a presentation using template,</li> <li>• Selecting slide layout,</li> <li>• Saving a presentation,</li> <li>• Running a slide show,</li> <li>• Save a presentation in PDF,</li> <li>• Closing a presentation,</li> <li>• Using Help.</li> </ul>	<ul style="list-style-type: none"> <li>• Start the presentation application</li> <li>• various components of main Impress window</li> <li>• Observe the different workspace views.</li> <li>• Create a new presentation using wizard.</li> <li>• Run the presentation,</li> <li>• Save the presentation,</li> <li>• Close the presentation,</li> <li>• Demonstrate to use Help in presentation.</li> </ul>

S. No.	LEARNING OUTCOMES	THEORY	PRACTICAL
3.	Work with slides	<ul style="list-style-type: none"> <li>• Inserting a duplicate slide,</li> <li>• Inserting new slides,</li> <li>• Slide layout,</li> <li>• Copying and moving slides,</li> <li>• Deleting and renaming slides</li> <li>• Copying, moving and deleting contents of slide,</li> <li>• View a presentation,</li> <li>• Controlling the size of the view,</li> <li>• Workspace views – Normal, Outline, Notes, Slide sorter view.</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate to insert a new slide and duplicate slide in a presentation,</li> <li>• Change the slide layout,</li> <li>• Demonstrate to copy and move slides in the presentation,</li> <li>• Demonstrate to copy, move and delete contents of the slide,</li> <li>• Demonstrate to view a presentation in different views.</li> </ul>
4.	Format text and apply animations	<ul style="list-style-type: none"> <li>• Formatting toolbar,</li> <li>• Various formatting features,</li> <li>• Text alignment,</li> <li>• Bullets and numbering.</li> <li>• Custom Animation</li> </ul>	<ul style="list-style-type: none"> <li>• Identify and list the various options in formatting toolbar,</li> <li>• Apply the appropriate formatting option</li> <li>• Align the text in presentation,</li> <li>• Apply bullets and numbering to the list items in presentation. □ Apply Animation</li> </ul>
5.	Create and use tables	<ul style="list-style-type: none"> <li>• Inserting tables in presentation,</li> <li>• Entering and editing data in a table,</li> <li>• Selecting a cell, row, column, table,</li> <li>• Adjusting column width and row height,</li> <li>• Table borders and background</li> </ul>	<p>Demonstrate the following:</p> <ul style="list-style-type: none"> <li>• Insert table in presentation,</li> <li>• Enter and edit data in a table,</li> <li>• Select a cell, row, column, table,</li> <li>• Adjust column width and row height,</li> <li>• Assign table borders and background.</li> </ul>
6.	Insert and format image in presentation	<ul style="list-style-type: none"> <li>• Inserting an image from a file,</li> <li>• Inserting an image from the gallery,</li> <li>• Formatting images,</li> <li>• Moving images,</li> <li>• Resizing images,</li> <li>• Rotating images,</li> <li>• Formatting using the Image toolbar,</li> <li>• Drawing graphic objects – line, shapes,</li> <li>• Grouping and un-grouping objects</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate to insert an image from file, gallery in presentation,</li> <li>• Apply formatting options to image in presentation,</li> <li>• Demonstrate to move, resize and rotate images,</li> <li>• Apply formatting options of Image toolbar,</li> <li>• Drawing line, shapes using graphic objects,</li> </ul> <p>Demonstrate to group and ungroup objects.</p>
7.	Work with slide master	<ul style="list-style-type: none"> <li>• Slide masters,</li> <li>• Creating the slide masters,</li> <li>• Applying the slide masters to all slide,</li> <li>• Adding transitions.</li> </ul>	<ul style="list-style-type: none"> <li>• Create the slide masters,</li> <li>• Apply the slide masters to the presentation,</li> <li>• Add transitions to presentation.</li> </ul>

## LIST OF EQUIPMENT/ MATERIALS:

The list given below is suggestive and an exhaustive list should be compiled by the teacher(s) teaching the subject. Only basic tools, equipment and accessories should be procured by the Institution so that the routine tasks can be performed by the students regularly for practice and acquiring adequate practical experience.

S. No.	ITEM NAME, DESCRIPTION & SPECIFICATION	QUANTITY
<b>A</b>	<b>HARDWARE</b>	
1.	Computer with latest configuration or minimum Pentium Processor with minimum 2GB RAM, 512 GB HDD, 17" LED Monitor, NIC Card, 3 button Mouse, 105 keys key board and built-in speakers and mic.	15
2.	Laser Printer - Black	01
3.	Inkjet Printers (Colour & Black)	01
4.	Scanner	01
5.	Online UPS 5 KVA	01
6.	16 Port Switches	01
7.	Air Conditioner 1.5 tonne	02
8.	Telephone line (For Internet)	01
9.	Fire extinguisher	01
<b>B</b>	<b>SOFTWARE</b>	
1.	Operating System Linux and Windows	
2.	Anti-Virus Latest version	
3.	Productivity Suite, Example –Libre Office	
<b>C</b>	<b>FURNITURE</b>	
1.	Class room chairs and desks	25
2.	Computer Tables	15
3.	Straight back revolving & adjustable chairs (Computer Chairs)	15
4.	Printer Tables	02
5.	Trainers Table	01
6.	Trainers Chair	01
7.	Steel cupboards drawer type	02
8.	Cabinet with drawer	01
9.	Steel Almira - big size	01
10.	Steel Almira- small size	01

## TEACHER'S/ TRAINER'S QUALIFICATIONS:

Qualification and other requirements for appointment of teachers/trainers for teaching this subject, on contractual basis should be decided by the State/ UT. The suggestive qualifications and minimum competencies for the teacher should be as follows:

Qualification	Minimum Competencies	Age Limit
Diploma in Computer Science/ Information Technology <b>OR</b> Bachelor Degree in Computer Application/ Science/ Information Technology (BCA, B.Sc. Computer Science/ Information Technology) <b>OR</b> Graduate with PGDCA OR DOEACC A Level Certificate. The suggested qualification is the minimum criteria. However higher qualifications will also be acceptable.	<ul style="list-style-type: none"> <li>The candidate should have a minimum of 1 year of work experience in the same job role.</li> <li>S/he should be able to communicate in English and local language.</li> <li>S/he should have knowledge of equipment, tools, material, Safety, Health &amp; Hygiene.</li> </ul>	<ul style="list-style-type: none"> <li>18-37 years (as on Jan. 01 (year))</li> <li>Age relaxation to be provided as per Govt. rules</li> </ul>

Teachers/Trainers form the backbone of Skill (Vocational) Education being imparted as an integral part of Rashtriya Madhyamik Shiksha *Abhiyan* (RMSA). They are directly involved in teaching of Skill (vocational) subjects and also serve as a link between the industry and the schools for arranging industry visits, On-the-Job Training (OJT) and placement.

These guidelines have been prepared with an aim to help and guide the States in engaging quality Teachers/Trainers in the schools. Various parameters that need to be looked into while engaging the Vocational Teachers/Trainers are mode and procedure of selection of Teachers/ Trainers, Educational Qualifications, Industry Experience, and Certification/ Accreditation.

The State may engage Teachers/Trainers in schools approved under the component of scheme of Vocationalisation of Secondary and Higher Secondary Education under RMSA in following ways:

- (i) Directly as per the prescribed qualifications and industry experience suggested by the PSS Central Institute of Vocational Education (PSSCIVE), NCERT or the respective Sector Skill Council (SSC).
- OR**
- (ii) Through accredited Vocational Training Providers accredited under the National Quality Assurance Framework (NQAF\*) approved by the National Skill Qualification Committee on 21.07.2016. If the State is engaging Vocational Teachers/Trainers through the Vocational Training Provider (VTP), it should ensure that VTP should have been accredited at NQAF Level 2 or higher.

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*\* The National Quality Assurance Framework (NQAF) provides the benchmarks or quality criteria which the different organizations involved in education and training must meet in order to be accredited by competent bodies to provide government- funded education and training/skills activities. This is applicable to all organizations offering NSQF-compliant qualifications.*

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The educational qualifications required for being a Teacher/Trainer for a particular job role are clearly mentioned in the curriculum for the particular NSQF compliant job role. The State should ensure that teachers/trainers deployed in the schools have relevant technical competencies for the NSQF qualification being delivered. Teachers/Trainers preferably should be certified by the concerned Sector Skill Council for the particular Qualification Pack/Job role which he will be teaching. Copies of relevant certificates and/or record of experience of the teacher/trainer in the industry should be kept as record.

To ensure the quality of the Teachers/Trainers, the State should ensure that a standardized procedure for selection of (Vocational) Teachers/Trainers is followed. The selection procedure should consist of the following:

- (i) Written test for the technical/domain specific knowledge related to the sector;
- (ii) Interview for assessing the knowledge, interests and aptitude of trainer through a panel of experts from the field and state representatives; and (iii) Practical test/mock test in classroom/workshop/laboratory.

In case of appointment through VTPs, the selection may be done based on the above procedure by a committee having representatives of both the State Government and the VTP.

The State should ensure that the Teachers/ Trainers who are recruited should undergo induction training of 20 days for understanding the scheme, NSQF framework and Vocational Pedagogy before being deployed in the schools.

The State should ensure that the existing trainers undergo in-service training of 5 days every year to make them aware of the relevant and new techniques/approaches in their sector and understand the latest trends and policy reforms in vocational education.

The Head Master/Principal of the school where the scheme is being implemented should facilitate and ensure that the (Vocational) Teachers/Trainers:

- Prepare session plans and deliver sessions which have a clear and relevant purpose and which engage the students;
- Deliver education and training activities to students, based on the curriculum to achieve the learning outcomes;
- Make effective use of learning aids and ICT tools during the classroom sessions;
- Engage students in learning activities, which include a mix of different methodologies, such as project based work, team work, practical and simulation based learning experiences;
- Work with the institution's management to organise skill demonstrations, site visits, on job trainings, and presentations for students in cooperation with industry, enterprises and other workplaces;
- Identify the weaknesses of students and assist them in up-gradation of competency;
- Cater to different learning styles and level of ability of students;
- Assess the learning needs and abilities, when working with students with different abilities
- Identify any additional support the student may need and help to make special arrangements for that support;
- Provide placement assistance

Assessment and evaluation of (Vocational) Teachers/Trainers is very critical for making them aware of their performance and for suggesting corrective actions. The States/UTs should ensure that the performance of the (Vocational) Teachers/Trainers is appraised annually. Performance based appraisal in relation to certain pre-established criteria and objectives should be done periodically to ensure the quality of the (Vocational) Teachers/Trainers.

Following parameters may be considered during the appraisal process:

- Participation in guidance and counseling activities conducted at Institutional, District and State level;
- Adoption of innovative teaching and training methods;
- Improvement in result of vocational students of Class X or Class XII;
- Continuous up-gradation of knowledge and skills related to the vocational pedagogy, communication skills and vocational subject;
- Membership of professional society at District, State, Regional, National and International level;
- Development of teaching-learning materials in the subject area;
- Efforts made in developing linkages with the Industry/Establishments;
- Efforts made towards involving the local community in Vocational Education
- Publication of papers in National and International Journals;
- Organization of activities for promotion of vocational subjects;
- Involvement in placement of students/student support services.

# **CBSE | DEPARTMENT OF SKILL EDUCATION**

## **CURRICULUM FOR SESSION 2025-2026**

### **INFORMATION TECHNOLOGY (SUB. CODE – 402)**

#### **JOB ROLE: DOMESTIC DATA ENTRY OPERATOR** **CLASS X**

#### **COURSE TITLE: DOMESTIC DATA ENTRY OPERATOR**

Domestic Data Entry Operator in the IT-ITeS Industry is also known as Data Entry Operator. Individuals are responsible to provide daily work reports and work on a daily hour basis. The individual is responsible for electronic entry of data from the client side to the office site or vice-versa. Individual tasks vary depending on the size and structure of the organization. This job requires the individual to have a thorough knowledge of various technology trends and processes as well as have updated knowledge about database management systems and IT initiatives. The individual should have fast and accurate typing/data encoding. This job involves working in a personal computer, and appropriate software to enter accurate data regarding different issues like retrieving data from a computer or to a computer

#### **COURSE OBJECTIVES:**

In this course, students will be introduced to advanced concepts of digital documentation, spreadsheets, database management, and workplace safety, enhancing both technical and soft skills. The course aims to develop effective communication skills, including active listening, speaking, and presentation abilities, while fostering self-management through time management, goal setting, and stress management techniques. Students will gain proficiency in Information and Communication Technology (ICT), ensuring safe and ethical use of digital tools. The course also focuses on nurturing an entrepreneurial mindset, critical thinking, and innovation skills, along with a strong understanding of sustainable practices and environmental conservation. Learners will master advanced document creation, data analysis, and automation techniques using LibreOffice tools and develop competency in designing and managing databases. Emphasis is placed on maintaining a safe and secure work environment by understanding health, safety, and emergency protocols, thus preparing students for professional and personal growth in diverse environments.

#### **LEARNING OUTCOMES:**

In this course, the students will be introduced to the advanced concepts of digital documentation, digital spreadsheet, database management and internet security. The objectives of this course are to :

- Develop effective verbal and non-verbal communication skills, active listening, speaking, and presentation skills. Understand the importance of feedback and improve interpersonal communication.
- Enhance self-awareness, self-regulation, and self-motivation. Learn time management, goal setting, and stress management techniques. Cultivate personal and professional growth mindsets.
- Understand the basics of Information and Communication Technology (ICT). Gain



proficiency in using digital tools and platforms for communication and productivity. Learn safe, responsible, and ethical use of ICT resources.

- Develop an entrepreneurial mindset and understanding of business fundamentals. Learn problem-solving, critical thinking, and innovation techniques. Understand financial literacy and risk management in business.
- Understand the importance of sustainable practices and environmental conservation. Learn about the green economy and green jobs. Promote sustainable development and eco-friendly initiatives.
- Master advanced document creation, formatting, and management skills. Learn to use templates, styles, tables, and images effectively. Understand document collaboration and review features.
- Learn advanced data analysis using Scenarios and Goal Seek, automate tasks with macros, and manage linked data across spreadsheets. Gain skills in securely sharing and reviewing spreadsheets for effective collaboration and feedback.
- Learn to design, create, and manage databases. Understand data querying, reporting, and relational database concepts. Develop skills in creating forms, reports, and managing data integrity.
- Understand workplace safety, health, and security protocols. Learn hazard identification, risk assessment, and emergency response planning. Promote a culture of health, safety, and well-being at the workplace.

These objectives are designed to provide comprehensive skills that enhance employability, personal development, and workplace readiness.

### **SALIENT FEATURES:**

This course equips students with essential skills for a Data Entry Operator role by focusing on advanced digital documentation, spreadsheet management, and database handling using LibreOffice tools. It enhances accuracy, speed, and data management capabilities while improving communication and ICT skills for efficient workplace interaction. The course promotes responsible digital practices, problem-solving, and critical thinking, ensuring readiness for data-centric tasks. Additionally, it emphasizes workplace safety, teaching health, safety, and emergency management protocols, essential for maintaining a secure and productive work environment.

### **SCHEME OF UNITS**

**Total Marks: 100 (Theory-50+Practical-50)**

This course is a planned sequence of instructions consisting of units meant for developing employability and vocational competencies of students of Class X opting for skill subject along with other subjects.

The unit-wise distribution of hours and marks for class X is as follows:

# CBSE | DEPARTMENT OF SKILL EDUCATION

## CURRICULUM FOR SESSION 2025-2026

### INFORMATION TECHNOLOGY (SUB. CODE – 402)

CLASS – X (SESSION 2025-2026)

	UNITS	NO. OF HOURS for Theory and Practical		MAX. MARKS for Theory and Practical
PART A	<b>Employability Skills</b>			
	Unit 1: Communication Skills-II	10		2
	Unit 2: Self-Management Skills-II	10		3
	Unit 3: ICT Skills-II	10		1
	Unit 4: Entrepreneurial Skills-II	15		3
	Unit 5: Green Skills-II	05		1
	<b>Total</b>	<b>50</b>		<b>10</b>
PART B	<b>SUBJECT SPECIFIC SKILLS</b>	<b>Theory</b>	<b>Practical</b>	<b>Marks</b>
	Unit 1: Digital Documentation (Advanced) using LibreOffice Writer	12	18	8
	Unit 2: Electronic Spreadsheet (Advanced) using LibreOffice Calc	15	23	10
	Unit 3: Database Management System using LibreOffice Base	18	27	12
	Unit 4: Maintain Healthy, Safe and Secure Working Environment	15	22	10
	<b>Total</b>	<b>60</b>	<b>90</b>	<b>40</b>
	<b>PRACTICAL WORK</b>			
PART C	<b>Practical Examination</b>			
	• Digital Documentation (Advanced) using LibreOffice Writer	5 Marks		20
	• Electronic Spreadsheet (Advanced) using LibreOffice Calc	5 Marks		
	• Database Management System using LibreOffice Base	10 Marks		
	• Viva Voce	10 Marks		10
	<b>Total</b>			<b>30</b>
PART D	<b>PROJECT WORK/FIELD VISIT:</b> Any Interdisciplinary Real World Case Study to be taken. Summarized data reports of same can be presented in base. Input should be taken using forms and output should be done using reports using base. Documentation of the case study should be presented using writer.			10
	<b>PORTFOLIO/ PRACTICAL FILE:</b> (Portfolio should contain printouts of the practical done using Writer, Calc and Base with minimum 5 problems of each)			10
	<b>Total</b>			<b>20</b>
	<b>GRAND TOTAL</b>	<b>200</b>		<b>100</b>

## **DETAILED CURRICULUM/ TOPICS:**

### **Part-A: EMPLOYABILITY SKILLS**

S. No.	Units	Duration in Hours
1.	Unit 1: Communication Skills-II	10
2.	Unit 2: Self-management Skills-II	10
3.	Unit 3: Information and Communication Technology Skills-I	10
4.	Unit 4: Entrepreneurial Skills-II	15
5.	Unit 5: Green Skills-II	05
	<b>TOTAL</b>	<b>50</b>

**Note:** The detailed curriculum/ topics to be covered under Part A: Employability Skills can be downloaded from CBSE website.

### **Part-B – SUBJECT SPECIFIC SKILLS**

- Unit 1: Digital Documentation (Advanced)
- Unit 2: Electronic Spreadsheet (Advanced)
- Unit 3: Database Management System
- Unit 4: Web Applications and Security

#### **Unit 1: Digital Documentation (Advanced) using LibreOffice Writer**

SUB UNIT	LEARNING OUTCOMES	THEORY	PRACTICAL
<b>Chapter 1: Introduction To Styles</b>	Learn to create, update, and apply various styles in Libre Office Writer for effective and consistent document formatting.	<ul style="list-style-type: none"><li>• Styles/ categories in Writer<ul style="list-style-type: none"><li>➤ Page</li><li>➤ Paragraph</li><li>➤ Character</li><li>➤ Frame</li><li>➤ List</li><li>➤ Table</li></ul></li><li>• Styles and Formatting</li><li>• Fill Format</li><li>• Creating a new style<ul style="list-style-type: none"><li>➤ From Selection method</li><li>➤ Drag and Drop method</li></ul></li><li>• Updating a new style</li><li>• Load style from template or document.</li><li>• Applying styles.</li></ul>	<ul style="list-style-type: none"><li>• <b>List Style Categories:</b> Open the Styles and Formatting window, list available style categories, and select one style from each.</li><li>• <b>Use Fill Format:</b> Apply a style to multiple areas of your document quickly using the Fill Format tool.</li><li>• <b>Create and Update a New Style:</b> Create a new style from selected text and update it by modifying its attributes.</li><li>• <b>Load a Style from a Template or Document:</b> Import and apply a style from a template or another document to your current work.</li><li>• <b>Create a New Style Using Drag-and-Drop:</b></li></ul>

SUB UNIT	LEARNING OUTCOMES	THEORY	PRACTICAL
			Create a new style by dragging and dropping formatted text into the Styles and Formatting panel.
<b>Chapter 2: Working with Images</b>	Able to insert, modify, and position images and drawing objects in a document, using various methods and options for effective document layout and formatting.	<ul style="list-style-type: none"> <li>Inserting an Image in a Document               <ul style="list-style-type: none"> <li>➤ Insert Image Option</li> <li>➤ Drag and Drop option</li> <li>➤ Copy and Paste method</li> <li>➤ Inserting an image by linking</li> </ul> </li> <li>Options to modify image using image toolbar, resize, crop and delete an image.</li> <li>Drawing Objects</li> <li>Creating drawing objects</li> <li>Setting or changing its properties.</li> <li>Resizing and grouping drawing objects.</li> <li>Positioning image in the text.</li> <li>Arrangement</li> <li>Anchoring</li> <li>Alignment</li> <li>Text Wrapping</li> </ul>	<ul style="list-style-type: none"> <li><b>Insert an Image:</b> Insert an image into a document using options such as Insert Image, Drag and Drop, Copy and Paste, and linking.</li> <li><b>Modify an Image:</b> Use the image toolbar to modify an image by resizing, cropping, and deleting it.</li> <li><b>Create Drawing Objects:</b> Create various drawing objects within your document.</li> <li><b>Set or Change Drawing Object Properties:</b> Adjust the properties of drawing objects, including color, line style, and fill.</li> <li><b>Resize and Group Drawing Objects:</b> Resize individual drawing objects and group multiple objects together for better document organization.</li> <li><b>Position the Image in the Text:</b> Adjust the image's position in the text using arrangement, anchoring, alignment, and text wrapping options.</li> </ul>
<b>Chapter 3: Advanced Features of Writer</b>	Acquire skills in creating, customizing, and managing a Table of Contents, using and editing templates, and tracking and reviewing changes in	<ul style="list-style-type: none"> <li>Table of contents</li> <li>Hierarchy of headings</li> <li>Creating a Table of Content (ToC)</li> <li>Customization of Table of Contents(ToC)</li> <li>Maintaining a Table of Contents(ToC)</li> </ul>	<ul style="list-style-type: none"> <li><b>Create a Table of Contents (ToC):</b> Generate and customize a Table of Contents in a document.</li> <li><b>Maintain a Table of Contents:</b> Update or delete the Table of Contents</li> <li><b>Use Templates:</b> Create,</li> </ul>

SUB UNIT	LEARNING OUTCOMES	THEORY	PRACTICAL
	documents effectively.	<ul style="list-style-type: none"> <li>Updating ToC</li> <li>Deleting ToC</li> <li>Using templates</li> <li>Creating a Template</li> <li>Using In-built/Saved Templates</li> <li>Using Online Templates</li> <li>Importing a Template</li> <li>Editing a Template</li> <li>Moving a Template</li> <li>Exporting a Template</li> <li>Applying Templates to a Blank Document</li> <li>Track Changes Feature</li> <li>Preparing a Document for Review</li> <li>Recording Changes</li> <li>Accepting and Rejecting Changes</li> <li>Adding Comments</li> <li>Deleting Comments</li> <li>Comparing Documents</li> </ul>	<p>import, and apply templates to a blank document, using in-built, saved, or online templates.</p> <ul style="list-style-type: none"> <li><b>Edit a Template:</b> Modify, move, and export an existing template.</li> <li><b>Track Changes:</b> Prepare a document for review by recording, accepting, or rejecting changes, and manage comments by adding or deleting them.</li> <li><b>Compare Documents:</b> Compare two versions of a document to identify and review differences.</li> </ul>

## Unit 2: Electronic Spreadsheet (Advanced) using LibreOffice Calc

SUB UNIT	LEARNING OUTCOMES	THEORY	PRACTICAL
<b>Chapter 4: Analyse data using scenarios and goal seek</b>	Learn skills in consolidating data, using groups and subtotals, performing what-if analysis and scenarios, and utilizing the Goal Seek tool for decision-making.	<ul style="list-style-type: none"> <li>Consolidating Data</li> <li>Groups and Subtotals</li> <li>What-if Scenarios</li> <li>What-if Analysis Tool</li> <li>Goal Seek</li> </ul>	<ul style="list-style-type: none"> <li><b>Use Consolidating Data:</b> Aggregate data from multiple sources into a single summary.</li> <li><b>Create Subtotals:</b> Apply subtotals to data groups to summarize and analyze information.</li> <li><b>Use “What-If” Scenarios:</b> Create and analyze different scenarios to forecast outcomes based on varying inputs.</li> <li><b>Use “What-If” Tools:</b> Use tools like Scenario Manager for detailed what-if analyses.</li> <li><b>Use Goal Seek and Solver:</b> Use Goal Seek to find specific input values needed to achieve a</li> </ul>

SUB UNIT	LEARNING OUTCOMES	THEORY	PRACTICAL
			desired result, and apply Solver for more complex problems.
<b>Chapter 5: Using Macros in Spreadsheet</b>	Develop skills in recording, running, creating, and organizing macros, and using them as functions for document automation.	<ul style="list-style-type: none"> <li>Recording a Macro</li> <li>Running a Macro</li> <li>Creating and Organising a Simple Macro</li> <li>Macro as a Function</li> </ul>	<ul style="list-style-type: none"> <li><b>Demonstrate the Use of a Macro Recorder:</b> Record a macro to automate repetitive tasks.</li> <li><b>Create a Simple Macro:</b> Develop a basic macro to perform a specific function.</li> <li><b>Use a Macro:</b> Execute an existing macro to automate tasks in a document.</li> <li><b>Pass Arguments to a Macro:</b> Provide arguments to a macro to customize its behavior.</li> <li><b>Pass the Arguments as Values:</b> Supply values as arguments to a macro for dynamic operation.</li> <li><b>Write Macros as Built-in Functions:</b> Create macros that function similarly to built-in functions for enhanced functionality.</li> <li><b>Access Cells Directly:</b> Write macros to directly manipulate cell data in spreadsheets.</li> <li><b>Sort Columns Using a Macro:</b> Develop and use a macro to sort columns in a spreadsheet.</li> </ul>
<b>Chapter 6: Linking Spreadsheet Data</b>	Learn to set up multiple sheets, create references and hyperlinks within and across documents, and link to external and registered data sources.	<ul style="list-style-type: none"> <li>Setting up multiple sheets.</li> <li>Creating reference to other sheets by using keyboard and mouse.</li> <li>Creating reference to another document by using keyboard and mouse.</li> <li>Hyperlinks to the Sheet</li> <li>Relative and Absolute Hyperlinks</li> <li>Creating Hyperlinks</li> </ul>	<ul style="list-style-type: none"> <li><b>Setup Multiple Sheets:</b> Insert and organize new sheets within a workbook.</li> <li><b>Create References to Other Sheets:</b> Use keyboard and mouse to create references between different sheets in a workbook.</li> <li><b>Create References to Other Documents:</b> Use keyboard and mouse to link data from one document to another.</li> <li><b>Create, Edit, and Remove Hyperlinks:</b> Add, modify, and delete hyperlinks to sheets within a workbook.</li> <li><b>Link to External Data:</b> Connect and import data from external sources into your document.</li> <li><b>Link to Registered Data Sources:</b> Establish links to registered data sources for data integration.</li> </ul>

SUB UNIT	LEARNING OUTCOMES	THEORY	PRACTICAL
		<ul style="list-style-type: none"> <li>• Editing a Hyperlink</li> <li>• Linking to External Data</li> <li>• Linking to Registered Data Sources</li> </ul>	
<b>Chapter 7: Share and Review a Spreadsheet</b>	Develop the ability to share, open, and save shared spreadsheets, track and review changes, and handle comments and merging for effective collaboration.	<ul style="list-style-type: none"> <li>• Sharing Spreadsheet</li> <li>• Opening and saving a shared spreadsheet.</li> <li>• Recording changes.</li> <li>• Add, Edit and Format the comments.</li> <li>• Reviewing Changes – View, Accept or Reject Changes</li> <li>• Merging and comparing.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Set Up a Spreadsheet for Sharing:</b> Configure a spreadsheet to enable sharing with others.</li> <li>• <b>Open and Save a Shared Spreadsheet:</b> Access and save changes to a spreadsheet that has been shared with you.</li> <li>• <b>Record Changes:</b> Track modifications made to the spreadsheet.</li> <li>• <b>Add, Edit, and Format Comments:</b> Insert, modify, and format comments within the spreadsheet.</li> <li>• <b>Review Changes:</b> View, accept, or reject changes made by others in the shared spreadsheet.</li> <li>• <b>Merge and Compare Sheets:</b> Combine and compare different sheets to integrate data effectively.</li> </ul>

## Unit 3: Database Management System using LibreOffice Base

SUB UNIT	LEARNING OUTCOMES	THEORY	PRACTICAL
<b>Chapter 8: Introduction to Database Management System</b>	Understand data and information concepts, the advantages of databases, various data models and key terminology and objects of relational database systems.	<ul style="list-style-type: none"> <li>• Data and Information</li> <li>• Databases and DBMS</li> <li>• Advantages of database,</li> <li>• Data Models                             <ul style="list-style-type: none"> <li>➤ Hierarchical Data Model</li> <li>➤ Network Data Model</li> <li>➤ Relational Data Model</li> </ul> </li> <li>• Relational database Model                             <ul style="list-style-type: none"> <li>➤ RDBS Terminology</li> <li>➤ Objects of an RDBMS</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <b>Identify Data and Information:</b> Distinguish between data and information within a database context.</li> <li>• <b>Identify Fields, Records, and Tables:</b> Recognize and describe fields, records, and tables in a database.</li> <li>• <b>Prepare a Sample Table:</b> Create a sample table with standard fields to illustrate database structure.</li> <li>• <b>Identify Different Types of Data Models:</b> Identify and describe various data models such as hierarchical, network, and relational.</li> <li>• <b>Different Types of Keys:</b> Recognize and explain different types of keys used in databases, such as primary and foreign keys.</li> <li>• <b>Identify Different Objects of RDBMS:</b> Identify and describe different objects in a relational database management system (RDBMS), including tables, queries, and forms.</li> </ul>
<b>Chapter 9: Starting with LibreOffice Base</b>	Learn to navigate LibreOffice Base, manage data types, create and save tables using various methods, set primary keys, and perform data entry, editing, sorting, and record deletion.	<ul style="list-style-type: none"> <li>• Introduction to LibreOffice Base</li> <li>• Data types</li> <li>• Starting with LibreOffice</li> <li>• User Interface Of LibreOffice Base</li> <li>• Opening a Database</li> <li>• Creating a Table                             <ul style="list-style-type: none"> <li>➤ Using a Wizard</li> <li>➤ Using design view,</li> </ul> </li> <li>• Setting primary key</li> <li>• Saving a Table</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Start LibreOffice Base and Observe the Main Window:</b> Launch LibreOffice Base and familiarize yourself with the main window's components.</li> <li>• <b>Create a Sample Table Using Wizard:</b> Use the wizard to create a sample table in any category.</li> <li>• <b>Create Different Tables from Available List:</b> Practice creating various tables by selecting fields from the available options.</li> <li>• <b>Assign Data Types and Set Primary Key:</b> Define data types for fields and set a primary key for the table.</li> <li>• <b>Edit the Table in Design View:</b> Modify the table structure using the design view.</li> <li>• <b>Enter Data in the Fields:</b> Input</li> </ul>



SUB UNIT	LEARNING OUTCOMES	THEORY	PRACTICAL
		<ul style="list-style-type: none"> <li>• Entering data into table</li> <li>• Navigating through the table</li> <li>• Editing Data</li> <li>• Deleting Records from Table</li> <li>• Sorting Data in the Table</li> </ul>	<p>data into the fields of your table.</p> <ul style="list-style-type: none"> <li>• <b>Delete Records from Table:</b> Remove records from the table as needed.</li> <li>• <b>Arrange Data in Ascending or Descending Order:</b> Sort the table data in ascending or descending order</li> </ul>
<b>Chapter 10: Working with Multiple Tables</b>	Develop skills in editing and deleting tables, creating and managing table relationships, and ensuring referential integrity.	<ul style="list-style-type: none"> <li>• Editing and Deleting tables,</li> <li>• Relationships between tables</li> <li>• Types of Relationships—one to one, one to many, many to many</li> <li>• Advantages of Relating Tables in a Database</li> <li>• Creating Relationships between Tables</li> <li>• Referential Integrity</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Insert Data in the Table:</b> Add new data entries to a table.</li> <li>• <b>Edit Records in the Table:</b> Modify existing records within the table.</li> <li>• <b>Delete Records from Table:</b> Remove specific records from the table.</li> <li>• <b>Sort Data in the Table:</b> Arrange data in ascending or descending order within the table.</li> <li>• <b>Create and Edit Relationships:</b> Establish and modify relationships between tables, including one-to-one, one-to-many, and many-to-many.</li> <li>• <b>Enter Various Field Properties:</b> Set and adjust different properties for fields in the table.</li> </ul>
<b>Chapter 11: Queries in Base</b>	Acquire skills in creating and editing queries using both wizards and design view, and working with numerical data in queries.	<ul style="list-style-type: none"> <li>• Queries</li> <li>• Query creation using wizard</li> <li>• Creation of query using design view</li> <li>• Editing a query,</li> <li>• Working with Numerical Data</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Prepare a Query for Given Criteria:</b> Create a query based on specified criteria.</li> <li>• <b>Create a Query Using Wizard and Design View:</b> Demonstrate how to generate a query using both the wizard and design view.</li> <li>• <b>Edit a Query:</b> Modify an existing query to update its criteria or structure.</li> <li>• <b>Apply Various Criteria in a Query:</b> Demonstrate applying different criteria in a query, including single field, multiple fields, and wildcard searches.</li> <li>• <b>Perform Calculations Using Query in Base:</b> Execute</li> </ul>

SUB UNIT	LEARNING OUTCOMES	THEORY	PRACTICAL
			calculations within a query in LibreOffice Base.
<b>Chapter 12: Forms and Reports</b>	Able to create and modify forms and reports in LibreOffice Base, use the Form Controls Toolbar, and insert additional controls, titles, headings, and date/time elements in reports.	<ul style="list-style-type: none"> <li>• Forms in BASE.</li> <li>• Creating form using wizard,</li> <li>• Modifying a Form</li> <li>• Form Controls Toolbar</li> <li>• Report in Base</li> <li>• Inserting other controls in report</li> <li>• Inserting Titles &amp; Headings</li> <li>• Inserting Date &amp; Time</li> <li>•</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Create a Form Using Form Wizard:</b> Generate a form by following the steps in the Form Wizard.</li> <li>• <b>Enter or Remove Data from Forms:</b> Input new data or delete existing data using forms.</li> <li>• <b>Modify Forms:</b> Demonstrate how to adjust and customize forms.</li> <li>• <b>Change Label and Background:</b> Modify the label text and background color or design of a form.</li> <li>• <b>Search Records Using a Form:</b> Use the form to find specific records based on search criteria.</li> <li>• <b>Insert and Delete Records Using Form View:</b> Add new records or remove existing ones through the Form View.</li> <li>• <b>Create a Report Using Report Wizard:</b> Illustrate the steps to generate a report using the Report Wizard.</li> <li>• <b>Demonstrate Various Report Examples:</b> Provide examples of different types of reports created using the Report Wizard.</li> </ul>

#### Unit 4: Maintain Healthy, Safe and Secure Working Environment

SUB UNIT	LEARNING OUTCOMES	THEORY	PRACTICAL
<b>Chapter 13. Health, Safety and Security at Workplace</b>	Understand workplace health, safety, and security policies, identify various hazards, and learn how to manage risks and maintain a safe working environment.	<ul style="list-style-type: none"> <li>• Introduction to Health, Safety, and Security At Workplace</li> <li>• Policies and Procedures for Healthy, Safety and Security</li> <li>• Reasons for Health, Safety, and Security Programs or Policies in the Workplace</li> <li>• Workplace Safety Hazards</li> <li>• Physical Hazards</li> <li>• Falling Off Heights, Slipping and Tripping</li> <li>• Electrical Hazards</li> <li>• Fire Hazards</li> <li>• Health Hazards</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Practice Basic Safety Rules:</b> Implement fire safety measures, prevent falls and slips, ensure electrical safety, and apply first aid procedures to protect workers and prevent accidents.</li> </ul>

SUB UNIT	LEARNING OUTCOMES	THEORY	PRACTICAL
		<ul style="list-style-type: none"> <li>• Potential Sources of Hazards in an Organisation</li> <li>• Hazards using Computers</li> <li>• Handling Office Equipment</li> <li>• Handling Objects</li> <li>• Stress at Work</li> <li>• Working Environment</li> <li>• Hazard Control</li> <li>• Safety Guidelines Checklist</li> </ul>	
<b>Chapter 14. Workplace Quality Measures</b>	Learn about air and water quality monitoring, office ergonomics, health and safety guidelines for computer use, and methods to reduce risks associated with musculoskeletal problems and other work-related issues.	<ul style="list-style-type: none"> <li>• Introduction</li> <li>• Air and Water Quality Monitoring Process</li> <li>• Guidelines for Clean Air and Clean Water</li> <li>• Importance of Cleanliness at Workplace</li> <li>• Office Ergonomics</li> <li>• Computer Health and Safety Tips</li> <li>• Musculoskeletal Problems: Occupational Overuse Syndrome, Strain in Legs and Feet, Eye Strain,</li> <li>• To reduce the risks of visual problems: Headaches, Obesity, Stress Disorders, Injuries from Laptop Use, Sleeping Problems</li> <li>• Health and Safety Requirements for Computer Workplace</li> <li>• Cautions while Working on the Computer</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Illustrate Handling Accidents at Workplace:</b> Demonstrate the steps to manage and respond to accidents in the workplace.</li> <li>• <b>Demonstrate Following Evacuation Plan:</b> Show how to effectively follow the evacuation plan and procedures during an emergency.</li> </ul>
<b>Chapter 15. Prevent Accidents and Emergencies</b>	Able to identify and handle accidents and emergencies, follow company policies, manage different types of accidents and emergencies, and apply fire safety and first aid procedures effectively.	<ul style="list-style-type: none"> <li>• Accident and Emergencies: <ul style="list-style-type: none"> <li>➤ Notice and Correctly Identify Accidents and Emergencies</li> <li>➤ Get help Promptly and in the Most Suitable Way</li> <li>➤ Follow Company Policies and Procedures for Preventing Further Injury While Waiting for Help to Arrive</li> <li>➤ Act within the Limits of your Responsibility and Authority when Accidents and Emergencies Arise,</li> <li>➤ Promptly Follow Instructions given by Senior Staff and the Emergency Services</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• <b>Identify Hazards and Sources of Hazards:</b> Recognize potential hazards and their sources in the workplace.</li> <li>• <b>Identify Problems at Workplace:</b> Assess workplace issues that could lead to accidents.</li> <li>• <b>Practice General Evacuation Procedures:</b> Execute evacuation</li> </ul>

SUB UNIT	LEARNING OUTCOMES	THEORY	PRACTICAL
		<ul style="list-style-type: none"> <li>• Types of Accidents               <ul style="list-style-type: none"> <li>➤ Trip and Fall</li> <li>➤ Slip and Fall</li> <li>➤ Injuries caused due to Escalators or Elevators (or lifts)</li> <li>➤ Accidents due to Falling of Goods</li> <li>➤ Accidents due to Moving Objects</li> </ul> </li> <li>• Handling Accidents:               <ul style="list-style-type: none"> <li>➤ Attend to the Injured Person Immediately,</li> <li>➤ Inform your Supervisor</li> <li>➤ Assist your Supervisor</li> </ul> </li> <li>• Types of Emergencies               <ul style="list-style-type: none"> <li>➤ First Aid,</li> <li>➤ Electrical Safety</li> <li>➤ Evacuation</li> </ul> </li> <li>• General Evacuation Procedures</li> <li>• Fire Hazards in the Workplace</li> <li>• Fire Prevention</li> <li>• Identification of Material and Ignition Sources</li> <li>• First Aid for Electrical Emergencies</li> <li>• Electrical Rescue Techniques</li> </ul>	procedures simulated emergency situations. in

### **ORGANISATION OF FIELD VISITS:**

In a year, at least 3 field visits/educational tours should be organised for the students to expose them to the activities in the workplace.

Visit a data entry centre and observe the following: Location, Site, Office building, Computer Systems, Tools and Equipment, Printer, Scanner. During the visit, students should obtain the following information from the owner or the supervisor of the Data Centre:

1. Data Entry Centre.
2. Computer Infrastructure.
3. Sitting Posture of data entry operators.
4. Assistive technology.
5. Man power engaged.
6. Total expenditure of Data Entry Centre.
7. Total annual income.
8. Profit/Loss (Annual).
9. Any other information.

### **LIST OF EQUIPMENT/ MATERIALS:**

The list given below is suggestive and an exhaustive list should be compiled from the feedback given by various by the teachers teaching the subject. Only basic tools, equipment and accessories should be procured by the Institution so that the routine tasks can be performed by the students regularly for practice and acquiring adequate practical experience.

<b>S. No.</b>	<b>ITEM NAME, DESCRIPTION &amp; SPECIFICATION</b>	<b>QUANTITY</b>
<b>A</b>	<b>HARDWARE</b>	
1.	Computer with latest configuration or minimum Pentium Processor with minimum 2GB RAM, 512 GB HDD, 17" LED Monitor, NIC Card 3 button Mouse, 105 keys key board and built-in speakers and mic.	15
2.	Laser Printer - Black	01
3.	Inkjet Printers (Colour and Black & White)	01
4.	Scanner	01
5.	Online UPS 5 KVA	01
6.	16 Port Switches	01
7.	Air Conditioner 1.5 tonne	02
8.	Telephone line (For Internet)	01
9.	Fire extinguisher	01
<b>B</b>	<b>SOFTWARE</b>	
1.	Operating System Linux and Windows	
2.	Anti-Virus Latest version	
3.	Productivity Suite, Example – Open Office, etc.	
<b>C</b>	<b>FURNITURE</b>	
1.	Class room chairs and desks	25
2.	Computer Tables	15
3.	Straight back revolving & adjustable chairs (Computer Chairs)	15
4.	Printer Tables	02
5.	Trainers Table	01
6.	Trainers Chair	01
7.	Steel cupboards drawer type	02
8.	Cabinet with drawer	01
9.	Steel Almira - big size	01
10.	Steel Almira- small size	01

**TEACHER'S/ TRAINER'S QUALIFICATIONS:**

Qualification and other requirements for appointment of teachers/trainers for teaching this subject, on contractual basis should be decided by the State/ UT. The suggestive qualifications and minimum competencies for the teacher should be as follows:

Qualification	Minimum Competencies	Age Limit
Diploma in Computer Science/ Information Technology <b>OR</b> Bachelor Degree in Computer Application/ Science/ Information Technology (BCA, B. Sc. Computer Science/ Information Technology) <b>OR</b> Graduate with PGDCA OR DOEACC A Level Certificate. The suggested qualification is the minimum criteria. However higher qualifications will also be acceptable.	<ul style="list-style-type: none"><li>• The candidate should have a minimum of 1 year of work experience in the same job role.</li><li>• S/He should be able to communicate in English and local language.</li><li>• S/He should have knowledge of equipment, tools, material, Safety, Health &amp; Hygiene.</li></ul>	<ul style="list-style-type: none"><li>• 18-37 years (as on Jan. 01 (year))</li><li>• Age relaxation to be provided as per Govt. rules</li></ul>

Teachers/Trainers form the backbone of Skill (Vocational) Education being imparted as an integral part of Rashtriya Madhyamik Shiksha *Abhiyan* (RMSA). They are directly involved in teaching of Skill (vocational) subjects and also serve as a link between the industry and the schools for arranging industry visits, On-the-Job Training (OJT) and placement.

These guidelines have been prepared with an aim to help and guide the States in engaging quality Teachers/Trainers in the schools. Various parameters that need to be looked into while engaging the Vocational Teachers/Trainers are mode and procedure of selection of Teachers/Trainers, Educational Qualifications, Industry Experience and Certification/ Accreditation.

The State may engage Teachers/Trainers in schools approved under the component of scheme of Vocationalisation of Secondary and Higher Secondary Education under RMSA in following ways:

- (i) Directly as per the prescribed qualifications and industry experience suggested by the PSS Central Institute of Vocational Education (PSSCIVE), NCERT or the respective Sector Skill Council (SSC).

**OR**

- (ii) Through accredited Vocational Training Providers accredited under the National Quality Assurance Framework (NQAF\*) approved by the National Skill Qualification Committee on 21.07.2016. If the State is engaging Vocational Teachers/Trainers through the Vocational Training Provider (VTP), it should ensure that VTP should have been accredited at NQAF Level 2 or higher.

*\* The National Quality Assurance Framework (NQAF) provides the benchmarks or quality criteria which the different organizations involved in education and training must meet in order to be accredited by competent bodies to provide government- funded education and training/skills activities. This is applicable to all organizations offering NSQF-compliant qualifications.*

The educational qualifications required for being a Teacher/Trainer for a particular job role are clearly mentioned in the curriculum for the particular NSQF compliant job role. The State should ensure that teachers/ trainers deployed in the schools have relevant technical competencies for the NSQF qualification being delivered. Teachers/Trainers preferably should be certified by the concerned Sector Skill Council for the particular Qualification Pack/Job role which S/he will be teaching. Copies of relevant certificates and/or record of experience of the teacher/trainer in the industry should be kept as record.

To ensure the quality of the Teachers/Trainers, the State should ensure that a standardized procedure for selection of (Vocational) Teachers/Trainers is followed. The selection procedure should consist of the following:

- (i) Written test for the technical/domain specific knowledge related to the sector;
- (ii) Interview for assessing the knowledge, interests and aptitude of trainer through a panel of experts from the field and state representatives; and
- (iii) Practical test/mock test in classroom/workshop/laboratory.

In case of appointment through VTPs, the selection may be done based on the above procedure by a committee having representatives of both the State Government and the VTP.

The State should ensure that the Teachers/ Trainers who are recruited should undergo induction training of 20 days for understanding the scheme, NSQF framework and Vocational Pedagogy before being deployed in the schools.

The State should ensure that the existing trainers undergo in-service training of 5 days every year to make them aware of the relevant and new techniques/approaches in their sector and understand the latest trends and policy reforms in vocational education.

The Head Master/Principal of the school where the scheme is being implemented should facilitate and ensure that the (Vocational) Teachers/Trainers:

- Prepare session plans and deliver sessions which have a clear and relevant purpose and which engage the students;
- Deliver education and training activities to students, based on the curriculum to achieve the learning outcomes;
- Make effective use of learning aids and ICT tools during the classroom sessions;
- Engage students in learning activities, which include a mix of different methodologies, such as project based work, team work, practical and simulation based learning experiences;
- Work with the institution's management to organise skill demonstrations, site visits, on job trainings, and presentations for students in cooperation with industry, enterprises and other workplaces;
- Identify the weaknesses of students and assist them in up-gradation of competency;
- Cater to different learning styles and level of ability of students;
- Assess the learning needs and abilities, when working with students with different abilities
- Identify any additional support the student may need and help to make special arrangements for that support;
- Provide placement assistance

Assessment and evaluation of (Vocational) Teachers/Trainers is very critical for making them aware of their performance and for suggesting corrective actions. The States/UTs should ensure that the performance of the (Vocational) Teachers/Trainers is appraised annually. Performance

based appraisal in relation to certain pre-established criteria and objectives should be done periodically to ensure the quality of the (Vocational) Teachers/Trainers.

Following parameters may be considered during the appraisal process:

- Participation in guidance and counseling activities conducted at Institutional, District and State level;
- Adoption of innovative teaching and training methods;
- Improvement in result of vocational students of Class X or Class XII;
- Continuous up-gradation of knowledge and skills related to the vocational pedagogy, communication skills and vocational subject;
- Membership of professional society at District, State, Regional, National and International level;
- Development of teaching-learning materials in the subject area;
- Efforts made in developing linkages with the Industry/Establishments;
- Efforts made towards involving the local community in Vocational Education
- Publication of papers in National and International Journals;
- Organisation of activities for promotion of vocational subjects;
- Involvement in placement of students/student support services.

### **CAREER OPPORTUNITIES:**

The job of a data entry operator/ analyst is to work for a wide variety of public and private organisations. A data entry operator/analyst is responsible to input data in a quick and efficient manner, create data storage and should possess knowledge about the methods for recovering useful data when needed, organizing and analyzing data in a clear and effective way, navigating computer and database systems proficiently, editing and preparing reports based on the information they have put into the system. They also help the organisations to keep up with recording and analyzing the abundance of information received on a daily basis.

**Some of the top sectors that require a data entry operator/analyst are listed below:**

- Banks and Public Sector
- Marketing Companies
- Accounting Companies
- Human Resources
- Corporate Businesses
- MNCs
- Study Centers
- Schools and Universities
- Hospitals or Healthcare Service Providers
- Insurance Firms
- Small-scale Businesses

### **VERTICAL MOBILITY**

- Students can pursue Polytechnic/Diploma/Certificate courses in IT fields.
- Can work as DEO
- Data Entry/Analysis work from home for different companies



# **CBSE | DEPARTMENT OF SKILL EDUCATION**

## **CURRICULUM FOR SESSION 2025-2026**

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### **ARTIFICIAL INTELLIGENCE (SUB. CODE 417)**

#### **CLASS – IX**

#### **OBJECTIVES OF THE COURSE:**

The objective of this module/curriculum - which combines both Inspire and Acquire modules is to develop a readiness for understanding and appreciating Artificial Intelligence and its application in our lives. This module/curriculum focuses on:

1. Helping learners understand the world of Artificial Intelligence and its applications through games, activities and multi-sensorial learning to become AI-Ready.
2. Introducing the learners to three domains of AI in an age-appropriate manner.
3. Allowing the learners to construct the meaning of AI through interactive participation and engaging hands-on activities.
4. Revisiting AI domains, project cycle and Ethics
5. Introducing the learners to the importance of Math for AI, data literacy and generative AI
6. Introducing the learners to programming skills - Basic python coding language.

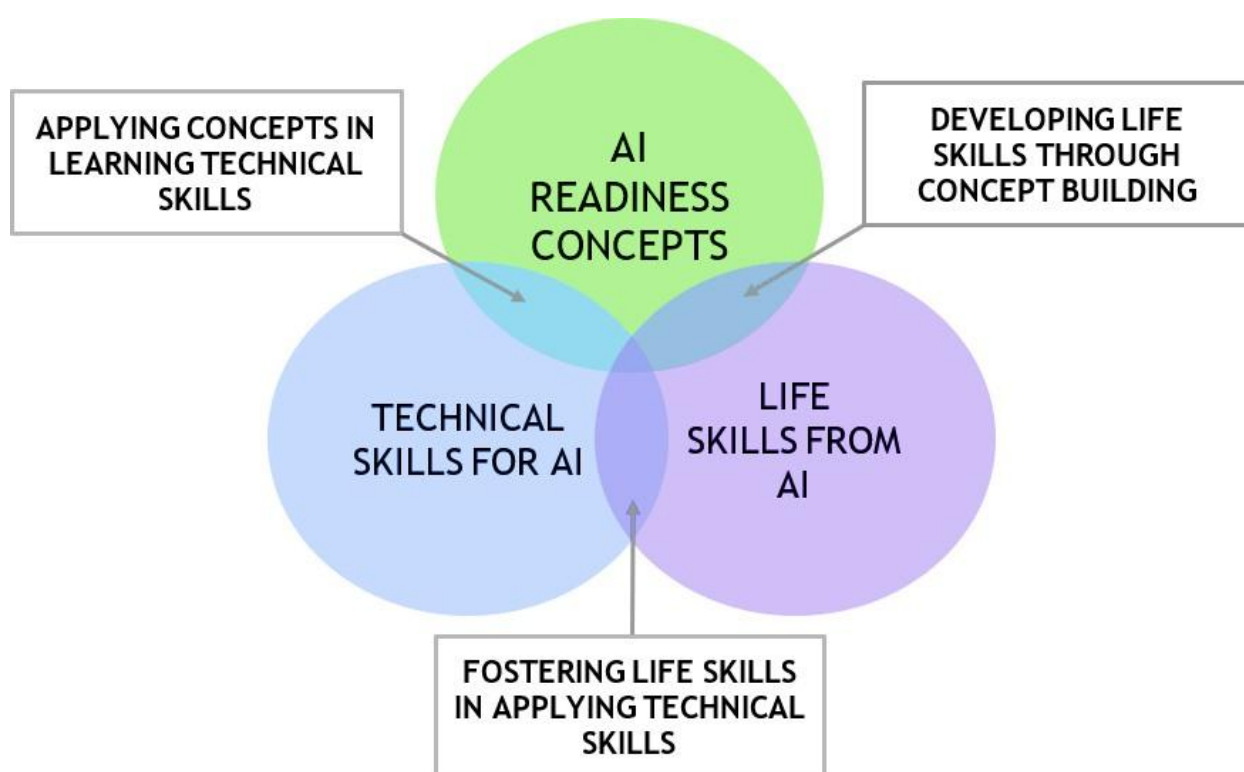
#### **LEARNING OUTCOMES:**

Learners will be able to

1. Identify and appreciate Artificial Intelligence and describe its applications in daily life.
2. Relate, apply and reflect on the Human-Machine Interactions to identify and interact with the three domains of AI: Data, Computer Vision and Natural Language Processing and Undergo assessment for analysing their progress towards acquired AI-Readiness skills.
3. Imagine, examine and reflect on the skills required for futuristic job opportunities.
4. Unleash their imagination towards smart homes and build an interactive story around it.
5. Understand the impact of Artificial Intelligence on Sustainable Development Goals to develop responsible citizenship.
6. Research and develop awareness of skills required for jobs of the future.
7. Gain awareness about AI bias and AI access and describe the potential ethical considerations of AI.
8. Develop effective communication and collaborative work skills.
9. Get familiar and motivated towards Artificial Intelligence and Identify the AI Project Cycle framework.
10. Learn problem scoping and ways to set goals for an AI project and understand the iterative nature of problem scoping in the AI project cycle.

11. Brainstorm on the ethical issues involved around the problem selected.
12. Foresee the kind of data required and the kind of analysis to be done, identify data requirements and find reliable sources to obtain relevant data.
13. Use various types of graphs to visualize acquired data.
14. Understand types of modeling.
15. Understand the importance of Math for AI.
16. Learn the concept of data literacy and generative AI
17. Acquire introductory Python programming skills in a very user-friendly format.

### **SKILLS TO BE DEVELOPED:**



### **SCHEME OF STUDIES:**

This course is a planned sequence of instructions consisting of units meant for developing employability and vocational competencies of students of Class IX opting for skill subject along with other education subjects.

The unit-wise distribution of hours and marks for class IX & X is as follows:

# ARTIFICIAL INTELLIGENCE (SUBJECT CODE 417)

## CLASS – IX (SESSION 2025-2026)

Total Marks: 100 (Theory-50 + Practical-50)

	UNITS	NO. OF HOURS for Theory and Practical		MAX. MARKS for Theory and Practical
PART A	<b>Employability Skills</b>			
	Unit 1: Communication Skills-I	10		2
	Unit 2: Self-Management Skills-I	10		2
	Unit 3: ICT Skills-I	10		2
	Unit 4: Entrepreneurial Skills-I	15		2
	Unit 5: Green Skills-I	05		2
	<b>Total</b>	<b>50</b>		<b>10</b>
PART B	<b>Subject Specific Skills</b>			
		<b>Theory</b>	<b>Practical</b>	
	Unit 1: AI Reflection, Project Cycle and Ethics	30	25	10
	Unit 2: Data Literacy	22	28	10
	Unit 3: Math for AI (Statistics & Probability)	12	13	07
	Unit 4: Introduction to Generative AI	08	12	05
	Unit 5: Introduction to Python	01	09	08
	<b>Total</b>	<b>160</b>		<b>40</b>
PART C	<b>Practical Work</b>			
	Unit 5: Introduction to Python <b>Practical File (minimum 15 programs)</b>			15
	<b>Practical Examination</b> <ul style="list-style-type: none"> <li>Simple programs using input and output function</li> <li>Variables, Arithmetic Operators, Expressions, Data Types</li> <li>Flow of control and conditions</li> <li>Lists</li> </ul> <b>* Any 3 programs based on the above topics</b>			15
	Viva Voce			5
	<b>Total</b>			<b>35</b>
PART D	<b>Project Work / Field Visit / Student Portfolio</b> <b>* relate it to Sustainable Development Goals</b>			15
	<b>Total</b>			<b>15</b>
	<b>GRAND TOTAL</b>	<b>210</b>		<b>100</b>

## DETAILED CURRICULUM/TOPICS FOR CLASS IX:

### **PART-A: EMPLOYABILITY SKILLS**

S. No.	Units	Duration in Hours
1.	Unit 1: Communication Skills-I	10
2.	Unit 2: Self-management Skills-I	10
3.	Unit 3: Information and Communication Technology Skills-I	10
4.	Unit 4: Entrepreneurial Skills-I	15
5.	Unit 5: Green Skills-I	05
	<b>TOTAL</b>	<b>50</b>

**NOTE:** Detailed curriculum/ topics to be covered under Part A: Employability Skills can be downloaded from CBSE website.

### **PART-B – SUBJECT SPECIFIC SKILLS**

- ❖ Unit 1: AI Reflection, Project Cycle and Ethics
- ❖ Unit 2: Data Literacy
- ❖ Unit 3: Math for AI (Statistics & Probability)
- ❖ Unit 4: Introduction to Generative AI
- ❖ Unit 5: Introduction to Python

### **UNIT 1: AI REFLECTION, PROJECT CYCLE AND ETHICS**

SUB-UNIT	LEARNING OUTCOMES	SESSION / ACTIVITY / PRACTICAL
<b>AI Reflection</b>	To identify and appreciate Artificial Intelligence and describe its applications in daily life.	Session: Introduction to AI and setting up the context of the curriculum <ul style="list-style-type: none"><li>Recommended Activity: Make a statement about lighting and LUIS will interpret and adjust the house accordingly <a href="https://aidemos.microsoft.com/luis/demo">https://aidemos.microsoft.com/luis/demo</a></li></ul>
	To recognize, engage and relate with the three realms of AI: , Computer Vision, Data Statistics and Natural Language Processing.	Recommended Activity: The AI Game <ul style="list-style-type: none"><li>Learners to participate in three games based on different AI domains.<ul style="list-style-type: none"><li>Game 1: Rock, Paper and Scissors (based on data) <a href="https://next.rockpaperscissors.ai/">https://next.rockpaperscissors.ai/</a></li><li>Game 2: Semantris (based on Natural Language Processing - NLP) <a href="https://research.google.com/semantris/">https://research.google.com/semantris/</a></li><li>Game 3: Quick Draw (based on Computer Vision - CV) <a href="https://quickdraw.withgoogle.com/">https://quickdraw.withgoogle.com/</a></li></ul></li></ul>

SUB-UNIT	LEARNING OUTCOMES	SESSION / ACTIVITY / PRACTICAL
<b>AI PROJECT CYCLE</b>	Identify the AI Project Cycle framework.	Session: Introduction to AI Project Cycle <ul style="list-style-type: none"> <li>• Problem Scoping</li> <li>• Data Acquisition</li> <li>• Data Exploration</li> <li>• Modeling</li> <li>• Evaluation</li> <li>• Deployment</li> </ul>
	Learn problem scoping and ways to set goals for an AI project.	Session: Problem Scoping Activity: Brainstorm around the theme provided and set a goal for the AI project. <ul style="list-style-type: none"> <li>• Discuss various topics within the given theme and select one.</li> <li>• Fill in the 4Ws problem canvas and a problem statement to learn more about the problem identified in the community/ society</li> <li>• List down/ Draw a mind map of problems related to the selected topic and choose one problem to be the goal for the project.</li> </ul>
	Identify stakeholders involved in the problem scoped. Brainstorm on the ethical issues involved around the problem selected.	<ul style="list-style-type: none"> <li>• Activity: To set actions around the goal.</li> <li>• List down the stakeholders involved in the problem.</li> <li>• Search on the current actions taken to solve this problem.</li> <li>• Think around the ethics involved in the goal of your project.</li> </ul>
	Understand the iterative nature of problem scoping for in the AI project cycle. Foresee the kind of data required and the kind of analysis to be done.	Activity: Data and Analysis <ul style="list-style-type: none"> <li>• What are the data features needed?</li> <li>• How will the features collected affect the problem?</li> <li>• Where can you get the data?</li> <li>• How frequent do you have to collect the data?</li> <li>• What happens if you don't have enough data?</li> <li>• What kind of analysis needs to be done?</li> <li>• How will it be validated?</li> <li>• How does the analysis inform the action?</li> </ul>
	Share what the students have discussed so far.	Presentation: Presenting the goal, actions and data. Teamwork Activity: <ul style="list-style-type: none"> <li>• Brainstorming solutions for the problem statement.</li> </ul>
	Identify data requirements and find reliable sources to obtain relevant data.	Session: Data Acquisition Activity: Introduction to data and its types. <ul style="list-style-type: none"> <li>• Students work around the scenarios given to them and think of ways to acquire data.</li> </ul> Activity: Data Features <ul style="list-style-type: none"> <li>• Identifying the possible data features affecting the problem.</li> </ul> Activity: System Maps <ul style="list-style-type: none"> <li>• Creating system maps considering data features identified.</li> </ul>

SUB-UNIT	LEARNING OUTCOMES	SESSION / ACTIVITY / PRACTICAL
	To understand the purpose of Data Visualisation	Session: Data Exploration/ Data Visualisation <ul style="list-style-type: none"> <li>Need of visualising data</li> <li>Ways to visualise data using various types of graphical tools.</li> </ul> Quiz Time
	Use various types of graphs to visualise acquired data.	Recommended Activities: Let's use Graphical Tools <ul style="list-style-type: none"> <li>Selecting an appropriate graphical format and presenting the graph sketched.</li> <li>Understanding graphs using <a href="https://datavizcatalogue.com/">https://datavizcatalogue.com/</a></li> <li>Listing of newly learnt data visualization techniques.</li> <li>Top 10 Song Prediction: Identify the data features, collect the data and convert into graphical representation.</li> <li>Collect and store data in a spreadsheet and create some graphical representations to understand the data effectively.</li> </ul>
	Understand modeling (Rule-based & Learning-based)	Session: Modeling <ul style="list-style-type: none"> <li>Introduction to modeling and types of models (Rule-based &amp; Learning-based)</li> </ul>
	Understand various evaluation techniques.	Session: Evaluation <p>Learners will understand about new terms</p> <ul style="list-style-type: none"> <li>True Positive</li> <li>False Positive</li> <li>True Negative</li> <li>False Negative</li> </ul>
	Challenge students to think about how they can apply their knowledge of deployment in future AI projects and encourage them to continue exploring different deployment methods.	Session: Deployment <p>Recommended Case Study: Preventable Blindness.</p> <p>Activity: Implementation of AI project cycle to develop an AI Model for Personalized Education.</p>
	To understand and reflect on the ethical issues around AI.	Session: Ethics <p>Video Session: Discussing about AI Ethics</p> <p>Recommended Activity: Ethics Awareness</p> <ul style="list-style-type: none"> <li>Students play the role of major stakeholders, and they have to decide what is ethical and what is not for a given scenario.</li> <li>Students to explore Moral Machine (<a href="https://www.moralmachine.net/">https://www.moralmachine.net/</a>) to understand more about the impact of ethical concerns</li> </ul>
	To gain awareness around AI bias and AI access.	Session: AI Bias and AI Access <ul style="list-style-type: none"> <li>Discussing about the possible bias in data collection</li> <li>Discussing about the implications of AI technology</li> </ul>

SUB-UNIT	LEARNING OUTCOMES	SESSION / ACTIVITY / PRACTICAL
	To let the students analyse the advantages and disadvantages of Artificial Intelligence.	<p>Recommended Activity: Balloon Debate</p> <ul style="list-style-type: none"> <li>Students divide in teams of 3 and 2 teams are given same theme. One team goes in affirmation to AI for their section while the other one goes against it.</li> <li>They have to come up with their points as to why AI is beneficial/ harmful for the society.</li> </ul>

## UNIT 2: DATA LITERACY:

SUB-UNIT	LEARNING OUTCOMES	SESSION / ACTIVITY / PRACTICAL
<b>Basics of data literacy</b>	<ul style="list-style-type: none"> <li>Define data literacy and recognize its importance</li> <li>Understand how data literacy enables informed decision-making and critical thinking</li> <li>Apply the Data Literacy Process Framework to analyze and interpret data effectively</li> <li>Differentiate between Data Privacy and Security</li> <li>Identify potential risks associated with data breaches and unauthorized access.</li> <li>Learn measures to protect data privacy and enhance data security</li> </ul>	<p>Session: Basics of data literacy</p> <ul style="list-style-type: none"> <li>Introduction to Data Literacy</li> <li>Impact of data Literacy</li> <li>How to become Data Literate?</li> <li>What are data security and privacy? How are they related to AI?</li> <li>Best Practices for Cyber Security</li> </ul> <p>Recommended Activity: Impact of News Articles</p> <p>Reference Videos:</p> <ul style="list-style-type: none"> <li><a href="https://www.youtube.com/watch?v=yhO_t-c3yJY">https://www.youtube.com/watch?v=yhO_t-c3yJY</a></li> <li><a href="https://www.youtube.com/watch?v=aO858HyFbKI">https://www.youtube.com/watch?v=aO858HyFbKI</a></li> <li><a href="https://www.cbse.gov.in/cbsenew/documents/Cyber%20Safety.pdf">https://www.cbse.gov.in/cbsenew/documents/Cyber%20Safety.pdf</a></li> </ul>
<b>Acquiring Data, Processing, and Interpreting Data</b>	<ul style="list-style-type: none"> <li>Determine the best methods to acquire data.</li> <li>Classify different types of data and enlist different methodologies to acquire it.</li> <li>Define and describe data interpretation.</li> <li>Enlist and explain the different methods of data interpretation.</li> <li>Recognize the types of data interpretation.</li> <li>Realize the importance of data interpretation</li> </ul>	<p>Session: Acquiring Data, Processing, and Interpreting Data</p> <ul style="list-style-type: none"> <li>Types of data</li> <li>Data Acquisition/Acquiring Data</li> <li>Best Practices for Acquiring Data</li> <li>Features of data and Data Preprocessing</li> <li>Data Processing and Data Interpretation</li> <li>Types of Data Interpretation</li> <li>Importance of Data Interpretation</li> </ul> <p>Recommended Activities:</p> <ul style="list-style-type: none"> <li>Trend analysis</li> <li>Visualize and Interpret Data</li> </ul>
<b>Project Interactive Data Dashboard &amp; Presentation</b>	<ul style="list-style-type: none"> <li>Recognize the importance of data visualization</li> <li>Discover different methods of data visualization</li> </ul>	<p>Session: Project Interactive Data Dashboard &amp; Presentation</p> <ul style="list-style-type: none"> <li>Data visualization Using Tableau</li> </ul> <p>Reference Links</p> <ul style="list-style-type: none"> <li><a href="https://public.tableau.com/en-us/s/download">https://public.tableau.com/en-us/s/download</a></li> <li><a href="https://www.datawrapper.de/">https://www.datawrapper.de/</a></li> </ul> <p>Video Links:</p> <ul style="list-style-type: none"> <li><a href="https://www.youtube.com/watch?v=NL_CzpPRCc7U">https://www.youtube.com/watch?v=NL_CzpPRCc7U</a></li> <li><a href="https://www.youtube.com/watch?v=M_8BnosAD78">https://www.youtube.com/watch?v=M_8BnosAD78</a></li> </ul>

### UNIT 3: MATH FOR AI (Statistics & Probability)

SUB-UNIT	LEARNING OUTCOMES	SESSION / ACTIVITY / PRACTICAL
<b>Importance of Math for AI</b>	Analyzing the data in the form of numbers/images and find the relation/pattern between the them. Use of Math in AI.	Session: Importance of Math for AI <ul style="list-style-type: none"> <li>Finding Patterns in Numbers and images.</li> <li>Uses of Math - <ul style="list-style-type: none"> <li>Statistics</li> <li>Linear Algebra</li> <li>Probability</li> <li>Calculus</li> </ul> </li> </ul>
	Number Patterns Picture Analogy	Activity: <ul style="list-style-type: none"> <li>observe the number pattern and find the missing number.</li> <li>To find connections between sets of images and use that to solve problems,</li> </ul>
<b>Statistics</b>	Understand the concept of Statistics in real life.	Session : <ul style="list-style-type: none"> <li>Definition of Statistics</li> <li>Applications <ul style="list-style-type: none"> <li>Disaster Management</li> <li>Sports</li> <li>Diseases Prediction</li> <li>Weather Forecast</li> </ul> </li> </ul>
	Application in various real life scenarios	Activity: Uses of Statistics in daily life <ul style="list-style-type: none"> <li>Students will explore the applications of statistics in real life .They collect data and can apply various statistical measures to analyze the data.</li> </ul> Activity:Car Spotting and Tabulating Purpose:To implement the concept of data collection , analysis and interpretation. Activity Introduction: <ul style="list-style-type: none"> <li>In this activity, Students will be engaged in data collection and tabulation.</li> <li>Data collection plays a key role in Artificial Intelligence as it forms the basis of statistics and interpretation by AI.</li> <li>This activity will also require students to answer a set of questions based on the recorded data.</li> </ul>
<b>Probability</b>	Understand the concept of Probability in real life and explore various types of events.	Session: Introduction to Probability <ul style="list-style-type: none"> <li>How to calculate the probability of an event</li> <li>Types of events</li> <li>understand the concept of Probability using a relatable example.</li> </ul> Exercise: Identify the type of event.
	Application in various real-life scenarios	Session: Applications of Probability <ul style="list-style-type: none"> <li>Sports</li> <li>Weather Forecast</li> <li>Traffic Estimation</li> </ul> Exercise: Revision time



#### UNIT 4: INTRODUCTION TO GENERATIVE AI:

LEARNING OUTCOMES	SESSION / ACTIVITY / PRACTICAL
Students will be able to define Generative AI & classify different kinds.	Recommended Activity: <ul style="list-style-type: none"><li>Activity: Guess the Real Image vs. the AI-generated image</li></ul>
<ul style="list-style-type: none"><li>Students will be able to explain how Generative AI works and recognize how it learns.</li><li>Applying Generative AI tools to create content.</li><li>Understanding the ethical considerations of using Generative AI.</li></ul>	Session: <ul style="list-style-type: none"><li>Introduction to Generative AI</li><li>Generative AI vs Conventional AI</li></ul>
	Session: <ul style="list-style-type: none"><li>Types of Generative AI</li><li>Examples of Generative AI</li></ul>
	Session: <ul style="list-style-type: none"><li>Benefits of using Generative AI</li><li>Limitations of using Generative AI</li></ul>
	Recommended Activities: <ul style="list-style-type: none"><li>Hands-on Activity: GAN Paint</li><li>Generative AI tools</li></ul>
	Session: <ul style="list-style-type: none"><li>Ethical considerations of using Generative AI</li></ul>

#### UNIT 5: INTRODUCTION TO PYTHON:

LEARNING OUTCOMES	SESSION / ACTIVITY / PRACTICAL
Learn basic programming skills through gamified platforms.	Recommended Activity: <ul style="list-style-type: none"><li>Introduction to programming using Online Gaming portals like Code Combat.</li></ul>
Acquire introductory Python programming skills in a very user-friendly format.	Session: <ul style="list-style-type: none"><li>Introduction to Python language</li><li>Introducing python programming and its applications</li></ul>
	Theory + Practical: Python Basics <ul style="list-style-type: none"><li>Students go through lessons on Python Basics (Variables, Arithmetic Operators, Expressions, Comparison Operators, logical operators, Assignment Operators, Data Types - integer, float, strings, type conversion, using print() and input() functions)</li><li>Students will try some simple problem-solving exercises on Python Compiler.</li></ul>
	Practical: Flow of control and conditions <ol style="list-style-type: none"><li>Students go through lessons on conditional and iterative statements (if, for and while)</li><li>Students will try some basic problem-solving exercises using conditional and iterative statements on Python Compiler.</li></ol>
	Practical: Python Lists <ol style="list-style-type: none"><li>Students go through lessons on Python Lists (Simple operations using list)</li><li>Students will try some basic problem-solving exercises using lists on Python Compiler.</li></ol>

**UNIT 5: INTRODUCTION TO PYTHON: Suggested Program List**

<p><b>PRINT</b></p>	<ul style="list-style-type: none"> <li>• To print personal information like Name, Father's Name, Class, School Name.</li> <li>• To print the following patterns using multiple print commands-                             <div> </div> </li> <li>• To find square of number 7</li> <li>• To find the sum of two numbers 15 and 20.</li> <li>• To convert length given in kilometers into meters.</li> <li>• To print the table of 5 up to five terms.</li> <li>• To calculate Simple Interest if the principle_amount = 2000 rate_of_interest = 4.5 time = 10</li> </ul>
<p><b>INPUT</b></p>	<ul style="list-style-type: none"> <li>• To calculate Area and Perimeter of a rectangle</li> <li>• To calculate Area of a triangle with Base and Height</li> <li>• To calculating average marks of 3 subjects</li> <li>• To calculate discounted amount with discount %</li> <li>• To calculate Surface Area and Volume of a Cuboid</li> </ul>
<p><b>LIST</b></p>	<ul style="list-style-type: none"> <li>• Create a list in Python of children selected for science quiz with following names- Arjun, Sonakshi, Vikram, Sandhya, Sonal, Isha, Kartik Perform the following tasks on the list in sequence-                             <ul style="list-style-type: none"> <li>◦ Print the whole list</li> <li>◦ Delete the name "Vikram" from the list</li> <li>◦ Add the name "Jay" at the end</li> <li>◦ Remove the item which is at the second position.</li> </ul> </li> <li>• Create a list num=[23,12,5,9,65,44]                             <ul style="list-style-type: none"> <li>◦ print the length of the list</li> <li>◦ print the elements from second to fourth position using positive indexing</li> <li>◦ print the elements from position third to fifth using negative indexing</li> </ul> </li> <li>• Create a list of first 10 even numbers, add 1 to each list item and print the final list.</li> <li>• Create a list List_1=[10,20,30,40]. Add the elements [14,15,12] using extend function. Now sort the final list in ascending order and print it.</li> </ul>

<b>IF, FOR, WHILE</b>	<ul style="list-style-type: none"> <li>• Program to check if a person can vote</li> <li>• To check the grade of a student</li> <li>• Input a number and check if the number is positive, negative or zero and display an appropriate message</li> <li>• To print first 10 natural numbers</li> <li>• To print first 10 even numbers</li> <li>• To print odd numbers from 1 to n</li> <li>• To print sum of first 10 natural numbers</li> <li>• Program to find the sum of all numbers stored in a list</li> </ul>
<b>Important Links</b>	<ul style="list-style-type: none"> <li>• <a href="https://cbseacademic.nic.in/web_material/Curriculum21/publication/secondary/Python_Content_Manual.pdf">https://cbseacademic.nic.in/web_material/Curriculum21/publication/secondary/Python_Content_Manual.pdf</a></li> <li>• <a href="https://drive.google.com/drive/folders/1qRAckDcuIA5i164OUFDIilxb8mT65MMb">https://drive.google.com/drive/folders/1qRAckDcuIA5i164OUFDIilxb8mT65MMb</a></li> </ul>

#### **PART-D: Project Work / Field Visit / Student Portfolio**

**\* relate it to Sustainable Development Goals**

#### **Suggested Projects/ Field Visit / Portfolio (Any one has to be done)**

<b>Suggested Projects</b>	<ol style="list-style-type: none"> <li>1. Create an AI Model using tools like- <ul style="list-style-type: none"> <li>◦ Teachable Machine (<a href="https://teachablemachine.withgoogle.com/">https://teachablemachine.withgoogle.com/</a>)</li> <li>◦ Machine Learning For Kids (<a href="https://machinelearningforkids.co.uk/">https://machinelearningforkids.co.uk/</a>)</li> </ul> </li> <li>2. Choose an issue that pertains to the objectives of sustainable development and carry out the actions listed below. <ul style="list-style-type: none"> <li>◦ To understand more about the problem identified, create a 4Ws problem canvas.</li> <li>◦ Identify the data features and create a system map to understand relationship between them</li> <li>◦ Visualize the data collected graphically (Spreadsheet software to be used store and visualize the data)</li> <li>◦ Suggest an AI enabled solution to it (Prototype/Research Work)</li> </ul> </li> </ol>
<b>Suggested Field Visit</b>	Visit to an industry or IT company or any other place that is creating or using AI applications and present the report for the same. Visit can be on physical or virtual mode.
<b>Suggested Student Portfolio</b>	Maintaining a record of all AI activities and projects (For Example Letter to Future self, Smart Home Floor Plan, Future Job Advertisement, Research Work on AI for SDGs and AI in Different Sectors, 4Ws canvas, System Map). (Minimum 5 Activities)

**LIST OF ITEMS/ EQUIPMENTS (MINIMUM REQUIREMENTS):**

The equipment / materials listed below are required to conduct effective hands-on learning sessions while delivering the AI curriculum to class 10 students. The list below consists of minimal configuration required to execute the AI curriculum for class 10 and create social impact real time solutions/ projects. The quantities mentioned here are recommended for a batch of 20 students keeping the human-machine ratio as 2:1. An exhaustive list may be compiled by the teacher(s) teaching the subject.

S. NO.	ITEM NAME, DESCRIPTION & SPECIFICATION
<b>A</b>	<b>SYSTEM SPECIFICATIONS</b>
1	Processor: Intel® Core™ i5-7300U Processor or equivalent with minimum SYSmark® 2018 Rating of 750 or higher
2	Graphic Card: Integrated graphics
3	Form Factor: - USFF (Ultra Small Form factor) System chassis volume less than One Litre
4	RAM: 8GB DDR4 – 2400MHz or above
5	Storage: 500 GB HDD – 7200 rpm
6	Display: 18.5” LED Monitor with HDMI, in-built-speaker,
7	Keyboard: Keyboard with numerical keypad (recommended)
8	Mouse: Optical Mouse
9	Webcam: Full HD Camera
10	Headphones with Mic
11	Dual Band Wireless Connectivity Min 800 Mbps
12	Bluetooth V4.2 or Higher
13	Ports: 4 USB 3.0 ports, dual high-definition display ports (HDMI 2.0/DP/thunderbolt 3.0 ports), High definition 8-channel audio through HDMI interface or through audio jack.
14	VPU: - Integrated or support for VPU - vision processing unit to accelerate AI machine vision applications.
<b>B</b>	<b>SOFTWARE SPECIFICATIONS</b>
1	Operating System: Any
2	Anti-Virus Activated
3	Internet Browser: Google Chrome
4	Productivity Suite: Any (Google+ Suite recommended)
5	Anaconda Navigator Distribution ( <a href="https://bit.ly/AI-installation-guide">https://bit.ly/AI-installation-guide</a> )
6	Conceptual installations ( <a href="https://bit.ly/AI-installation-guide">https://bit.ly/AI-installation-guide</a> )
7	Intel Open VINO tools
8	Python

**NOTE:** In keeping with the spirit of Recycle, Upcycle and Reuse, it is recommended to make use of any equipment/ devices/ accessories from the existing inventory in school.

## **TEACHER'S/ TRAINER'S QUALIFICATIONS:**

Qualification and other requirements for appointment of teachers/trainers for teaching this subject, on contractual basis should be decided by the State/ UT. The suggestive qualifications and minimum competencies for the teacher should be as follows:

<b>Qualification</b>	<b>Minimum Competencies</b>	<b>Age Limit</b>
Diploma in Computer Science/ Information Technology <b>OR</b> Bachelor's Degree in Computer Applications/ Science/ Information Technology (BCA, B. Sc. Computer Science/ Information Technology) <b>OR</b> Graduate with PGDCA <b>OR</b> DOEACC A Level Certificate.  <i>The suggested qualification is the minimum criteria. However higher qualifications will also be acceptable.</i>	<ul style="list-style-type: none"><li>• The candidate should have a minimum of 1 year of work experience in the same job role.</li><li>• S/He should be able to communicate in English and local language.</li><li>• S/He should have knowledge of equipment, tools, material, Safety, Health &amp; Hygiene.</li></ul>	<ul style="list-style-type: none"><li>• 18-37 years (as on Jan. 01 (year))</li><li>• Age relaxation to be provided as per Govt. rules</li></ul>

Teachers/Trainers form the backbone of Skill (Vocational) Education being imparted as an integral part of Rashtriya Madhyamik Shiksha Abhiyan (RMSA). They are directly involved in teaching of Skill (vocational) subjects and also serve as a link between the industry and the schools for arranging industry visits, On-the-Job Training (OJT) and placement.

These guidelines have been prepared with an aim to help and guide the States in engaging quality Teachers/Trainers in the schools. Various parameters that need to be looked into while engaging the Vocational Teachers/Trainers are mode and procedure of selection of Teachers/ Trainers, Educational Qualifications, Industry Experience, and Certification/ Accreditation.

The State may engage Teachers/Trainers in schools approved under the component of scheme of Vocationalisation of Secondary and Higher Secondary Education under RMSA in following ways:

- (i) Directly as per the prescribed qualifications and industry experience suggested by the PSS Central Institute of Vocational Education (PSSCIVE), NCERT or the respective Sector Skill Council (SSC).

**OR**

- (ii) Through accredited Vocational Training Providers accredited under the National Quality Assurance Framework (NQAF\*) approved by the National Skill Qualification Committee on 21.07.2016. If the State is engaging Vocational Teachers/Trainers through the Vocational Training Provider (VTP), it should ensure that VTP should have been accredited at NQAF Level 2 or higher.

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*\* The National Quality Assurance Framework (NQAF) provides the benchmarks or quality criteria which the different organizations involved in education and training must meet in order to be accredited by competent bodies to provide government- funded education and training/skills activities. This is applicable to all organizations offering NSQF-compliant qualifications.*

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The educational qualifications required for being a Teacher/Trainer for a particular job role are clearly mentioned in the curriculum for the particular NSQF compliant job role. The State should ensure that teachers/ trainers deployed in the schools have relevant technical competencies for the NSQF qualification being delivered. Teachers/Trainers preferably should be certified by the concerned Sector Skill Council for the particular Qualification Pack/Job role which he will be teaching. Copies of relevant certificates and/or record of experience of the teacher/trainer in the industry should be kept as record.

To ensure the quality of the Teachers/Trainers, the State should ensure that a standardized procedure for selection of (Vocational) Teachers/Trainers is followed. The selection procedure should consist of the following:

- (i) Written test for the technical/domain specific knowledge related to the sector;
- (ii) Interview for assessing the knowledge, interests and aptitude of trainer through a panel of experts from the field and state representatives; and
- (iii) Practical test/mock test in classroom/workshop/laboratory.

In case of appointment through VTPs, the selection may be done based on the above procedure by a committee having representatives of both the State Government and the VTP.

The State should ensure that the Teachers/ Trainers who are recruited should undergo induction training of 20 days for understanding the scheme, NSQF framework and Vocational Pedagogy before being deployed in the schools.

The State should ensure that the existing trainers undergo in-service training of 5 days every year to make them aware of the relevant and new techniques/approaches in their sector and understand the latest trends and policy reforms in vocational education.

The Headmaster/Principal of the school where the scheme is being implemented should facilitate and ensure that the (Vocational) Teachers/Trainers:

- Prepare session plans and deliver sessions which have a clear and relevant purpose, and which engage the students;
- Deliver education and training activities to students, based on the curriculum to achieve the learning outcomes;
- Make effective use of learning aids and ICT tools during the classroom sessions;
- Engage students in learning activities, which include a mix of different methodologies, such as project-based work, teamwork, practical and simulation-based learning experiences;
- Work with the institution's management to organise skill demonstrations, site visits, on-job trainings, and presentations for students in cooperation with industry, enterprises and other workplaces;
- Identify the weaknesses of students and assist them in up-gradation of competency;
- Cater to different learning styles and level of ability of students;
- Assess the learning needs and abilities, when working with students with different abilities
- Identify any additional support the student may need and help to make special arrangements for that support;
- Provide placement assistance

Assessment and evaluation of (Vocational) Teachers/Trainers is very critical for making them aware of their performance and for suggesting corrective actions. The States/UTs should ensure that the performance of the (Vocational) Teachers/Trainers is appraised annually. Performance based appraisal in relation to certain pre-established criteria and objectives should be done periodically to ensure the quality of the (Vocational) Teachers/Trainers.

Following parameters may be considered during the appraisal process:

- Participation in guidance and counseling activities conducted at Institutional, District & State level;
- Adoption of innovative teaching and training methods;
- Improvement in result of vocational students of Class X or Class XII;
- Continuous up-gradation of knowledge and skills related to the vocational pedagogy, communication skills and vocational subject;
- Membership of professional society at District, State, Regional, National & International level;
- Development of teaching-learning materials in the subject area;
- Efforts made in developing linkages with the Industry/Establishments;
- Efforts made towards involving the local community in Vocational Education
- Publication of papers in National and International Journals;
- Organization of activities for promotion of vocational subjects;
- Involvement in placement of students/student support services

# **CBSE | DEPARTMENT OF SKILL EDUCATION**

## **CURRICULUM FOR SESSION 2025-2026**

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### **ARTIFICIAL INTELLIGENCE (SUB. CODE 417)**

#### **CLASS – X**

#### **OBJECTIVES OF THE COURSE:**

The objective of this module/curriculum - which combines both Inspire and Acquire modules is to develop a readiness for understanding and appreciating Artificial Intelligence and its application in our lives. This module/curriculum focuses on:

1. Helping learners understand the world of Artificial Intelligence and its applications through games, activities and multi-sensorial learning to become AI-Ready.
2. Introducing the learners to three domains of AI in an age-appropriate manner.
3. Allowing the learners to construct the meaning of AI through interactive participation and engaging hands-on activities.
4. Introducing the learners to the AI Project Cycle.
5. Introducing the learners to programming skills - Basic python coding language.
6. To equip students with the skills to develop AI solutions addressing societal challenges.

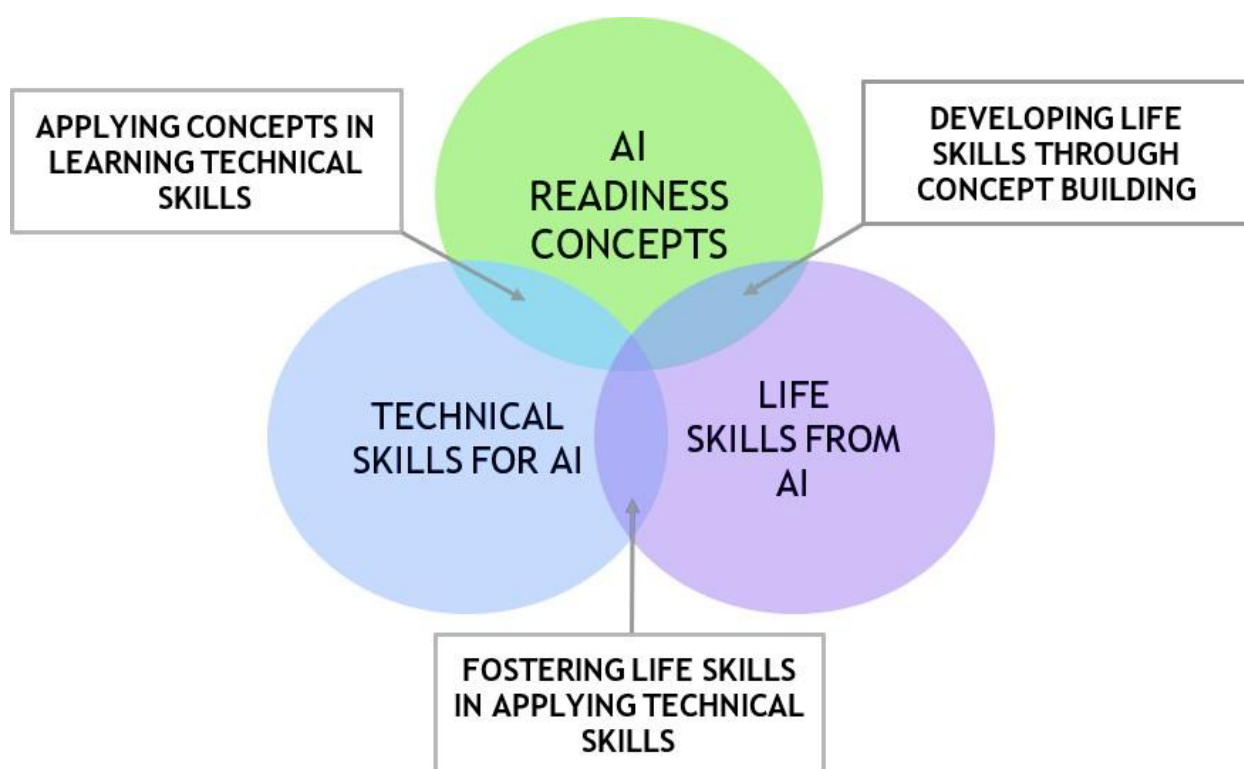
#### **LEARNING OUTCOMES:**

Learners will be able to

1. Identify and appreciate Artificial Intelligence and describe its applications in daily life.
2. Relate, apply and reflect on the Human-Machine Interactions to identify and interact with the three domains of AI: Data, Computer Vision and Natural Language Processing and Undergo assessment for analysing their progress towards acquired AI-Readiness skills.
3. Imagine, examine and reflect on the skills required for futuristic job opportunities.
4. Unleash their imagination towards smart homes and build an interactive story around it.
5. Understand the impact of Artificial Intelligence on Sustainable Development Goals to develop responsible citizenship.
6. Research and develop awareness of skills required for jobs of the future.
7. Gain awareness about AI bias and AI access and describe the potential ethical considerations of AI.
8. Develop effective communication and collaborative work skills.
9. Get familiar and motivated towards Artificial Intelligence and Identify the AI Project Cycle framework.
10. Learn problem scoping and ways to set goals for an AI project and understand the iterative nature of problem scoping in the AI project cycle.
11. Brainstorm on the ethical issues involved around the problem selected.

12. Foresee the kind of data required and the kind of analysis to be done, identify data requirements and find reliable sources to obtain relevant data.
13. Use various types of graphs to visualize acquired data.
14. Understand, create and implement the concept of Decision Trees.
15. Understand and visualize the computer's ability to identify alphabets and handwriting.
16. Understand and appreciate the concept of domains through gamification and learn basic programming skills through gamified platforms.
17. Acquire introductory Python programming skills in a very user-friendly format.
18. Empower students to create positive change through AI-driven social impact projects.

### **SKILLS TO BE DEVELOPED:**



### **SCHEME OF STUDIES:**

This course is a planned sequence of instructions consisting of units meant for developing employability and vocational competencies of students of Class X opting for skill subjects along with other education subjects.

The unit-wise distribution of hours and marks for class X is as follows:



# CBSE | DEPARTMENT OF SKILL EDUCATION

## ARTIFICIAL INTELLIGENCE (SUBJECT CODE 417) CLASS – X (SESSION 2025-2026)

Total Marks: 100 (Theory-50 + Practical-50)

	UNITS	NO. OF HOURS for Theory and Practical		MAX. MARKS for Theory and Practical
PART A	<b>Employability Skills</b>			
	Unit 1: Communication Skills-II	10		2
	Unit 2: Self-Management Skills-II	10		2
	Unit 3: ICT Skills-II	10		2
	Unit 4: Entrepreneurial Skills-II	10		2
	Unit 5: Green Skills-II	10		2
	<b>Total</b>	<b>50</b>		<b>10</b>
PART B	<b>Subject Specific Skills</b>	<b>Theory (hours)</b>	<b>Practical (hours)</b>	<b>Marks</b>
	Unit 1: Revisiting AI Project Cycle & Ethical Frameworks for AI	11	4	7
	Unit 2: Advanced Concepts of Modeling in AI	18	7	11
	Unit 3: Evaluating Models	21	4	10
	Unit 4: Statistical Data	–	28	–
	Unit 5: Computer Vision	10	20	4
	Unit 6: Natural Language Processing	20	7	8
	Unit 7: Advance Python		10	–
	<b>Total</b>	<b>160</b>		<b>40</b>
PART C	<b>Practical &amp; Project Work:</b>			<b>Marks</b>
	Practical File with minimum 15 Programs			15
	Practical Examination <ul style="list-style-type: none"> <li>Unit 4: Statistical Data</li> <li>Unit 5: Computer Vision</li> <li>Unit 6: Natural Language Processing</li> <li>Unit 7: Advance Python</li> </ul>			15
	Viva Voce			5
	Project Work / Field Visit / Student Portfolio (Anyone to be done)			10
	Viva Voce (related to project work)			5
	<b>Total</b>			<b>50</b>
	<b>GRAND TOTAL</b>	<b>210</b>		<b>100</b>

## **DETAILED CURRICULUM/TOPICS FOR CLASS X**

### **Part-A: EMPLOYABILITY SKILLS**

<b>S. No.</b>	<b>Units</b>	<b>Duration in Hours</b>
1.	Unit 1: Communication Skills-II	10
2.	Unit 2: Self-management Skills-II	10
3.	Unit 3: Information and Communication Technology Skills-II	10
4.	Unit 4: Entrepreneurial Skills-II	10
5.	Unit 5: Green Skills-II	10
	<b>TOTAL</b>	<b>50</b>

**Note:** The detailed curriculum/ topics to be covered under Part A: Employability Skills can be downloaded from CBSE website

### **Part-B – SUBJECT SPECIFIC SKILLS**

- ❖ Unit 1: Revisiting AI Project Cycle & Ethical Frameworks for AI
- ❖ Unit 2: Advanced Concepts of Modeling in AI
- ❖ Unit 3: Evaluating Models
- ❖ Unit 4: Statistical Data
- ❖ Unit 5: Computer Vision
- ❖ Unit 6: Natural Language Processing
- ❖ Unit 7: Advance Python

#### **UNIT 1: Revisiting AI Project Cycle & Ethical Frameworks for AI**

<b>SUB-UNIT</b>	<b>LEARNING OUTCOMES</b>	<b>ACTIVITY/ PRACTICAL</b>
AI Project Cycle	Understand the stages of the AI Project Cycle.	<b>Session:</b> Revisiting AI Project Cycle
Introduction to AI Domains	Understand the concept of Artificial Intelligence (AI) domains and the illustrations of practical applications within each AI domain.	<b>Session:</b> The three domains of AI and their applications.

SUB-UNIT	LEARNING OUTCOMES	ACTIVITY/ PRACTICAL
Ethical Frameworks of AI	Learn about the ethical framework for AI and its category. Explore Bioethics, a popular framework that is used in the healthcare industry.	<b>Session:</b> Frameworks, Ethical Framework and need of Ethical Frameworks for AI. <b>Activity:</b> My Goodness <a href="https://www.my-goodness.net/">https://www.my-goodness.net/</a>
		<b>Session:</b> Types of Ethical Frameworks.
		<b>Session:</b> Bioethics and a case study in bioethics.

## UNIT 2: Advance Concepts of Modeling in AI

SUB-UNIT	LEARNING OUTCOMES	SESSION/ ACTIVITY/ PRACTICAL
Revisiting AI, ML, DL	Understand AI, ML and DL	<b>Session:</b> Differentiate between AI, ML, and DL <b>Session:</b> Common terminologies used with data
Modeling	<ul style="list-style-type: none"> <li>Familiarize with supervised, unsupervised and reinforcement learning based approach</li> <li>Understand subcategories of Supervised, Unsupervised and deep learning models</li> </ul>	<b>Session:</b> Types of AI Models: Rule Based Approach, Learning Based Approach  <b>Session:</b> Categories of Machine learning based models: Supervised Learning ( <a href="https://teachablemachine.withgoogle.com/">https://teachablemachine.withgoogle.com/</a> ), Unsupervised Learning ( <a href="https://experiments.withgoogle.com/ai/drum-machine/view/">https://experiments.withgoogle.com/ai/drum-machine/view/</a> ), Reinforcement Learning  <b>Session:</b> Subcategories of Supervised Learning Model: Classification Model, Regression Model  <b>Session:</b> Subcategories of Unsupervised Learning Model: Clustering, Association  <b>Session:</b> Subcategories of Deep Learning: Artificial Neural networks (ANN), Convolutional Neural Network (CNN)
Artificial Neural Networks	<ul style="list-style-type: none"> <li>Understand Neural Networks</li> <li>Understand how AI makes a decision</li> </ul>	<b>Session:</b> What is Neural Network?  <b>Session:</b> How does AI make a Decision?  <b>Activity:</b> Human Neural Network – The Game  <b>Suggested Neural Network Activity:</b> <a href="https://playground.tensorflow.org/">https://playground.tensorflow.org/</a>

## UNIT 3: Evaluating Models

SUB-UNIT	LEARNING OUTCOMES	SESSION/ ACTIVITY/ PRACTICAL
Importance of Model Evaluation	Understand the role of evaluation in the development and implementation of AI systems.	<b>Session:</b> What is evaluation?  <b>Session:</b> Need of model evaluation

Splitting the training set data for Evaluation	Understand Train-test split method for evaluating the performance of a machine learning algorithm	<b>Session:</b> Train-test split
Accuracy and Error	Understand Accuracy and Error for effectively evaluating and improving AI models	<b>Session:</b> Accuracy <b>Session:</b> Error <b>Activity:</b> Find the accuracy of the AI model
Evaluation metrics for classification	Learn about the different types of evaluation techniques in AI, such as Accuracy, Precision, Recall and F1 Score, and their significance.	<b>Session:</b> What is Classification? <b>Session:</b> Classification metrics <b>Activity:</b> Build the confusion matrix from scratch <b>Activity:</b> Calculate the accuracy of the classifier model <b>Activity:</b> Decide the appropriate metric to evaluate the AI model
Ethical concerns around model evaluation	Understand ethical concerns around model evaluation	<b>Session:</b> Bias, Transparency, Accuracy

#### UNIT 4: Statistical Data (To be assessed through Practicals)

SUB-UNIT	LEARNING OUTCOMES	SESSION/ ACTIVITY/ PRACTICAL
Introduction & No code AI tool	Define the concept of Statistical Data and understand its applications in various fields. Define No-Code and Low-Code AI. Identify the differences between Code and No-Code AI concerning Statistical Data.	<b>Session: No code AI tool</b> • Introduction to Data Science & its applications • Meaning of No-Code AI • No-Code and Low-Code. • Some no-code tools <b>Orange Data Mining Tool:</b> <a href="https://orangedatamining.com/download/">https://orangedatamining.com/download/</a>
Statistical Data: Use Case Walk through	Relate AI project stages to the stages of No-Code AI projects Able to use no-code tool Orange Data mining. To perform data exploration, modeling and evaluation with Orange data mining.	<b>Session</b> • Important concepts in Statistics. • Orange data mining • AI project cycle in Orange data mining (Palmer penguins case study) <b>Activity:</b> MS Excel for Statistical Analysis. Link: <a href="https://docs.google.com/spreadsheets/d/1f5G-JXyP7EV2fy1hax47YVaH5gyq8KZy/edit?usp=drive_link&amp;oid=109928090180926267402&amp;rtpof=true&amp;sd=true">https://docs.google.com/spreadsheets/d/1f5G-JXyP7EV2fy1hax47YVaH5gyq8KZy/edit?usp=drive_link&amp;oid=109928090180926267402&amp;rtpof=true&amp;sd=true</a>  Case study using Orange data mining (Palmer Penguins). Link: <a href="https://drive.google.com/drive/u/0/folders/1fmcRVb-iiTyUhmUv4DWT1BFsaCoQ2BmF">https://drive.google.com/drive/u/0/folders/1fmcRVb-iiTyUhmUv4DWT1BFsaCoQ2BmF</a>

## UNIT 5: Computer Vision (To be assessed through Theory)

SUB-UNIT	LEARNING OUTCOMES	SESSION/ ACTIVITY/ PRACTICAL
Introduction	Define the concept of Computer Vision and understand its applications in various fields.	<b>Session:</b> Introduction to Computer Vision <b>Session:</b> Applications of CV
Concepts of Computer Vision	Understand the basic concepts of image representation, feature extraction, object detection, and segmentation.	<b>Session:</b> Understanding CV Concepts <ul style="list-style-type: none"> <li>• Computer Vision Tasks</li> <li>• Basics of Images-Pixel, Resolution, Pixel value</li> <li>• Grayscale and RGB images</li> </ul> <b>Activities:</b> <ul style="list-style-type: none"> <li>• Game- Emoji Scavenger Hunt <a href="https://emojiscavengerhunt.withgoogle.com/">https://emojiscavengerhunt.withgoogle.com/</a></li> <li>• RGB Calculator: <a href="https://www.w3schools.com/colors/colors_rgb.asp">https://www.w3schools.com/colors/colors_rgb.asp</a></li> <li>• Create your own pixel art: <a href="http://www.piskelapp.com">www.piskelapp.com</a></li> <li>• Create your own convolutions: <a href="http://setosa.io/ev/image-kernels/">http://setosa.io/ev/image-kernels/</a></li> </ul>

## UNIT 5: Computer Vision (To be assessed through Practicals)

SUB-UNIT	LEARNING OUTCOMES	SESSION/ ACTIVITY/ PRACTICAL
No-Code AI Tools	To demonstrate proficiency in using no-code AI tools for computer vision projects. To deploy models, fine-tune parameters, and interpret results. Skills acquired include data preprocessing, model selection, and project deployment.	<b>Introduction to Lobe:</b> <a href="https://www.lobe.ai/">https://www.lobe.ai/</a> <b>Teachable Machine:</b> <a href="https://teachablemachine.withgoogle.com/">https://teachablemachine.withgoogle.com/</a> <ul style="list-style-type: none"> <li>• <b>Activity:</b> Build a Smart Sorter</li> </ul> <b>Orange Data Mining Tool:</b> <a href="https://orangedatamining.com/download/">https://orangedatamining.com/download/</a> <ul style="list-style-type: none"> <li>• <b>Activity:</b> Build a real-world Classification Model: Coral Bleaching (Use Case Walkthrough)</li> <li>• Link to the steps involved in project development and dataset:  <a href="https://drive.google.com/drive/folders/1ppJ4d-8yOFJ2G22rHHpjNrK0ejdIAe5Q?usp=sharing">https://drive.google.com/drive/folders/1ppJ4d-8yOFJ2G22rHHpjNrK0ejdIAe5Q?usp=sharing</a> </li> </ul>
Image Features & Convolution Operator	Apply the convolution operator to process images and extract useful features.	<b>Session:</b> Understanding Convolution operator <b>Activity:</b> Convolution Operator
Convolution Neural Network	Understand the basic architecture of a CNN and its applications in computer vision and image recognition.	<b>Session:</b> Introduction to CNN <b>Session:</b> Understanding CNN <ul style="list-style-type: none"> <li>• Kernel</li> <li>• Layers of CNN</li> </ul> <b>Activity:</b> Testing CNN

## UNIT 6: Natural Language Processing (To be assessed through Theory)

SUB-UNIT	LEARNING OUTCOMES	SESSION/ ACTIVITY/ PRACTICAL
Introduction	Comprehend the complexities of natural languages. and elaborate on the need for NLP techniques for machines to understand various natural languages effectively.	<b>Session:</b> Features of natural languages. <b>Session:</b> Introduction to Natural Language Processing
Applications of Natural Language Processing	Explore the various applications of NLP in everyday life, such as , voice assistants, auto generated captions, language translation, sentiment analysis, text classification and keyword extraction.	<b>Session:</b> Various real-life applications of NLP  <b>Activity:</b> Keyword Extraction <a href="https://cloud.google.com/natural-language">https://cloud.google.com/natural-language</a>
Stages of Natural Language Processing (NLP)	Understand the concepts like lexicon, syntax, semantics, and logical analysis of input text.	<b>Session:</b> Explore the various stages of NLP that involve in understanding and processing human language.
Chatbots	Understand the concept of chatbot and the differences between smartbots and script bots.	<b>Activity:</b> Play with chatbots Elizabot - <a href="https://www.masswerk.at/elizabot/">https://www.masswerk.at/elizabot/</a> Mitsuki - <a href="https://www.kuki.ai/">https://www.kuki.ai/</a> Cleverbot - <a href="https://www.cleverbot.com/">https://www.cleverbot.com/</a> Singtel - <a href="https://www.singtel.com/personal/support">https://www.singtel.com/personal/support</a>  <b>Session:</b> Script Bot V/s Smart Bot
Concepts of Natural Language Processing: Text Processing	Learn about the Text Normalization technique used in NLP and the popular NLP model - Bag-of-Words	<b>Session: Text Processing</b> <ul style="list-style-type: none"> <li>• Text Normalisation</li> <li>• Bag of Words</li> </ul> <b>Hands-on:</b> Text processing <ul style="list-style-type: none"> <li>• Data Processing</li> <li>• Bag of Words</li> <li>• TFIDF</li> </ul>

## UNIT 6: Natural Language Processing (To be assessed through Practicals)

SUB-UNIT	LEARNING OUTCOMES	SESSION/ ACTIVITY/ PRACTICAL
Natural Language Processing: Use Case Walkthrough	Explore the sentiment analysis process using real-life datasets with the Orange Data Mining tool.	<b>Session:</b> Examples of Code and No-code NLP Tools  <b>Session:</b> Applications of NLP- Introduction to Sentiment Analysis  <b>Hands-on:</b> Case Walkthrough – Steps involved in project development Link to steps and dataset: <a href="https://drive.google.com/drive/u/2/folders/1geFLXxV5890kfcakMfEg_KsH1LPcS_Iz">https://drive.google.com/drive/u/2/folders/1geFLXxV5890kfcakMfEg_KsH1LPcS_Iz</a>

## UNIT 7: ADVANCE PYTHON (To be assessed through Practicals)

SUB-UNIT	LEARNING OUTCOMES	SESSION/ ACTIVITY/ PRACTICAL
Recap	Understand to work with Jupyter Notebook, creating virtual environments, installing Python Packages.	<b>Session:</b> Jupyter Notebook
	Able to write basic Python programs using fundamental concepts such as variables, data types, operators, and control structures.	<b>Session:</b> Introduction to Python
	Able to use Python built-in functions and libraries.	<b>Session:</b> Python Basics

### PART-C: PRACTICAL & PROJECT WORK

#### Practical Work:

<b>Suggested Programs List</b>	<ul style="list-style-type: none"><li>• Write a program to add the elements of the two lists.</li><li>• Write a program to calculate mean, median and mode using Numpy</li><li>• Write a program to display line chart from (2,5) to (9,10).</li><li>• Write a program to display a scatter chart for the following points (2,5), (9,10),(8,3),(5,7),(6,18).</li><li>• Read the csv file saved in your system and display 10 rows.</li><li>• Read csv file saved in your system and display its information</li><li>• Write a program to read an image and display using Python</li><li>• Write a program to read an image and identify its shape using Python</li></ul>
<b>Important Links</b>	Link to AI Activities & steps to AI project development considering real life problem statement along with the required dataset <a href="https://docs.google.com/spreadsheets/d/1ZQCTT8RM-l7QfeTzH0n-5wJLBAoiXu7TFM0Pcp31cX0/edit?usp=sharing">https://docs.google.com/spreadsheets/d/1ZQCTT8RM-l7QfeTzH0n-5wJLBAoiXu7TFM0Pcp31cX0/edit?usp=sharing</a>
<b>Project Work / Field Visit / Student Portfolio</b> <b>* relate it to Sustainable Development Goals</b> <b>Suggested Projects/ Field Visit / Portfolio (any one activity to be one)</b>	
<b>Sample Projects</b>	AI Project Development Using <ol style="list-style-type: none"><li>1. Statistical Data for AI: Prediction of palmer penguin species</li><li>2. Computer Vision: Early detection of coral bleaching</li><li>3. Natural Language Processing: Sentiment Analysis</li></ol>
<b>Field Work</b>	Students' participation in the following- <ul style="list-style-type: none"><li>• AI for Youth Bootcamp</li><li>• AI Fests/ Exhibition</li><li>• Participation in any AI training sessions</li><li>• Virtual tours of companies using AI to get acquainted with real-life usage</li></ul>
<b>Student Portfolio (to be continued from class IX)</b>	<ul style="list-style-type: none"><li>• Maintaining a record of all AI activities</li><li>• Hackathons</li><li>• Competitions (CBSE/Inter School)</li></ul> <p>Note: Portfolio should contain minimum 5 activities</p>

**LIST OF ITEMS/ EQUIPMENT'S (MINIMUM REQUIREMENTS):**

The equipment / materials listed below are required to conduct effective hands-on learning sessions while delivering the AI curriculum to class 10 students. The list below consists of minimal configuration required to execute the AI curriculum for class 10 and create social impact real time solutions/ projects. The quantities mentioned here are recommended for a batch of 20 students keeping the human-machine ratio as 2:1. An exhaustive list may be compiled by the teacher(s) teaching the subject.

S. NO.	ITEM NAME, DESCRIPTION & SPECIFICATION
<b>A</b>	<b>SYSTEM SPECIFICATIONS</b>
1	Processor: Intel® Core™ i5-7300U Processor or equivalent with minimum SYSmark® 2018 Rating of 750 or higher
2	Graphic Card: Integrated graphics
3	Form Factor: - USFF (Ultra Small Form factor) System chassis volume less than One Litre
4	RAM: 8GB DDR4 – 2400MHz or above
5	Storage: 500 GB HDD – 7200 rpm
6	Display: 18.5" LED Monitor with HDMI, in-built-speaker,
7	Keyboard: Keyboard with numerical keypad (recommended)
8	Mouse: Optical Mouse
9	Webcam: Full HD Camera
10	Headphones with Mic
11	Dual Band Wireless Connectivity Min 800 Mbps
12	Bluetooth V4.2 or Higher
13	Ports: 4 USB 3.0 ports, dual high-definition display ports (HDMI 2.0/DP/thunderbolt 3.0 ports), High definition 8-channel audio through HDMI interface or through audio jack.
14	VPU: - Integrated or support for VPU - vision processing unit to accelerate AI machine vision applications.
<b>B</b>	<b>SOFTWARE SPECIFICATIONS</b>
1	Operating System: Any
2	Anti-Virus Activated
3	Internet Browser: Google Chrome
4	Productivity Suite: Any (Google+ Suite recommended)
5	Anaconda Navigator Distribution ( <a href="https://bit.ly/AI-installation-guide">https://bit.ly/AI-installation-guide</a> )
6	Conceptual installations ( <a href="https://bit.ly/AI-installation-guide">https://bit.ly/AI-installation-guide</a> )
7	Intel Open VINO tools
8	Python

**NOTE:** In keeping with the spirit of Recycle, Upcycle and Reuse, it is recommended to make use of any equipment/ devices/ accessories from the existing inventory in school.



## **TEACHER'S/ TRAINER'S QUALIFICATIONS:**

Qualification and other requirements for appointment of teachers/trainers for teaching this subject, on contractual basis should be decided by the State/ UT. The suggestive qualifications and minimum competencies for the teacher should be as follows:

Qualification	Minimum Competencies	Age Limit
Diploma in Computer Science/ Information Technology  <b>OR</b> Bachelor's Degree in Computer Applications/Science/Information Technology (BCA, B.Sc. Computer Science/ Information Technology) <b>OR</b> Graduate with PGDCA <b>OR</b> DOEACC A Level Certificate.  <i>The suggested qualification is the minimum criteria. However higher qualifications will also be acceptable.</i>	<ul style="list-style-type: none"><li>• The candidate should have a minimum of 1 year of work experience in the same job role.</li><li>• S/He should be able to communicate in English and local language.</li><li>• S/He should have knowledge of equipment, tools, material, Safety, Health &amp; Hygiene.</li></ul>	<ul style="list-style-type: none"><li>• 18-37 years (as on Jan. 01 (year))</li><li>• Age relaxation to be provided as per Govt. rules</li></ul>

Teachers/Trainers form the backbone of Skill (Vocational) Education being imparted as an integral part of Rashtriya Madhyamik Shiksha *Abhiyan* (RMSA). They are directly involved in teaching of Skill (vocational) subjects and also serve as a link between the industry and the schools for arranging industry visits, On-the-Job Training (OJT) and placement.

These guidelines have been prepared with an aim to help and guide the States in engaging quality Teachers/Trainers in the schools. Various parameters that need to be looked into while engaging the Vocational Teachers/Trainers are mode and procedure of selection of Teachers/ Trainers, Educational Qualifications, Industry Experience, and Certification/ Accreditation.

The State may engage Teachers/Trainers in schools approved under the component of scheme of Vocationalisation of Secondary and Higher Secondary Education under RMSA in following ways:

- (i) Directly as per the prescribed qualifications and industry experience suggested by the PSS Central Institute of Vocational Education (PSSCIVE), NCERT or the respective Sector Skill Council (SSC).

**OR**

- (ii) Through accredited Vocational Training Providers accredited under the National Quality Assurance Framework (NQAF\*) approved by the National Skill Qualification Committee on 21.07.2016. If the State is engaging Vocational Teachers/Trainers through the Vocational Training Provider (VTP), it should ensure that VTP should have been accredited at NQAF Level 2 or higher.

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*\* The National Quality Assurance Framework (NQAF) provides the benchmarks or quality criteria which the different organizations involved in education and training must meet in order to be accredited by competent bodies to provide government-funded education and training/skills activities. This is applicable to all organizations offering NSQF-compliant qualifications.*

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The educational qualifications required for being a Teacher/Trainer for a particular job role are clearly mentioned in the curriculum for the particular NSQF compliant job role. The State should ensure that teachers/ trainers deployed in the schools have relevant technical competencies for the NSQF qualification being delivered. Teachers/Trainers preferably should be certified by the concerned Sector Skill Council for the particular Qualification Pack/Job role which he will be teaching. Copies of relevant certificates and/or record of experience of the teacher/trainer in the industry should be kept as record.

To ensure the quality of the Teachers/Trainers, the State should ensure that a standardized procedure for selection of (Vocational) Teachers/Trainers is followed. The selection procedure should consist of the following:

- (i) Written test for the technical/domain specific knowledge related to the sector;
- (ii) Interview for assessing the knowledge, interests and aptitude of trainer through a panel of experts from the field and state representatives; and
- (iii) Practical test/mock test in classroom/workshop/laboratory.

In case of appointment through VTPs, the selection may be done based on the above procedure by a committee having representatives of both the State Government and the VTP.

The State should ensure that the Teachers/ Trainers who are recruited should undergo induction training of 20 days for understanding the scheme, NSQF framework and Vocational Pedagogy before being deployed in the schools.

The State should ensure that the existing trainers undergo in-service training of 5 days every year to make them aware of the relevant and new techniques/approaches in their sector and understand the latest trends and policy reforms in vocational education.

The Headmaster/Principal of the school where the scheme is being implemented should facilitate and ensure that the (Vocational) Teachers/Trainers:

- Prepare session plans and deliver sessions which have a clear and relevant purpose, and which engage the students;
- Deliver education and training activities to students, based on the curriculum to achieve the learning outcomes;
- Make effective use of learning aids and ICT tools during the classroom sessions;
- Engage students in learning activities, which include a mix of different methodologies, such as project-based work, teamwork, practical and simulation-based learning experiences;
- Work with the institution's management to organise skill demonstrations, site visits, on-job trainings, and presentations for students in cooperation with industry, enterprises and other workplaces;
- Identify the weaknesses of students and assist them in up-gradation of competency;
- Cater to different learning styles and level of ability of students;
- Assess the learning needs and abilities, when working with students with different abilities
- Identify any additional support the student may need and help to make special arrangements for that support;
- Provide placement assistance

Assessment and evaluation of (Vocational) Teachers/Trainers is very critical for making them aware of their performance and for suggesting corrective actions. The States/UTs should ensure that the performance of the (Vocational) Teachers/Trainers is appraised annually. Performance based appraisal in relation to certain pre-established criteria and objectives should be done periodically to ensure the quality of the (Vocational) Teachers/Trainers.

Following parameters may be considered during the appraisal process:

- Participation in guidance and counseling activities conducted at Institutional, District and State level;
- Adoption of innovative teaching and training methods;
- Improvement in result of vocational students of Class X or Class XII;
- Continuous up-gradation of knowledge and skills related to the vocational pedagogy, communication skills and vocational subject;
- Membership of professional society at District, State, Regional, National and International level;
- Development of teaching-learning materials in the subject area;
- Efforts made in developing linkages with the Industry/Establishments;
- Efforts made towards involving the local community in Vocational Education
- Publication of papers in National and International Journals;
- Organisation of activities for promotion of vocational subjects;
- Involvement in placement of students/student support services.