English Language & Literature
Code No. 184
Class IX (2021-22)
Term wise Syllabus

Term - I

Reading-

Question based on the following kinds of unseen passages to assess inference, evaluation, vocabulary, analysis and interpretation:

1. Discursive passage (400-450 words)
2. Case based Factual passage (with visual input/ statistical data/ chart etc. 200-250 words)

Writing-

1. Descriptive paragraph (Person)
2. Short Story (based on beginning line, outline, cues etc.)

Grammar

1. Tenses
2. Subject-Verb Concord
3. Modals
4. Determiners
5. Reported Speech
6. Commands and Requests
7. Statements
8. Questions

Literature

Questions based on extracts / texts to assess interpretation, inference, extrapolation beyond the text and across the texts.

Moments

1. The Lost Child
2. The Adventures of Toto
3. In the Kingdom of Fools
4. The Happy Prince

Beehive
Prose

1. The Fun They Had
2. The Sound of Music
3. The Little Girl
4. A Truly Beautiful Mind
5. My Childhood

Poems-

1. The Road Not Taken
2. Wind
3. Rain on The Roof
4. A Legend of The Northland

Term - II

Reading-

Question based on the following kinds of unseen passages to assess inference, evaluation, vocabulary, analysis and interpretation:

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

Writing-

1. **Descriptive Paragraph (Diary)**
2. **Story writing (based on beginning line, outline, cues etc.)**

Grammar

1. **Tenses**
2. **Subject-Verb Concord**
3. **Modals**
4. **Determiners**
5. **Reported Speech**
6. **Commands and Requests**
7. **Statements**
8. **Questions**

Literature

Questions based on extracts / texts to assess interpretation, inference, extrapolation beyond the text and across the texts.

Moments
1. **Weathering the Storm in Ersama**
2. **The Last Leaf**
3. **A House is not a Home**
4. **The Beggar**

Beehive
Prose

1. **Packing**
2. **Reach for The Top**
3. **The Bond of Love**
4. **If I were You**

Poems

1. **No Men Are Foreign**
2. **On killing a Tree**
3. **The Snake Trying**

Each Term

SECTION	WEIGHTAGE (IN MARKS)
READING	10
WRITING & GRAMMAR	10
LITERATURE	20
TOTAL	40
INTERNAL ASSESSMENT	10
GRAND TOTAL	50

English Language and Literature
Code No. 184
Class X (2021-22)
Term wise Syllabus

Term - I

READING

Question based on the following kinds of unseen passages to assess inference, evaluation, vocabulary, analysis and interpretation:

1. Discursive passage (400-450 words)
2. Case based Factual passage (with visual input/ statistical data/ chart etc. 300-350 words)

WRITING SKILL

1. Formal letter based on a given situation.
   - Letter to the Editor
   - Letter of Complaint (Official)
   - Letter of Complaint (Business)

GRAMMAR

1. Tenses
2. Modals
3. Subject-Verb Concord
4. Determiner
5. Reported Speech
6. Commands and Requests
7. Statements
8. Questions

LITERATURE

Questions based on extracts / texts to assess interpretation, inference, extrapolation beyond the text and across the texts.

FIRST FLIGHT

1. A Letter to God
2. Nelson Mandela
3. Two Stories About Flying
4. From the Diary of Anne Frank
5. The Hundred Dresses 1
6. The Hundred Dresses 2

POEMS

1. Dust of Snow
2. Fire and Ice
3. A Tiger in the Zoo
4. The Ball Poem

FOOTPRINTS WITHOUT FEET

1. **A Triumph of Surgery**
2. **The Thief's Story**
3. **Footprints Without Feet**

Term - II

READING

Question based on the following kinds of unseen passages to assess inference, evaluation, vocabulary, analysis and interpretation:

1. **Discursive passage (400-450 words)**
2. **Case based Factual passage (with visual input/ statistical data/ chart etc. 300-350 words)**

WRITING SKILL

1. **Formal letter based on a given situation**
   - **Letter of Order**
   - **Letter of Enquiry**
2. **Analytical Paragraph (based on outline/chart/cue/map/report etc.)**

GRAMMAR

1. **Tenses**
2. **Modals**
3. **Subject Verb Concord**
4. **Determiner**
5. **Reported Speech**
6. **Commands and Requests**
7. **Statements**
8. **Questions**

LITERATURE

Questions based on extracts / texts to assess interpretation, inference, extrapolation beyond the text and across the texts.

FIRST FLIGHT

1. **Glimpses of India**
2. **Madam Rides the Bus**
3. **The Sermon at Benares**
4. **The Proposal (Play)**

POEMS

1. **Amanda**
2. **Animals**
3. **The Tale of Custard the Dragon**

Each Semester

SECTION	WEIGHTAGE (IN MARKS)
READING	10
WRITING & GRAMMAR	10
LITERATURE	20
TOTAL	40
INTERNAL ASSESSMENT	10
GRAND TOTAL	50

द्वितीय भाषा के रूप में हिंदी (कोड सं.– 085)
कक्षा 9वीं – 10वीं (2021-22)

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 जरिए 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
- जाति, धर्म, रीति-रिवाज तथा लिंग के विषय को समझने की क्षमता का विकास
- 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 पढ़ने और पढ़ाने दोनों ही दृष्टियों से मातृभाषा सीखने की तुलना में कुछ मंथर गति से चलेगा। वह 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 तेजी 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 जरूरी 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।

- एन.सी.ई.आर.टी. मानव संसाधन विकास मंत्रालय के विभिन्न संगठनों तथा स्वतंत्र निर्माताओं द्वारा उपलब्ध कराए गए कार्यक्रम/ ई सामग्री वृत्तचित्रों और सिनेमा को शिक्षण-सामग्री के तौर पर इस्तेमाल करने की जरूरत है। इनके प्रदर्शन के क्रम में इन पर लगातार बातचीत के जरिए 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 सिर्फ एक पाठ्यपुस्तक की उपस्थिति से बेहतर होगा कि शिक्षक के हाथ में तरह-तरह 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 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 ठीक 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।
- हिंदी अभिनय में भाग लेना।

आंतरिक मूल्याङ्कन हेतु

श्रवण तथा वाचन परीक्षा हेतु दिशानिर्देश

श्रवण (सुनना) (5अंक): वर्णित या पठित त सामग्री को सुनकर अर्थग्रहण करना,वार्तालाप करना, वाद-विवाद ,भाषण, कविता पाठ आदि को सुनकर समझना, मूल्याङ्कन करना और अभिवयक्ति ढंग को समझना।

वाचन (बोलना) (5अंक): भाषण, सस्वर कविता -पाठ, वार्तालाप और उसकी औपचारिकता , कार्यक्रमप्रस्तुति ,कथा -कहानी अथवा घटना सुनाना, परिचय देना, भावानुकूल संवाद -वाचन।

टिप्पणी : वार्तालाप की दक्षताओं का मूल्याङ्कन निरंतरता के आधार पर परीक्षा के समय ही होगा। निर्धारित 10 अंकों में से5 श्रवण (सुनना) कौशल के मूल्याङ्कन के लिये और 5 वाचन (बोलना) कौशल के मूल्याङ्कन के लिये होंगें ।

श्रवण (सुनना) –5 अंक व वाचन (बोलना) -5 अंक का परीक्षण

परीक्षक विद्यार्थियों से कविता तथा कहानी पाठ करेंगे।

- परीक्षक किसी प्रासांगिक विषय पर एक अनुच्छेद का स्पष्ट वाचन करेगा। अनुच्छेद तथ्यात्मक या सुझावात्मक हो सकता है। अनुच्छेद लगभग 80-100 शब्दों का होना चाहिए।

  या

  परीक्षक 2 –3 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 पश्चात् परीक्षक द्वारा पूछे गए प्रश्नों का अपनी समझ से मौखिक उत्तर देंगे। (1X5=5)

- किसी निर्धारित विषय पर बोलना: जिससे विद्यार्थी अपने व्यक्तिगत अनुभवों का प्रत्यास्मरण कर सकें।

- कोई कहानी सुनाना या किसी घटना का वर्णन करना।

- परिचय देना। (स्व/ परिवार / वातावरण/ वस्तु/ व्यक्ति/पर्यावरण / कवि /लेखक आदि)

- परीक्षण से पूर्व परीक्षार्थी को तैयारी के लिए कुछ समय दिया जाये ।

- विवरणात्मक भाषा में वर्तमान काल का प्रयोग अपेक्षित है।

- निर्धारित विषय परीक्षार्थी के अनुभव जगत हों ।

- जब परीक्षार्थी बोलना आरांभ करेंतो परीक्षक कम से कम हस्तक्षेप करें।

कौशलों के अंतरण का मूल्यांकन

	श्रवण (सुनना)		वाचन(बोलना)
1	विद्यार्थी में परिचित संदर्भों में प्रयुक्त शब्दों और पदों को समझने की सामान्य योग्यता है।	1	विद्यार्थी 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 संदर्भ में केवल छोटे सुसंबद्ध कथनों का सीमित शुद्धता से प्रयोग करता है।
3	परिचित या अपरिचित दोनों संदर्भों में कथित सूचना को स्पष्ट समझने की योग्यता है।	3	अपेक्षित दीर्घ भाषण में जटिल कथनों के प्रयोग की योग्यता प्रदर्शित करता है।
4	दीर्घ कथनों की श्रृंखला 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 कर

			सकता है।
5	जटिल कथनों के विचार-बिंदुओं को समझने की योग्यता प्रदर्शित करता है।	5	उद्देश्य और श्रोता के लिए उपयुक्त शैली को अपना सकता है।

श्रवण -वाचन कौशल एवं परियोजना कार्य का मूल्याङ्कन विद्यालय स्तर पर आंतरिक परीक्षक द्वारा ही किया जाएगा।

पठन कौशल

पढ़ने की योग्यताएँ

- हिंदी में कहानी, निबंध, यात्रा-वर्णन, जीवनी, पत्र, डायरी आदि को अर्थबोध के साथ पढ़ना।
- पाठयवस्तु 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 बांटकर लिखना।
- प्रार्थना पत्र, निमंत्रण पत्र, बधाई पत्र, संवेदना पत्र, आदेश पत्र, ई मेल, एस.एम.एस आदि लिखना और विविध प्रपत्रों को भरना।
- विविध स्त्रोतों स्रोतो 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 मौलिकता और सर्जनात्मकता लाना।

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-केन्द्रित - प्रारंभ से अंत तक अनुच्छेद का एक सूत्र में बंधा होना
- समासिकता - सीमित शब्दों में यथासंभव पूरी बात कहने का प्रयास, अनावश्यक बातें न करके केवल विषय संबद्ध वर्णन-विवेचन

पत्र लेखन

- अनौपचारिक पत्र विचार-विमर्श का जरिया जिनमें मैत्रीपूर्ण भावना निहित, सरलता, संक्षिप्त और सादगी के साथ लेखन शैली
- 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 भाषाशैली, 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, संक्षेप और सम्पूर्णता के साथ प्रभावान्विति

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 मे बॉक्स, चित्र अथवा रंग का उपयोग अनिवार्य नहीं)

संवाद लेखन

दो या दो से अधिक लोगों के बीच होने वाले वार्तालाप/ बातचीत विषय, काल्पनिक या किसी वार्ता को सुनकर यथार्थ पर आधारित संवाद लेखन की रचनात्मक शक्ति का विकास, कहानी, नाटक, फिल्म और टीवी सीरियल से लें।

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

सूचना लेखन

किसी विशेष सूचना को सार्वजनिक करना, कम शब्दों में औपचारिक शैली में लिखी गई संक्षिप्त जानकारी
जिसमें लेखन में

- उद्देश्य की स्पष्टता

- आम बोलचाल की भाषा और सरल वाक्यों का प्रयोग
- स्पष्ट शीर्षक, मुख्य तथ्य/ विषय वस्तु, उपयोगी संपर्क सूत्र के साथ स्पष्ट संप्रेषण क्षमता

संदेश लेखन   (शुभकामना, पर्व-त्यौहारों एवं विशेष अवसरों पर दिए जाने वाले संदेश)
- विषय से संबद्धता
- संक्षिप्त और सारगर्भित
- भाषाई दक्षता एवं प्रस्तुति
- रचनात्मकता/सृजनात्मकता

कहानी लेखन
- निरंतरता
- रचनात्मकता/कल्पना शक्ति का उपयोग
- प्रभावी संवाद/ पात्रानुकुल संवाद
- जिज्ञासा/रोचकता
- कथात्मकता

नारा लेखन   (दिए गए विषय पर आधारित नारा लेखन)
- शब्दों का उपयुक्त चयन एवं आपसी ताल-मेल
- विषय से संबद्धता
- आकर्षण
- मौलिकता
- रचनात्मकता

कक्षा 9वीं हिंदी 'ब'-परीक्षाओं हेतु पाठ्यक्रम विनिर्देशन 2021 -22 प्रथम सत्र

		विषयवस्तु		उपभार	कुलभार
1		अपठित गद्यांश -चार अपठित गद्यांशों में से कोई दो गद्यांश करने होंगे| (200-250 शब्दों के) 2 गद्यांश (1अंक x 5 प्रश्न) (चिंतन क्षमता एवं अभिव्यक्ति कौशल पर बहुविकल्पात्मक प्रश्न पूछे जाएंगे)			10
2		व्याकरण :पाठ्यपुस्तक में दिए गए भाषा-अध्ययन के आधार पर बहुविकल्पात्मक प्रश्न (1 अंक x16 प्रश्न)			16
	i	शब्द और पद (2 अंक)		02	
	ii	अनुस्वार (1 अंक), अनुनासिक (1 अंक)		02	
	iii	उपसर्ग (2 अंक), प्रत्यय (2 अंक)		04	
	iv	शब्द-विचार -श्रुतिसम भिन्नार्थक शब्द - 2; पर्यायवाची - 2; विलोम - 2		06	
	v	अर्थ की दृष्टि से वाक्य भेद (2 अंक)		02	
3		पाठ्य पुस्तक स्पर्श भाग - 1			14
	अ	गद्य खंड- दो पठित गद्यांशों पर पाँच-पाँच बहुविकल्पी प्रश्न।		10	
	ब	काव्य खंड -पठित पद्यांश पर चार बहुविकल्पी प्रश्न।		04	
4		**आंतरिक मूल्याङ्कन**		10	10
	अ	सामयिक आकलन		3	
	ब	बहुविध आकलन		2	
	स	पोर्टफोलियो		2	
	द	श्रवण एवं वाचन		3	
		कुल			50

पाठ्यपुस्तक स्पर्श भाग -1 सत्र -1   2021-22 में निम्नलिखित पाठ सम्मिलित किए गए हैं –

गद्य - खंड	काव्य - खंड
यशपाल - दुःख का अधिकार	रैदास – अब कैसे छूटे राम ,नाम... - ऐसी लाल तुझ बिनु ...
बचेंद्री पाल - एवरेस्ट : मेरी शिखर यात्रा	रहीम - दोहे

परीक्षा भार विभाजन द्वितीय सत्र 2021 -22				
	विषयवस्तु		**उपभार**	**कुलभार**
1	पाठ्य पुस्तक स्पर्श भाग - 1		**08**	
	1	स्पर्श से निर्धारित पाठों के आधार पर विषय-वस्तु का ज्ञान बोध, अभिव्यक्ति आदि पर 25-30 शब्दों वाले तीन में दो प्रश्न पूछे जाएंगे। (2 अंक x 2 प्रश्न)	04	
	2	स्पर्श से निर्धारित पाठों के आधार पर विद्यार्थियों की उच्च चिंतन क्षमताओं एवं अभिव्यक्ति का आकलन करने हेतु 60-70 शब्दों वाला दो में से एक प्रश्न।	04	
	पूरक पाठ्यपुस्तक संचयन भाग - 1		**06**	**14**
	पूरक पाठ्यपुस्तक संचयन के निर्धारित पाठों से तीन में से दो प्रश्न पूछे जाएंगे जिनका उत्तर 40-50 शब्दों में देना होगा। (3 अंक x 2 प्रश्न)		06	
2	लेखन			
	अ	संकेत बिंदुओं पर आधारित समसामयिक एवं व्यावहारिक जीवन से जुड़े हुए किन्हीं तीन विषयों में से किसी एक विषय पर लगभग 150 शब्दों में अनुच्छेद। (6 अंक x1 प्रश्न)	6	
	ब	अनौपचारिक विषय से संबंधित लगभग 120 शब्दों में पत्र।(5 अंक x1 प्रश्न) (विकल्प सहित)	5	
	स	संदेश लेखन (शुभकामना, पर्व-त्योहारों एवं विशेष अवसरों पर दिए जाने वाले दो संदेश) (प्रत्येक लगभग 40 शब्दों में) (2.5 अंक x2 प्रश्न) (विकल्प सहित)	5	26
	द	किन्ही दो स्थितियों पर लगभग 40 शब्दों के दो संवाद लेखन (2.5 अंक x2 प्रश्न) (विकल्प सहित)	5	
	इ	नारा - लेखन- लगभग 10-20 शब्दों में विषय से संबंधित दो नारों का लेखन (2.5 अंक x2 प्रश्न) (विकल्प सहित)	5	
कुल				**40**
3	**आंतरिक मूल्याङ्कन**		10	10
	अ	सामयिक आकलन	3	
	ब	बहुविध आकलन	2	
	स	पोर्टफोलियो	2	
	द	श्रवण एवं वाचन	3	
कुल				**50**

सत्र -2   **2021-22** में निम्नलिखित पाठ सम्मिलित किए गए हैं –

गद्य – खंड

1. शरद जोशी - तुम कब जाओगे, अतिथि
2. गणेशशंकर विद्यार्थी - धर्म की आड़

काव्य - खंड

3. सियारामशरण गुप्त - एक फूल की चाह
4. अरुण कमल - खुशबू रचते हैं हाथ...

अनुपूरक पाठ्यपुस्तक संचयन भाग -1

1. महादेवी वर्मा - गिल्लू
2. स्मृति - श्रीराम शर्मा
3. एस.के.पोट्रेकाट - हामिद खाँ
4. मधुकर उपाध्याय - दिये जल उठे

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

कक्षा 10वीं हिंदी 'ब' परीक्षा हेतु पाठ्यक्रम विनिर्देशन 2021 -2022 प्रथम सत्र

		विषयवस्तु		उपभार	कुलभार
		परीक्षा भार विभाजन प्रथम सत्र			
1		अपठित गद्यांश (चिंतन क्षमता एवं अभिव्यक्ति कौशल पर बहुविकल्पात्मक प्रश्न पूछे जाएंगे)			10
	अ	चार अपठित गद्यांशों में से कोई दो गद्यांश करने होंगे| (200-250 शब्दों के) 2 गद्यांश (1अंक x 5 प्रश्न)		10	
2		**व्याकरण :पाठ्यपुस्तक में दिए गए भाषा-अध्ययन के आधार पर बहुविकल्पात्मक प्रश्न (1 अंक x16 प्रश्न)**			16
	1	पदबंध (5 में से किन्हीं 4 के उत्तर)		04	
	2	रचना के आधार पर वाक्य रूपांतरण (5 में से किन्हीं 4 के उत्तर)		04	
	3	समास (5 में से किन्हीं 4 के उत्तर)		04	
	4	मुहावरे (केवल 4 प्रश्न, सभी अनिवार्य)		04	
3		**पाठ्य पुस्तक स्पर्श भाग - 2**			14
		काव्य खंड पठित पद्यांश पर चार बहुविकल्पी प्रश्न।		04	
		गद्य खंड-दो पठित गद्यांशों पर पाँच-पाँच बहुविकल्पी प्रश्न।		10	
4		**आंतरिक मूल्याङ्कन**		10	10
		सामयिक आकलन		3	
		बहुविध आकलन		2	
		पोर्टफोलियो		2	
		श्रवण एवं वाचन		3	
		कुल			50

पाठ्यपुस्तक स्पर्श भाग -2 सत्र-1   2021-22 में निम्नलिखित पाठ सम्मिलित किए गए हैं –

पद्य - खंड	गद्य - खंड
कबीर - साखी	प्रेमचंद -बड़े भाई साहब
मीरा - पद	लीलाधर मंडलोई - तताँरा - वामीरो कथा
	निदा फ़ाज़ली - अब कहाँ दूसरे के दुख से दुखी होने वाले

		कक्षा 10वीं हिंदी 'ब' परीक्षा हेतु पाठ्यक्रम विनिर्देशन 2021 -2022 द्वितीय सत्र		
		विषयवस्तु	उपभार	कुलभार
1		पाठ्य पुस्तक स्पर्श भाग - 2	**08**	
	1	स्पर्श से निर्धारित पाठों के आधार पर विषय-वस्तु का ज्ञान बोध, अभिव्यक्ति आदि पर 25-30 शब्दों वाले तीन में दो प्रश्न पूछे जाएंगे। (2 अंक x 2 प्रश्न)	04	
	2	स्पर्श से निर्धारित पाठों के आधार पर विद्यार्थियों की उच्च चिंतन क्षमताओं एवं अभिव्यक्ति का आकलन करने हेतु 60-70 शब्दों वाला दो में से एक प्रश्न।	04	14
		पूरक पाठयपुस्तक संचयन भाग - 2	**06**	
		पूरक पाठयपुस्तक संचयन के निर्धारित पाठों से तीन में से दो प्रश्न पूछे जाएंगे जिनका उत्तर 40-50 शब्दों में देना होगा| (3 अंक x 2 प्रश्न)	06	
2		लेखन		
	अ	संकेत बिंदुओं पर आधारित समसामयिक एवं व्यावहारिक जीवन से जुड़े हुए किन्हीं तीन विषयों में से किसी एक विषय पर लगभग 150 शब्दों में अनुच्छेद| (6 अंक x1 प्रश्न) (विकल्प सहित)	6	
	ब	औपचारिक विषय से संबंधित लगभग 120 शब्दों पत्र।(5 अंक x1 प्रश्न) (विकल्प सहित)	5	
	स	व्यावहारिक जीवन से सम्बंधित विषयों पर आधारित दो सूचनाओं (प्रत्येक लगभग 50 शब्दों वाली) का लेखन। (2.5 अंक x2 प्रश्न) (विकल्प सहित)	5	26
	द	विषय से संबंधित दो विज्ञापनों (प्रत्येक लगभग 50 शब्दों वाला)का लेखन। (2.5 अंक x2 प्रश्न) (विकल्प सहित)	5	
	इ	लघुकथा लेखन लगभग 120 शब्दों में लघुकथा लेखन। (5 अंक x1 प्रश्न) (विकल्प सहित)	5	
3		**आंतरिक मूल्याङ्कन**		10
	अ	सामयिक आकलन	3	
	ब	बहुविध आकलन	2	
	स	पोर्टफोलियो	2	
	द	श्रवण एवं वाचन	3	
कुल				**50**

पाठ्यपुस्तक स्पर्श भाग - 2

सत्र-2 2021-22 में निम्नलिखित पाठ सम्मिलित किए गए हैं –

पद्य – खंड

1. मैथिलीशरण गुप्त - मनुष्यता
2. सुमित्रानंदन पंत - पर्वत प्रदेश में पावस
3. कैफ़ी आज़मी - कर चले हम फ़िदा

   गद्य - खंड

4. रवींद्र केलेकर - पतझर में टूटी पत्तियाँ : (ii) झेन की देन
5. हबीब तनवीर - कारतूस

अनुपूरक पाठ्यपुस्तक संचयन भाग - 2

1. मिथिलेश्वर - हरिहर काका
2. गुरदयाल सिंह - सपनों के - से दिन
3. राही मासूम रज़ा - टोपी शुक्ला

निर्धारित पुस्तकें :

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

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

MATHEMATICS (IX-X)

(CODE NO. 041)

Session 2021-22

Term-wise Syllabus

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 (2021-22)

FIRST TERM

One Paper

90 Minutes

NO.	UNIT NAME	MARKS
I	NUMBER SYSTEMS	8
II	ALGEBRA	5
III	COORDINATE GEOMETRY	4
IV	GEOMETRY	13
V	MENSURATION	4
VI	STATISTICS & PROBABILITY	6
	Total	40
	INTERNAL ASSESSMENT	10
	TOTAL	50

UNIT- NUMBER SYSTEMS

1. **NUMBER SYSTEM**

   Review of representation of natural numbers, integers, rational numbers on the number line. Rational numbers as recurring/ terminating decimals. Operations on real numbers.
   1. Examples of non-recurring/non-terminating decimals. Existence of non-rational numbers (irrational numbers) such as , $\sqrt{2},\sqrt{3}$ and their representation on the number
   2. Rationalization (with precise meaning) of real numbers of the type $\frac{1}{a+b\sqrt{x}}$ and $\frac{1}{\sqrt{x}+\sqrt{\sqrt{y}}}$ (and their combinations) where x and y are natural number and a and b are integers.
   3. 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.)

UNIT-ALGEBRA

2. LINEAR EQUATIONS IN TWO VARIABLES

Recall of linear equations in one variable. Introduction to the equation in two variables. Focus on linear equations of the type ax+by+c=0. 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. Graph of linear equations in two variables. Examples, problems from real life with algebraic and graphical solutions being done simultaneously

UNIT-COORDINATE GEOMETRY

3. COORDINATE GEOMETRY

The Cartesian plane, coordinates of a point, names and terms associated with the coordinate plane, notations, plotting points in the plane.

UNIT-GEOMETRY

4. LINES AND ANGLES

1. (Motivate) If a ray stands on a line, then the sum of the two adjacent angles so formed is 180˚ and the converse.

2. (Prove) If two lines intersect, vertically opposite angles are equal.

3. (Motivate) Results on corresponding angles, alternate angles, interior angles when a transversal intersects two parallel lines.

 4. (Motivate) Lines which are parallel to a given line are parallel.

5. (Prove) The sum of the angles of a triangle is 180˚.

6. (Motivate) If a side of a triangle is produced, the exterior angle so formed is equal to the sum of the two interior opposite angles.

5. TRIANGLES

1. (Motivate) Two triangles are congruent if any two sides and the included angle of one triangle is equal to any two sides and the included angle of the other triangle (SAS Congruence).

2. (Motivate) Two triangles are congruent if any two angles and the included side of one triangle is equal to any two angles and the included side of the other triangle (ASA Congruence).

3. (Motivate) Two triangles are congruent if the three sides of one triangle are equal to three sides of the other triangle (SSS Congruence).

 4. (Motivate) 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)

 5. (Prove) The angles opposite to equal sides of a triangle are equal.

 6. (Motivate) The sides opposite to equal angles of a triangle are equal.

7. (Motivate) The sides opposite to equal angles of a triangle are equal.

UNIT-MENSURATION

6. HERON'S FORMULA

Area of a triangle using Heron's formula (without proof)

UNIT-STATISTICS & PROBABILITY

7. STATISTICS

Introduction to Statistics: Collection of data, presentation of data — tabular form, ungrouped / grouped, bar graphs, histograms

INTERNAL ASSESSMENT	MARKS	TOTAL MARKS
Periodic Tests	3	
Multiple Assessments	2	
Portfolio	2	10
Student Enrichment Activities-practical work	3	

SECOND TERM

No.	UNIT NAME	MARKS
I	ALGEBRA(Cont.)	12
II	GEOMETRY(Cont.)	15
III	MENSURATION(Cont.)	9
IV	STATISTICS & PROBABILITY(Cont)	4
	Total	40
	INTERNAL ASSESSMENT	10
	TOTAL	50

UNIT-ALGEBRA

1. POLYNOMIALS

Definition of a polynomial in one variable, with examples and counter examples. Coefficients of a polynomial, terms of a polynomial and zero polynomial. Degree of a polynomial. Constant, linear, quadratic and cubic polynomials. Monomials, binomials, trinomials. Factors and multiples. Zeros of a polynomial. Factorization of $ax^2 + bx + c$, $a \neq 0$ where a, b and c are real numbers, and of cubic polynomials using the Factor Theorem.

Recall of algebraic expressions and identities. Verification of identities

$$(x + y + z)^2 = x^2 + y^2 + z^2 + 2xy + 2yz + 2zx$$
$$(x \pm y)^3 = x^3 \pm y^3 \pm 3xy (x \pm y)$$
$$x^3 \pm y^3 = (x \pm y)(x^2 \mp xy + y^2)$$

and their use in factorization of polynomials.

UNIT-GEOMETRY

2. QUADRILATERALS

1. (Prove) The diagonal divides a parallelogram into two congruent triangles.

2. (Motivate) In a parallelogram opposite sides are equal, and conversely.

3. (Motivate) In a parallelogram opposite angles are equal, and conversely.

4. (Motivate) A quadrilateral is a parallelogram if a pair of its opposite sides is parallel and equal.

5. (Motivate) In a parallelogram, the diagonals bisect each other and conversely.

6. (Motivate) In a triangle, the line segment joining the mid points of any two sides is parallel to the third side and in half of it and (motivate) its converse.

3. CIRCLES

Through examples, arrive at definition of circle and related concepts-radius, circumference, diameter, chord, arc, secant, sector, segment, subtended angle.

1. (Prove) Equal chords of a circle subtend equal angles at the centre and (motivate) its converse.

2. (Motivate) The perpendicular from the centre of a circle to a chord bisects the chord and conversely, the line drawn through the centre of a circle to bisect a chord is perpendicular to the chord.

3. (Motivate) Equal chords of a circle (or of congruent circles) are equidistant from the centre (or their respective centres) and conversely.

4. (Motivate) The angle subtended by an arc at the centre is double the angle subtended by it at any point on the remaining part of the circle.

5. (Motivate) Angles in the same segment of a circle are equal.

6. (Motivate) The sum of either of the pair of the opposite angles of a cyclic quadrilateral is 180° and its converse.

4. CONSTRUCTIONS

1. Construction of bisectors of line segments and angles of measure 60˚, 90˚, 45˚ etc., equilateral triangles.

2. Construction of a triangle given its base, sum/difference of the other two sides and one base angle.

UNIT-MENSURATION

5. SURFACE AREAS AND VOLUMES

Surface areas and volumes of cubes, cuboids, spheres (including hemispheres) and right circular cylinders/cones.

UNIT-STATISTICS & PROBABILITY

6. PROBABILITY

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; the experiments to be drawn from real - life situations, and from examples used in the chapter on statistics).

INTERNAL ASSESSMENT	MARKS	TOTAL MARKS
Periodic Tests	3	
Multiple Assessments	2	
Portfolio	2	10 marks for the term
Student Enrichment Activities-practical work	3	

COURSE STRUCTURE

CLASS –X (2021-22)

FIRST TERM

One Paper

90 Minutes

NO.	UNIT NAME	MARKS
I	NUMBER SYSTEMS	6
II	ALGEBRA	10
III	COORDINATE GEOMETRY	6
IV	GEOMETRY	6
V	TRIGONOMETRY	5
VI	MENSURATION	4
VII	STATISTICS & PROBABILITY	3
	Total	40
	INTERNAL ASSESSMENT	10
	TOTAL	50

INTERNAL ASSESSMENT	MARKS	TOTAL MARKS
Periodic Tests	3	
Multiple Assessments	2	
Portfolio	2	**10 marks for the term**
Student Enrichment Activities-practical work	3	

UNIT-NUMBER SYSTEMS

1. REAL NUMBER

Fundamental Theorem of Arithmetic - statements after reviewing work done earlier and after illustrating and motivating through examples. Decimal representation of rational numbers in terms of terminating/non-terminating recurring decimals.

UNIT-ALGEBRA

2. POLYNOMIALS

Zeroes of a polynomial. Relationship between zeroes and coefficients of quadratic polynomials only.

3. PAIR OF LINEAR EQUATIONS IN TWO VARIABLES

Pair of linear equations in two variables and graphical method of their solution, consistency/inconsistency. Algebraic conditions for number of solutions. Solution of a pair of linear equations in two variables algebraically - by substitution and by elimination. Simple situational problems. Simple problems on equations reducible to linear equations.

UNIT-COORDINATE GEOMETRY

4. COORDINATE GEOMETRY

LINES (In two-dimensions)

Review: Concepts of coordinate geometry, graphs of linear equations. Distance formula. Section formula (internal division)

UNIT-GEOMETRY

5. TRIANGLES

Definitions, examples, counter examples of similar triangles.

1. (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.

2. (Motivate) If a line divides two sides of a triangle in the same ratio, the line is parallel to the third side.

3. (Motivate) If in two triangles, the corresponding angles are equal, their corresponding sides are proportional and the triangles are similar.

4. (Motivate) If the corresponding sides of two triangles are proportional, their corresponding angles are equal and the two triangles are similar.

5. (Motivate) 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.

6. (Motivate) If a perpendicular is drawn from the vertex of the right angle of a right triangle to the hypotenuse, the triangles on each side of the perpendicular are similar to the whole triangle and to each other.

7. (Motivate) The ratio of the areas of two similar triangles is equal to the ratio of the squares of their corresponding sides.

8. (Prove) In a right triangle, the square on the hypotenuse is equal to the sum of the squares on the other two sides.

9. (Motivate) In a triangle, if the square on one side is equal to sum of the squares on the other two sides, the angle opposite to the first side is a right angle.

UNIT- TRIGONOMETRY

6. INTRODUCTION TO TRIGONOMETRY

Trigonometric ratios of an acute angle of a right-angled triangle. Proof of their existence (well defined). Values of the trigonometric ratios of 30^0, 45^0 and 60^0. Relationships between the ratios.

TRIGONOMETRIC IDENTITIES

Proof and applications of the identity $\sin^2 A + \cos^2 A = 1$. Only simple identities to be given

UNIT-MENSURATION

7. AREAS RELATED TO CIRCLES

Motivate the area of a circle; area of sectors and segments of a circle. 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° and 90° only. Plane figures involving triangles, simple quadrilaterals and circle should be taken.)

UNIT- STATISTICS & PROBABILITY

8. PROBABILITY

Classical definition of probability. Simple problems on finding the probability of an event.

SECOND TERM

NO.	UNIT NAME	MARKS
I	ALGEBRA(Cont.)	10
II	GEOMETRY(Cont.)	9
III	TRIGONOMETRY(Cont.)	7
IV	MENSURATION(Cont.)	6
V	STATISTICS & PROBABILITY(Cont.)	8
	Total	40
	INTERNAL ASSESSMENT	10
	TOTAL	50

UNIT-ALGEBRA
1. QUADRATIC EQUATIONS
(10) Periods
Standard form of a quadratic equation $ax2 + bx + c = 0$, $(a \neq 0)$. Solutions of quadratic equations (only real roots) by factorization, and by using quadratic formula. Relationship between discriminant and nature of roots. Situational problems based on quadratic equations related to day to day activities (problems on equations reducible to quadratic equations are excluded)

2. ARITHMETIC PROGRESSIONS
Motivation for studying Arithmetic Progression Derivation of the nth term and sum of the first n terms of A.P. and their application in solving daily life problems.
(Applications based on sum to n terms of an A.P. are excluded)

UNIT- GEOMETRY
3. CIRCLES
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.

4. CONSTRUCTIONS
1. Division of a line segment in a given ratio (internally).
2. Tangents to a circle from a point outside it.

UNIT-TRIGONOMETRY
5. SOME APPLICATIONS OF TRIGONOMETRY
HEIGHTS AND DISTANCES-Angle of elevation, Angle of Depression.
Simple problems on heights and distances. Problems should not involve more than two right triangles. Angles of elevation / depression should be only 30°, 45°, 60°.

UNIT-MENSURATION
6. SURFACE AREAS AND VOLUMES
1. Surface areas and volumes of combinations of any two of the following: cubes, cuboids, spheres, hemispheres and right circular cylinders/cones.
2. Problems involving converting one type of metallic solid into another and other mixed problems. (Problems with combination of not more than two different solids be taken).

UNIT-STATISTICS & PROBABILITY
7. STATISTICS

Mean, median and mode of grouped data (bimodal situation to be avoided). Mean by Direct Method and Assumed Mean Method only

INTERNAL ASSESSMENT	MARKS	TOTAL MARKS
Periodic Tests	3	
Multiple Assessments	2	
Portfolio	2	**10 marks for the term**
Student Enrichment Activities-practical work	3	

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.

SCIENCE

(Subject Code - 086)
Syllabus for Purpose of Examination 2021-22
CLASS – IX and X (2021-22)

The subject of Science plays an important role in developing well-defined abilities in cognitive, affective and psychomotor domains in children. It augments the spirit of enquiry, creativity, objectivity and aesthetic sensibility.

Upper primary stage demands that a number of opportunities should be provided to the students to engage them with the processes of Science like observing, hypothesizing, experimenting recording observations, drawing, tabulation, plotting graphs, analyze and drive conclusions etc., whereas the secondary stage also expects abstraction and quantitative reasoning to occupy a more central place in the teaching and learning of Science. Thus, the idea of atoms and molecules being the building blocks of matter makes its appearance, as does Newton's law of gravitation.

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. Special care has been taken to avoid the temptation of adding too many concepts than can be comfortably learnt in the given time frame. No attempt has been made to be comprehensive.

At this stage, while science is still a common subject, the disciplines of Physics, Chemistry and Biology begin to emerge. The students should be exposed to experiences based on hands - on activities as well as modes of reasoning that are typical of the subject.

General Instructions:

1. The total Theory Examinations (Term I+II) will be of 80 marks and 20 marks weightage shall be for Internal Assessment (Term I+II).

2. Internal Assessment - Maximum Marks 10 for each Term:
   a. There will be Periodic Assessment that would include:
      - Three periodic tests will be conducted by the school in the entire session. Average of the two periodic tests/marks of best periodic Test conducted in the Term is to be taken for consideration.
      - 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, enquiry based scientific investigations etc.
   b. Subject Enrichment in the form of Practical/Laboratory work should be done throughout the year and the student should maintain record of the same. Practical Assessment should be

continuous. All practicals listed in the syllabus must be completed.

c. Portfolio to be prepared by the student- This would include classwork and other sample of student work.

COURSE STRUCTURE
CLASS IX

EVALUATION SCHEME		
Theory		
Units	Term- I	Marks
I	Matter-Its Nature and Behaviour: Chapter - 2	09
II	Organization in the Living World: Chapter - 5 and 6	18
III	Motion, Force and Work: Chapter - 8 and 9	13
Units	Term - II	Marks
I	Matter-Its Nature and Behaviour: Chapter 3 and 4	18
II	Organization in the Living World: Chapter -13	08
III	Motion, Force and Work: 10 and 11	14
Total Theory (Term I+II)		80
Internal Assessment: Term I		10
Internal Assessment: Term II		10
Grand Total		100

TERM – I

Theme: Materials

Unit I: Matter- It's Nature and Behaviour

Chapter – 2 Is matter around us Pure

Nature of matter: Elements, compounds and mixtures. Heterogeneous and homogenous mixtures, colloids and suspensions.

Theme: The World of the Living

Unit II: Organization in the Living World

Chapter – 5 The Fundamental Unit of Life

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.

Chapter – 6 Tissues

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).

Theme: Moving Things, People and Ideas

Unit III: Motion, Force and Work

Chapter – 8 Motion

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, derivation of equations of motion by graphical method; elementary idea of uniform circular motion.

Chapter – 9 Force and Laws of 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. Elementary idea of conservation of Momentum.

TERM - II

Theme: Materials

Unit I: Matter- It's Nature and Behaviour

Chapter – 3 Atoms and Molecules

Particle nature and their basic units: Atoms and molecules, Law of constant proportions, Atomic and molecular masses. Mole concept: Relationship of mole to mass of the particles and numbers.

Chapter – 4 Structure of Atom

Structure of atoms: Electrons, protons and neutrons, valency, chemical formula of common compounds. Isotopes and Isobars.

Theme: Moving Things, People and Ideas

Unit III: Motion, Force and Work

Chapter – 10 Gravitation

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

Chapter – 11 Work and Energy

Work, energy and power: Work done by a Force, Energy, power; Kinetic and Potential energy; Law of conservation of energy.

Theme: The World of the Living

Unit II: Organization in the Living World

Chapter – 13 Why do we fall ill

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.

*****

ONLY FOR INTERNAL ASSESSMENT

*Note: **Learners are assigned to read the below listed part of Unit IV. They can be encouraged to prepare a brief write up on any one concept of this Unit in their Portfolio. This may be an assessment for Internal Assessment and credit may be given (Periodic assessment/Portfolio). This portion of the Unit is not to be assessed in the year-end examination.***

Theme: Natural Resources: Balance in nature

Unit IV: Our Environment

Chapter -14 Natural Resources

Physical resources: Air, Water, Soil. Air for respiration, for combustion, for moderating temperatures; movements of air and its role in bringing rains across India.

Air, water and soil pollution (brief introduction).Holes in ozone layer and the probable damages.

Bio-geo chemical cycles in nature: Water, Oxygen, Carbon and Nitrogen.

PRACTICALS

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

TERM-I

LIST OF EXPERIMENTS

1. Preparation of:

   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**Unit-I: (Chapter -2)**

2. Preparation of

   a) A mixture

   b) A compound

   using iron filings and sulphur powder and distinguishing between these on the basis of:

   i. appearance, i.e., homogeneity and heterogeneity

   ii. behaviour towards a magnet

    iii.   behaviour towards carbon disulphide as a solvent

    iv.   effect of heat**Unit-I:(Chapter-2)**

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

    a)   Iron with copper sulphate solution in water

    b)   Burning of magnesium ribbon in air

    c)   Zinc with dilute sulphuric acid

    d)   Heating of copper sulphate crystals

    e)   Sodium sulphate with barium chloride in the form of their solutions in water.

<div align="right">

Unit-I:(Chapter-2)
</div>

4.   Preparation of stained temporary mounts of (a) onion peel, (b) human cheek cells & to record observations and draw their labeled diagrams.   **Unit-II:(Chapter-5)**

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:(Chapter-6)**

<div align="center">

TERM-II
</div>

LIST OF EXPERIMENTS

1.   Determination of the density of solid (denser than water) by using a spring balance and a measuring cylinder.   **Unit-III:(Chapter–10)**

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

    a)   Tap water

    b)   Strongly salty water with the weight of water displaced by it by taking at least two different solids.**Unit-III:(Chapter–10)**

3.   Verification of the law of conservation of mass in a chemical reaction.**Unit-I:(Chapter–3)**

EVALUATION SCHEME		
THEORY		
Units	**Term - I**	**Marks**
I	Chemical Substances-Nature and Behaviour: Chapter 1,2 and 3	16
II	World of Living: Chapter 6	10
III	Natural Phenomena: Chapter 10 and 11	14
Units	**Term - II**	**Marks**
I	Chemical Substances-Nature and Behaviour: Chapter 4 and 5	10
II	World of Living: Chapter 8 and 9	13
IV	Effects of Current: Chapter 12 and 13	12
V	Natural Resources: Chapter 15	05
Total Theory (Term I+II)		**80**
Internal Assessment: Term I		**10**
Internal Assessment: Term II		**10**
Grand Total		**100**

TERM - I

Theme: Materials

Unit I: Chemical Substances - Nature and Behaviour

Chapter -1 Chemical reactions and equations

Chemical reactions: Chemical equation, Balanced chemical equation, implications of a balanced chemical equation, types of chemical reactions: combination, decomposition, displacement, double displacement, precipitation, neutralization, oxidation and reduction.

Chapter – 2 Acids, Bases and Salts

Acids, bases and salts: Their definitions in terms of furnishing of H^+ and OH^- ions, General properties, examples and uses, 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.

Chapter – 3 Metals and non – metals

Metals and nonmetals: Properties of metals and non-metals; Reactivity series; Formation and properties of ionic compounds.

Theme: The World of the Living

Unit II: World of Living

Chapter – 6 Life processes

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

Theme: How Things Work

Unit III: Natural Phenomena

Chapter – 10 Light – Reflection and Refraction

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.

Chapter – 11 Human eye and colourful world

Refraction of light through a prism, dispersion of light, scattering of light, applications in daily life.

TERM - II

Theme: Materials

Unit I: Chemical Substances - Nature and Behaviour

Chapter – 4 Carbon and its compounds

Carbon compounds: Covalent bonding in carbon compounds. Versatile nature of carbon.Homologous series.

Chapter – 5 Periodic classification of elements

Periodic classification of elements: Need for classification, early attempts at classification of elements (Dobereiner's Triads, Newland's Law of Octaves, Mendeleev's Periodic Table), Modern periodic table, gradation in properties, valency, atomic number, metallic and non-metallic properties.

Theme: The World of the Living

Unit II: World of Living

Chapter – 8 How do organisms reproduce?

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.

Chapter – 9 Heredity and Evolution

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

Theme: Natural Phenomena

Unit IV: Effects of Current

Chapter – 12 Electricity

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.

Chapter – 13 Magnetic effects of current

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, Electric Motor, Electromagnetic induction. Induced potential difference, Induced current. Fleming's Right Hand Rule.

Theme: Natural Resources

Unit V: Natural Resources

Chapter – 15 Our Environment

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

*****

ONLY FOR INTERNAL ASSESSMENT

Note: *Learners are assigned to read the below listed part of Unit V. They can be encouraged to prepare a brief write up on any one concept of this Unit in their Portfolio. This may be an assessment for Internal Assessment and credit may be given (Periodic assessment/Portfolio). This portion of the Unit is not to be assessed in the year-end examination.*

Chapter – 16 Management of natural resources: Conservation and judicious use of natural resources. Forest and wild life; Coal and Petroleum conservation.Examples of people's participation for conservation of natural resources. Big dams: advantages and limitations; alternatives, if any. Water harvesting.Sustainability of natural resources.

PRACTICALS

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

TERM-I

LIST OF EXPERIMENTS

1. A. Finding the pH of the following samples by using pH paper/universal indicator:

    (i)   Dilute Hydrochloric Acid
    (ii) Dilute NaOH solution
    (iii) Dilute Ethanoic Acid solution
    (iv) Lemon juice
    (v)   Water
    (vi) Dilute Hydrogen Carbonate solution

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

    a) Litmus solution (Blue/Red)
    b) Zinc metal
    c) Solid sodium carbonate**Unit–I:(Chapter-2)**

2. Performing and observing the following reactions and classifying them into:

    A. Combination reaction
    B. Decomposition reaction
    C. Displacement reaction
    D. Double displacement reaction

        (i)   Action of water on quicklime
        (ii) Action of heat on ferrous sulphate crystals
        (iii) Iron nails kept in copper sulphate solution
        (iv) Reaction between sodium sulphate and barium chloride solutions.
              Unit-I:(Chapter-1)

3. A. Observing the action of Zn, Fe, Cu and Al metals on the following salt solutions:

        (i) $ZnSO_4(aq)$
        (ii) $FeSO_4(aq)$
        (iii) $CuSO_4(aq)$
        (iv) $Al_2(SO_4)_3(aq)$

    B. Arranging Zn, Fe, Cu and Al (metals) in the decreasing order of reactivity based on the above result.**Unit-I :(Chapter-3)**

4. Experimentally show that carbon dioxide is given out during respiration.

    Unit-II:(Chapter-6)

5. Determination of the focal length of (i) Concave mirror and (ii) Convex lens by obtaining the image of a distant object. **Unit-III:(Chapter- 10)**

6. 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:(Chapter-10)**

7. Tracing the path of the rays of light through a glass prism. **Unit-III:(Chapter-11)**

TERM-II

LIST OF EXPERIMENTS

1. Studying the dependence of potential difference (V) across a resistor on the current (I) passing through it and determining its resistance. Also plotting a graph between V and I.
   Unit-IV:(Chapter-12)

2. Studying (a) binary fission in *Amoeba,* and (b) budding in yeast and Hydra with the help of prepared slides. **Unit-II:(Chapter-8)**

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

Assessment Areas (Theory) 2021-22
(Class X)
Science (086)

Theory   **TotalMaximum Marks: 80**

Competencies	Marks
Demonstrate Knowledge and Understanding	46 %
Application of Knowledge/Concepts	22 %
Analyze, Evaluate and Create	32 %

Note:

- Internal choice would be provided.

Internal Assessment – Term I and II (10 Marks each)

- **Periodic Assessment** - 03 marks
- **Multiple Assessment** – 02 marks
- **Subject Enrichment** (Practical Work) - 03 marks
- **Portfolio** - 02 marks

_____

SOCIAL SCIENCE
CLASS IX-X (2021-22)
CODE NO. (087)
TERM WISE CURRICULUM

Social Science is a compulsory subject up to secondary stage of school education. It is an integral component of general education because it helps the learners to understand the environment in its totality and developing a broader perspective and an empirical, reasonable and humane outlook. This is of crucial importance because it helps them grow into well-informed and responsible citizens with necessary attributes and skills for being able to participate and contribute effectively in the process of development and nation-building.

The Social Science curriculum draws its content mainly from History, Geography, Political Science and Economics. Some elements of Sociology and Commerce are also included. Together they provide a comprehensive view of society over space and time, and in relation to each other. Each subject's distinct methods of enquiry help the learners to understand society from different angles and form a holistic view.

Objectives

The main objectives of this syllabus are to:

- develop an understanding of the processes of change and development-both in terms of time and space, through which human societies have evolved
- make learners realise that the process of change is continuous and any event or phenomenon or issue cannot be viewed in isolation but in a wider context of time and space
- develop an understanding of contemporary India with its historical perspective, of the basic framework of the goals and policies of national development in independent India, and of the process of change with appropriate connections to world development
- deepen knowledge about and understanding of India's freedom struggle and of the values and ideals that it represented, and to develop an appreciation of the contributions made by people of all sections and regions of the country
- help learners understand and cherish the values enshrined in the Indian Constitution and to prepare them for their roles and responsibilities as effective citizens of a democratic society
- deepen the knowledge and understanding of India's environment in its totality, their interactive processes and effects on the future quality of people's lives
- facilitate the learners to understand and appreciate the diversity in the land and people of the country with its underlying unity
- develop an appreciation of the richness and variety of India's heritage-both natural and cultural and the need for its preservation

- promote an understanding of the issues and challenges of contemporary India-environmental, economic and social, as part of the development process
- help pupils acquire knowledge, skills and understanding to face the challenges of contemporary society as individuals and groups and learn the art of living a confident and stress-free life as well as participating effectively in the community
- develop scientific temperament by promoting the spirit of enquiry and following a rational and objective approach in analysing and evaluating data and information as well as views and interpretations
- develop academic and social skills such as critical thinking, communicating effectively both in visual and verbal forms - cooperating with others, taking initiatives and providing leadership in solving others' problems
- develop qualities clustered around the personal, social, moral, national and spiritual values that make a person humane and socially effective.

COURSE STRUCTURE
CLASS IX (2021-22)

TERM- I

			M. MARKS: 40
No.	**Units**	**No. of Periods**	**Marks**
I	India and the Contemporary World -1	17	10
II	Contemporary India – I	14	10
III	Democratic Politics – I	20	10
IV	Economics	20	10
	Total	**71**	**40**

TERM- II

			M. MARKS: 40
No.	**Units**	**No. of Periods**	**Marks**
I	India and the Contemporary World -1	34	10
II	Contemporary India – I	24	10
III	Democratic Politics – I	18	10
IV	Economics	10	10
	Total	**86**	**40**

COURSE CONTENT- IX

TERM- I	

Unit 1: India and the Contemporary World – I

Themes	Learning Objectives
Section 1: Events and Processes: (Theme one)	*In this theme students would get familiarized with distinct ideologies, extracts of speeches, political declarations, as well as the politics of caricatures, posters and engravings. Students would learn how to interpret these kinds of historical evidences.*
I. The French Revolution • French Society during the late eighteenth century • The Outbreak of the Revolution • France abolishes Monarchy and Becomes a Republic • Did Women have a Revolution? • The Abolition of Slavery • The Revolution and Everyday Life	• Familiarize with the names of people involved, the different types of ideas that inspired the revolution, the wider forces that shaped it. • Know the use of written, oral and visual material to recover the history of revolutions.

Unit 2: Contemporary India – I

Themes	Learning Objectives
1. India • Size and Location • India and the World • India's Neighbours	• Identify the location of India in the Indian subcontinent.
2. Physical Features of India • Major Physiographic Divisions	• Understand the major landform features and the underlying geological structure; their association with various rocks and minerals as well as nature of soil types.

Unit 3: Democratic Politics – I

Themes	Learning Objectives
1. What is Democracy? Why Democracy? • What is Democracy? • Features of Democracy • Why Democracy?	• Develop conceptual skills of defining democracy. • Understand how different historical processes and forces have promoted democracy.

Themes	Learning Objectives
• Broader Meaning of Democracy **2. Constitutional Design** • Why do we need a Constitution? • Making of the Indian Constitution • Guiding Values of the Indian Constitution	• Develop a sophisticated defence of democracy against common prejudices. • Develop a historical sense of the choice and nature of democracy in India. • Understand the process of Constitution making. • Develop respect for the Constitution and appreciation for Constitutional values. • Recognize Constitution as a dynamic and living document.

Unit 4: Economics

Themes	Learning Objectives
1. The Story of Village Palampur • Overview • Organization of production • Farming in Palampur • Non-farm activities of Palampur **2. People as Resource** • Overview • Economic activities by men and women • Quality of Population • Unemployment	• Familiarize with basic economic concepts through an imaginary story of a village. • Understand the demographic concepts. • Understand how population can be an asset or a liability for a nation.

TERM – I

SUBJECT - HISTORY

Chapter-1: The French Revolution

Outline Political Map of France

- Bordeaux
- Nantes
- Paris
- Marseilles

SUBJECT – GEOGRAPHY

Chapter -1: India-Size and Location

- India-States   with   Capitals, Tropic of Cancer, Standard   Meridian

Chapter -2: Physical Features of India

- **Mountain Ranges:** The Karakoram, The Zasker, The Shivalik, The Aravali, The Vindhya, The Satpura, Western & Eastern Ghats

- **Mountain Peaks** – K2, Kanchan Junga, Anai Mudi

- **Plateau -** Deccan Plateau, Chotta Nagpur Plateau, Malwa Plateau

- **Coastal Plains -** Konkan, Malabar, Coromandel & Northern Circar

COURSE CONTENT - IX

TERM II	
Unit 1: India and the Contemporary World – I	
Themes	**Learning Objectives**
Section 1: Events and Processes: (Theme two and three)	*In each of these two themes in this unit students would get familiarized with distinct ideologies, extracts of speeches, political declarations, as well as the politics of caricatures, posters and engravings. Students would learn how to interpret these kinds of historical evidences.*
II. Socialism in Europe and the Russian Revolution • The Age of Social Change • The Russian Revolution • The February Revolution in Petrograd • What Changed after October? • The Global Influence of the Russian Revolution and the USSR	• Explore the history of socialism through the study of Russian Revolution. • Familiarize with the different types of ideas that inspired the revolution.
III. Nazism and the Rise of Hitler • Birth of the Weimar Republic • Hitler's Rise to Power • The Nazi Worldview • Youth in Nazi Germany • Ordinary People and the Crimes Against Humanity	• Discuss the critical significance of Nazism in shaping the politics of modern world. • Get familiarized with the speeches and writings of Nazi Leaders.
Unit 2: Contemporary India – I	
Themes	**Learning Objectives**
3. Drainage • Major rivers and tributaries • Lakes • Role of rivers in the economy • Pollution of rivers *Note: Only Map Items as given in the Map List from this chapter to be evaluated in Examination.*	• Identify the river systems of the country and explain the role of rivers in the human society.
4. Climate • Concept • Climatic Controls • Factors influencing India's climate • The Indian Monsoon • Distribution of Rainfall • Monsoon as a unifying bond **5. Natural Vegetation and Wild Life** • Factors affecting Vegetation	• Identify various factors influencing the climate and explain the climatic variation of our country and its impact on the life of people. • Explain the importance and unifying role of monsoons.

• Vegetation types • Wild Life Conservation	• Explain the nature of diverse flora and fauna as well as their distribution. • Develop concern about the need to protect the biodiversity of our country.

Unit 3: Democratic Politics – I

Themes	Learning Objectives
3. Electoral Politics • Why Elections? • What is our System of Elections? • What makes elections in India democratic? **4. Working of Institutions** • How is the major policy decision taken? • Parliament • Political Executive • Judiciary	• Understand representative democracy via competitive party politics. • Familiarize with Indian electoral system. • Reason out for the adoption of present Indian Electoral System. • Develop an appreciation of citizen's increased participation in electoral politics. • Recognize the significance of the Election Commission. • Get an overview of central governmental structures. • Identify the role of Parliament and its procedures. • Distinguish between political and permanent executive authorities and functions. • Understand the parliamentary system of executive's accountability to the legislature. • Understand the working of Indian Judiciary.

Unit 4: Economics

Themes	Learning Objectives
3. Poverty as a Challenge • Two typical cases of poverty • Poverty as seen by Social Scientists • Poverty Estimates • Vulnerable Groups • Interstate disparities • Global Poverty Scenario • Causes of Poverty • Anti-poverty measures • The Challenges Ahead	• Understand poverty as a challenge. • Identify vulnerable group and interstate disparities. • Appreciate the initiatives of the government to alleviate poverty.

LIST OF MAP ITEMS
CLASS IX (2021-22)
TERM- II

SUBJECT - HISTORY

Chapter-2: Socialism in Europe and the Russian Revolution

Outline Political Map of World (For locating and labeling / Identification)

- **Major countries of First World War**

(Central Powers and Allied Powers)

Central Powers - Germany, Austria-Hungary, Turkey (Ottoman Empire)

Allied Powers - France, England, Russia, U.S.A.

Chapter-3: Nazism and Rise of Hitler

Outline Political Map of World (For locating and labeling / Identification)

- **Major countries of Second World War**

Axis Powers – Germany, Italy, Japan

Allied Powers – UK, France, Former USSR, USA

- **Territories under German expansion** (Nazi Power)

Austria, Poland, Czechoslovakia (only Slovakia shown in the map), Denmark, Lithuania, France, Belgium

SUBJECT – GEOGRAPHY (Outline Political Map of India)

Chapter -3: Drainage

- Rivers: (Identification only)
  - *The Himalayan River Systems*-The Indus, The Ganges, and The Satluj
  - *The Peninsular rivers*-The Narmada, The Tapi, The Kaveri, The Krishna, The Godavari, The Mahanadi
- Lakes: Wular, Pulicat, Sambhar, Chilika

Chapter - 4: Climate

- Areas receiving rainfall less than 20 cm and over 400 cm (Identification only)

Chapter - 5: Natural Vegetation and Wild Life

- Vegetation Type: Tropical Evergreen Forest, Tropical Deciduous Forest, Thorn Forest, Montane Forests and Mangrove- For identification only
- National Parks: Corbett, Kaziranga, Ranthambor, Shivpuri, Kanha, Simlipal & Manas
- Bird Sanctuaries: Bharatpur and Ranganthitto
- Wild Life Sanctuaries: Sariska, Mudumalai, Rajaji, Dachigam (Location and Labelling)

INTERNAL ASSESSMENT

	Marks	Description	
Periodic Assessment	10 Marks	Pen Paper Test	5 marks
		Assessment using multiple strategies For example, Quiz, Debate, Role Play, Viva, Group Discussion, Visual Expression, Interactive Bulletin Boards, Gallery Walks, Exit Cards, Concept Maps, Peer Assessment, Self-Assessment, etc.	5 marks
Portfolio	5 Marks	• Classwork and Assignments • Any exemplary work done by the student • 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	
Subject Enrichment Activity	5 Marks	• Project Work	
TOTAL	**20 MARKS**		

PROJECT WORK

CLASS IX (2021-22)

05 Marks
1. Every student has to compulsorily undertake one project on Disaster Management.

2. **Objectives**: The main objectives of giving project work on Disaster Management to the students are to:
  a. create awareness in them about different disasters, their consequences and management
  b. prepare them in advance to face such situations
  c. ensure their participation in disaster mitigation plans
  d. enable them to create awareness and preparedness among the community.

3. The project work should also help in enhancing the Life Skills of the students.
4. If possible, ***different forms of art*** may be integrated in the project work.

5. In order to realize the expected objectives completely, it would be required of the Principals / Teachers to muster support from various local authorities and organizations 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 Defense etc. in the area where the schools are located.

6. The distribution of marks over different aspects relating to Project Work is as follows:

S. No.	Aspects	Marks
a.	Content accuracy, originality and analysis	**2**
b.	Presentation and creativity	**2**
c.	Viva Voce	**1**

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

8. All documents pertaining to assessment under this activity should be meticulously maintained by the schools.

9. A Summary Report should be prepared highlighting:
   a. objectives realized through individual work and group interactions
   b. calendar of activities
   c. innovative ideas generated in the process (like comic strips, drawings, illustrations, script play etc.);
   d. list of questions asked in viva voce.

10. 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.

11. The Project Report should be handwritten by the students themselves.

12. The record of the project work (internal assessment) should be kept for a period of three months for verification, if any.

Note: Please procure latest reprinted edition of prescribed NCERT textbooks.

COURSE STRUCTURE
CLASS X (2021-22)

TERM - I

		M. MARKS: 40	
No.	Units	No. of Periods	Marks
I	India and the Contemporary World -1	12	10
II	Contemporary India – I	16	10
III	Democratic Politics – I	14	10
IV	Economics	20	10
	Total	**62**	**40**

TERM- II

		M. MARKS: 40	
No.	Units	No. of Periods	Marks
I	India and the Contemporary World -1	34	10
II	Contemporary India – I	19	10
III	Democratic Politics – I	14	10
IV	Economics	22	10
	Total	**89**	**40**

COURSE CONTENT - X

TERM- I	
Unit 1: India and the Contemporary World – II	
Themes	**Learning Objectives**
Section 1: Events and Processes 1. **The Rise of Nationalism in Europe** • The French Revolution and the Idea of the Nation • The Making of Nationalism in Europe • The Age of Revolutions: 1830-1848 • The Making of Germany and Italy • Visualizing the Nation • Nationalism and Imperialism	• Enable the learners to identify and comprehend the forms in which nationalism developed along with the formation of nation states in Europe in the post-1830 period. • Establish the relationship and bring out the difference between European nationalism and anti-colonial nationalisms. • Understand the way the idea of nationalism emerged and led to the formation of nation states in Europe and elsewhere.

Unit 2: Contemporary India – II	
Themes	**Learning Objectives**
1. Resources and Development • Types of Resources • Development of Resources • Resource Planning in India • Land Resources • Land Utilization • Land Use Pattern in India • Land Degradation and Conservation Measures • Soil as a Resource • Classification of Soils • Soil Erosion and Soil Conservation	• Understand the value of resources and the need for their judicious utilization and conservation.
3. Water Resources • Water Scarcity and The Need for Water Conservation and Management • Multi-Purpose River Projects and Integrated Water Resources Management • Rainwater Harvesting *Note: The theoretical aspect of chapter 'Water Resources' to be assessed in the Periodic Tests only and will not be evaluated in Board Examination. However, the map items of this chapter as listed will be evaluated in Board Examination.*	• Comprehend the importance of water as a resource as well as develop awareness towards its judicious use and conservation. • Identify different Dams in the country.
4. Agriculture • Types of farming • Cropping Pattern • Major Crops • Technological and Institutional Reforms • Impact of Globalization on Agriculture	• Explain the importance of agriculture in national economy. • Identify various types of farming and discuss the various farming methods; describe the spatial distribution of major crops as well as understand the relationship between rainfall regimes and cropping pattern. • Explain various government policies for institutional as well as technological reforms since independence.

Unit 3: Democratic Politics – II	
Themes	**Learning Objectives**
1. **Power Sharing** • Case Studies of Belgium and Sri Lanka • Why power sharing is desirable? • Forms of Power Sharing	• Familiarize with the centrality of power sharing in a democracy. • Understand the working of spatial and social power sharing mechanisms.
2. **Federalism** • What is Federalism? • What make India a Federal Country? • How is Federalism practiced? • Decentralization in India	• Analyse federal provisions and institutions. • Explain decentralization in rural and urban areas.

Unit 4: Economics	
Themes	**Learning Objectives**
1. **Development** • What Development Promises - Different people different goals • Income and other goals • National Development • How to compare different countries or states? • Income and other criteria • Public Facilities • Sustainability of development	• Familiarize with concepts of macroeconomics. • Understand the rationale for overall human development in our country, which includes the rise of income, improvements in health and education rather than income. • Understand the importance of quality of life and sustainable development.
2. **Sectors of the Indian Economy** • Sectors of Economic Activities • Comparing the three sectors • Primary, Secondary and Tertiary Sectors in India • Division of sectors as organized and unorganized • Sectors in terms of ownership: Public and Private Sectors	• Identify major employment generating sectors. • Reason out the government investment in different sectors of economy.

LIST OF MAP ITEMS
CLASS X (2021-22)
TERM – I

A. GEOGRAPHY

Chapter 1: Resources and Development

  a. Major soil Types

Chapter 3: Water Resources

Dams:

a. Salal
b. Bhakra Nangal
c. Tehri
d. Rana Pratap Sagar
e. Sardar Sarovar
f. Hirakud
g. Nagarjuna Sagar
h. Tungabhadra

Note: The theoretical aspect of chapter 'Water Resources' to be assessed in the Periodic Tests only and will not be evaluated in Board Examination. However, the map items of this chapter as listed above will be evaluated in Board Examination.

Chapter 4: Agriculture

  a. Major areas of Rice and Wheat
  b. Largest / Major producer States of Sugarcane, Tea, Coffee, Rubber, Cotton and Jute

COURSE CONTENT – X

TERM - II	
Unit 1: India and the Contemporary World – II	
Themes	**Learning Objectives**
Section 1: Events and Processes **2. Nationalism in India** • The First World War, Khilafat and Non - Cooperation • Differing Strands within the Movement • Towards Civil Disobedience • The Sense of Collective Belonging	• Recognize the characteristics of Indian nationalism through a case study of Non-Cooperation and Civil Disobedience Movement. • Analyze the nature of the diverse social movements of the time. • Familiarize with the writings and ideals of different political groups and individuals. • Appreciate the ideas promoting Pan Indian belongingness.
Section 2: Livelihoods, Economies and Societies Note: Any one theme of the following. The theme selected should be assessed in the periodic test only and will not be evaluated in the board examination**:** **3. The Making of a Global World** • The Pre-modern world • The Nineteenth Century (1815-1914) • The Inter war Economy • Rebuilding a World Economy: The Post-War Era **4. The Age of Industrialization** • Before the Industrial Revolution • Hand Labour and Steam Power • Industrialization in the colonies • Factories Come Up • The Peculiarities of Industrial Growth • Market for Goods	• Show that globalization has a long history and point to the shifts within the process. • Analyze the implication of globalization for local economies. • Discuss how globalization is experienced differently by different social groups. • Familiarize with the Pro- to-Industrial phase and Early – factory system. • Familiarize with the process of industrialization and its impact on labour class. • Enable them to understand industrialization in the colonies with reference to Textile industries.

Unit 2: Contemporary India – II	
Themes	**Learning Objectives**
5. Minerals and Energy Resources • What is a mineral? • Mode of occurrence of Minerals • Ferrous and Non-Ferrous Minerals • Non-Metallic Minerals • Rock Minerals • Conservation of Minerals • Energy Resources ○ Conventional and Non-Conventional • Conservation of Energy Resources Note: The theoretical aspect of chapter 'Minerals and Energy Resources' to be assessed in the Periodic Tests only and will not be evaluated in Board Examination. However, the map items of this chapter as given in the Map List will be evaluated in Board Examination	• Identify different types of minerals and energy resources and places of their availability • Feel the need for their judicious utilization
6. Manufacturing Industries • Importance of manufacturing • Contribution of Industry to National Economy • Industrial Location • Classification of Industries • Spatial distribution • Industrial pollution and environmental degradation • Control of Environmental Degradation	• Bring out the importance of industries in the national economy as well as understand the regional disparities which resulted due to concentration of industries in some areas. • Discuss the need for a planned industrial development and debate over the role of government towards sustainable development.
7. Life Lines of National Economy • Transport – Roadways, Railways, Pipelines, Waterways, Airways • Communication • International Trade • Tourism as a Trade	• Explain the importance of transport and communication in the ever-shrinking world. • Understand the role of trade and tourism in the economic development of a country.
Unit 3: Democratic Politics – II	
Themes	**Learning Objectives**
6. Political Parties	• Analyze party systems in democracies.

Themes	Learning Objectives
• Why do we need Political Parties? • How many Parties should we have? • National Political Parties • State Parties • Challenges to Political Parties • How can Parties be reformed? **7. Outcomes of Democracy** • How do we assess democracy's outcomes? • Accountable, responsive and legitimate government • Economic growth and development • Reduction of inequality and poverty • Accommodation of social diversity • Dignity and freedom of the citizens	• Introduction to major political parties, challenges faced by them and reforms in the country. • Evaluate the functioning of democracies in comparison to alternative forms of governments. • Understand the causes for continuation of democracy in India. • Distinguish between sources of strengths and weaknesses of Indian democracy.

Unit 4: Economics	
Themes	**Learning Objectives**
3. Money and Credit • Money as a medium of exchange • Modern forms of money • Loan activities of Banks • Two different credit situations • Terms of credit • Formal sector credit in India • Self Help Groups for the Poor **4. Globalization and the Indian Economy** • Production across countries • Interlinking production across countries • Foreign Trade and integration of markets • What is globalization? • Factors that have enabled Globalization • World Trade Organization • Impact of Globalization on India • The Struggle for a fair Globalization	• Understand money as an economic concept. • Understand the role of financial institutions from the point of view of day-to- day life. • Explain the working of the Global Economic phenomenon.

A. **HISTORY** (Outline Political Map of India)

Chapter - 2 Nationalism in India – (1918 – 1930) for Locating and Labelling / Identification

1. **Indian National Congress Sessions:**
   a. Calcutta (Sep. 1920)
   b. Nagpur (Dec. 1920)
   c. Madras (1927)
2. **Important Centres of Indian National Movement**
   a. Champaran (Bihar) - Movement of Indigo Planters
   b. Kheda (Gujarat) - Peasant Satyagrah
   c. Ahmedabad (Gujarat) - Cotton Mill Workers Satyagraha
   d. Amritsar (Punjab) - Jallianwala Bagh Incident
   e. Chauri Chaura (U.P.) - Calling off the Non-Cooperation Movement
   f. Dandi (Gujarat) - Civil Disobedience Movement

B. **GEOGRAPHY (**Outline Political Map of India)

Chapter 5: Minerals and Energy Resources

Power Plants-(Locating and Labelling only)
a. Thermal
- Namrup
- Singrauli
- Ramagundam

b. Nuclear
- Narora
- Kakrapara
- Tarapur
- Kalpakkam

Chapter 6: Manufacturing Industries (Locating and Labelling Only)
Cotton Textile Industries:
a. Mumbai
b. Indore
c. Surat
d. Kanpur
e. Coimbatore

Iron and Steel Plants:
a. Durgapur
b. Bokaro
c. Jamshedpur
d. Bhilai
e. Vijaynagar
f. Salem

Software Technology Parks:
a. Noida
b. Gandhinagar
c. Mumbai
d. Pune
e. Hyderabad
f. Bengaluru
g. Chennai
h. Thiruvananthapuram

Chapter 7: Lifelines of National Economy
Major Ports: (Locating and Labelling)

a. Kandla
b. Mumbai
c. Marmagao
d. New Mangalore
e. Kochi
f. Tuticorin
g. Chennai
h. Vishakhapatnam
i. Paradip
j. Haldia

International Airports:

a. Amritsar (Raja Sansi)

b. Delhi (Indira Gandhi International)

c. Mumbai (Chhatrapati Shivaji)

d. Chennai (Meenam Bakkam)

e. Kolkata (Netaji Subhash Chandra Bose)

f. Hyderabad (Rajiv Gandhi)

INTERNAL ASSESSMENT

	Marks	Description
Periodic Assessment	10 Marks	<table><tr><td>Pen Paper Test</td><td>**5 marks**</td></tr><tr><td>Assessment using multiple strategies For example, Quiz, Debate, Role Play, Viva, Group Discussion, Visual Expression, Interactive Bulletin Boards, Gallery Walks, Exit Cards, Concept Maps, Peer Assessment, Self-Assessment, etc.</td><td>**5 marks**</td></tr></table>
Portfolio	5 Marks	• Classwork and Assignments • Any exemplary work done by the student • 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
Subject Enrichment Activity	5 Marks	• Project Work
TOTAL	**20 MARKS**	

PROJECT WORK
CLASS X (2021-22)

1. ***Every student*** has to compulsorily undertake ***any one project*** on the following topics:

<div align="center">

Consumer Awareness
OR
Social Issues
OR
Sustainable Development

</div>

2. **Objective:** The overall 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 interdisciplinary perspective. It should also help in enhancing the Life Skills of the students.

Students are expected to apply the Social Science concepts that they have learnt over the years in order to prepare the project report.

If required, students may go out for collecting data and use different primary and secondary resources to prepare the project. If possible, ***different forms of Art*** may be integrated in the project work.

S. No.	Aspects	Marks
a.	Content accuracy, originality and analysis	**2**
b.	Presentation and creativity	**2**
c.	Viva Voce	**1**

3. The distribution of marks over different aspects relating to Project Work is as follows:

4. The projects carried out by the students in different topics should subsequently be shared among themselves through interactive sessions such as exhibitions, panel discussions, etc.

5. All documents pertaining to assessment under this activity should be meticulously maintained by concerned schools.

6. A Summary Report should be prepared highlighting:
- objectives realized through individual work and group interactions;
- calendar of activities;

- innovative ideas generated in the process (like comic strips, drawings, illustrations, script play etc.);
- list of questions asked in viva voce.

7. 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.

8. The Project Report should be handwritten by the students themselves.

9. 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 Board. Subjudiced cases, if any or those involving RTI / Grievances may however be retained beyond three months.

PRESCRIBED BOOKS:

1. India and the Contemporary World-II (History) - Published by NCERT
2. Contemporary India II (Geography) - Published by NCERT
3. Democratic Politics II (Political Science) - Published by NCERT
4. Understanding Economic Development - Published by NCERT
5. Together Towards a Safer India - Part III, a textbook on Disaster Management - Published by CBSE
6. Learning Outcomes at the Secondary Stage – Published by NCERT

Note: Please procure latest reprinted edition of prescribed NCERT textbooks.

CBSE | DEPARTMENT OF SKILL EDUCATION

CURRICULUM FOR SESSION 2021-2022

INFORMATION TECHNOLOGY (CODE – 402)

JOB ROLE: DOMESTIC DATA ENTRY OPERATOR

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, they are responsible for organizing files, collecting and managing data to be entered into the computer. They are also responsible for security of data and safeguard 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:
  - o Data Entry and Keyboarding skills
  - o The concept of Digital Documentation
  - o The concept of Digital Presentation
  - o The concept of Electronic Spreadsheet
  - o The concept of Databases
  - o 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 2021-2022)
Total Marks: 100 (Theory-50 + Practical-50)

	TERM	UNITS	NO. OF HOURS for Theory and Practical 200		MAX. MARKS for Theory and Practical 100
Part A		**Employability Skills**			
	TERM I	Unit 1 : Communication Skills-I	10		5
		Unit 2 : Self-Management Skills-I	10		
		Unit 3 : ICT Skills-I	10		
	TERM II	Unit 4 : Entrepreneurial Skills-I	15		5
		Unit 5 : Green Skills-I	05		
		Total	**50**		**10**
Part B		**Subject Specific Skills**	**Theory (In Hours)**	**Practical (In Hours)**	**Marks**
	TERM I	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
	TERM II	Unit 4:Electronic Spreadsheet	18	35	10
		Unit 5: Digital Presentation	10	31	10
		Total	**44**	**106**	**40**
Part C		**Practical Work**			
		Practical Examination			15
		Written Test			10
		Viva Voce			10
		Total			**35**
Part D		**Project Work/Field Visit**			
		Practical File/ Student Portfolio			10
		Viva Voce			05
		Total			**15**
		GRAND TOTAL	**200**		**100**

DETAILED CURRICULUM/TOPICS:

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: Basic Information and Communication Technology Skills-I	10
4.	Unit 4: Entrepreneurial Skills-I	15
5.	Unit 5: Green Skills-I	05
	TOTAL	**50**

NOTE: For 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		
S. No.	LEARNING OUTCOMES	THEORY	PRACTICAL
1	Appreciate the applications of IT	• Introduction to IT and ITeS, BPO services, • BPM industry in India, • Structure of the IT-BPM industry, • 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,	- Identify and list the various IT enabled services, Observe the application of IT in various areas.

UNIT 2: DATA ENTRY AND KEYBOARDING SKILLS

S. No.	LEARNING OUTCOMES	THEORY	PRACTICAL
1.	Use keyboard and mouse for data entry	• Keyboarding Skills, • Types of keys on keyboard, Numeric keypad, • Home keys, Guide keys, • Typing and deleting text, • Typing ergonomics, • Positioning of fingers on the keyboard, Allocation of keys to fingers on four different rows, • Pointing device – Mouse, Mouse operations.	• Identify the keys and its use on the keyboard, • Demonstrate to use various keys on the keyboard, • Demonstrate to type the text, numbers, special character using appropriate keys on the keyboard, • Practice the correct typing ergonomics, • Practice to place fingers on correct key in four different row of keyboard, • Practice various mouse operations.
2.	Use typing software	• Introduction to Rapid Typing Tutor, • Touch typing technique, • User interface of Typing Tutor, • Typing text and interpret results, • Working with lesson editor, • Calculating typing speed, • Typing rhythm.	• Identify the user interface of • typing tutor, • Practice to type text in typing tutor software and interpret the results, • Practice to work in lesson editor, • Calculate the typing speed, ☐ Practice to improve typing • Using typing tutor software.

UNIT 3: DIGITAL DOCUMENTATION

S. No.	LEARNING OUTCOMES	THEORY	PRACTICAL
1.	Create a document using a word processor	• Introduction to word processing, • Word processing applications, • Introduction to Word Processing tool • Creating a document, Parts of a Word Processor Window, • Cursor and mouse pointer.	• List the available word processing applications. • Introduce with the parts of the main window. • Change document views. • Start a new document. • Open an existing document. • Save a document. • Close a document. • Use the Navigator.
2.	Apply Editing features	• Text editing – Undo and Redo, • Moving and copying text, • Copy and Paste, • Selecting text, • Selection criteria, • Selecting non-consecutive text items, • Selecting a vertical block of • text, • Find and replace option, • Jumping to the page number, • Non-printing characters, • Checking spelling and grammar, • Using Synonyms and Thesaurus.	• Type some text in the document and edit it, • Demonstrate to use undo and redo option, • Use the keyboard and mouse options to select, cut, copy, paste, and move text. • Demonstrate to select nonconsecutive text items, vertical block of text, • Search the word from the text and replace it with another word. • Jump to the given page number in a document, • Insert non-printing characters in a document, • Check spelling and grammar and apply the changes to the document. • Demonstrate to use Synonyms and Thesaurus.

S.NO.	LEARNING OUTCOMES	THEORY	PRACTICAL
3.	Apply formatting features	• Page style dialog, • Formatting text – Removing manual formatting, • Common text formatting, • Changing text case, • Superscript and Subscript, • Formatting paragraph – Indenting paragraphs, • Aligning paragraphs, Font colour, highlighting, and background colour, • Using bullets and numbering, • Assigning colour, border and background to paragraph • Page formatting – setting up basic page layout using styles, Inserting page break, • Creating header/footer and page numbers, • Defining borders and backgrounds, • Inserting images shapes, special characters in a document, • Dividing page into columns, • Formatting the shape or image.	• Apply various text formatting options for the text, • Demonstrate to format paragraphs – indent/align paragraphs, assign font colour, highlighting, and background colour, • Assign number or bullets to the lists items, • Demonstrate to assign colour, border and background to paragraph, • Demonstrate the page formatting – set up basic page layout using styles, • Insert page break, Create header/footer and page numbers, • Define borders and backgrounds • Insert images, shapes, special characters in a document, ☐ Divide page into columns, • Format the shape or image.
4.	Create and work with tables	• Creating table in Word Processor, • Inserting row and column in a table, • Deleting rows and columns, • Splitting and merging tables, • Deleting a table, ☐ Copying a table, • Moving a table.	• Demonstrate and do the following in Word Processor: • Create table, • Insert and delete rows and column in a table, • Split and merge tables, • Delete a table, • Copy or move from one location to another location of document.
5.	Use Print Options	• Printing options in Word Processor. • Print preview, • Controlling printing, • Printing all pages, single and multiple pages.	• Demonstrate to print the document, selected pages in the document • Print the document with various options, • Preview pages before printing.

S. No.	LEARNING OUTCOMES	THEORY	PRACTICAL
6.	Understand and apply mail merge	• Concept of mail merge in word processing, • Creating a main document, • Creating the data source, • Entering data in the fields, Merging the data source with main document, • Editing individual document, Printing the merged letter, Saving the merged letter.	• Demonstrate to print the letters using mail merge, Do the following to achieve • Create a main document, • Create the data source, • Enter data in the fields, • Merge the data source with main document, • Edit individual document, ☐ Print the merged letter, • Save the merged letter.

UNIT 4: ELECTRONIC SPREADSHEET

S. No.	LEARNING OUTCOMES	THEORY	PRACTICAL
1.	Create a Spreadsheet	• Introduction to spreadsheet application, • Starting a spreadsheet, • Parts of a spreadsheet • Worksheet – Rows and columns, Cell and cell address, • Range of cell – column range, row range, row and column range.	• Start the spreadsheet, • Identify the parts of Calc, • Identify the rows number, column number, cell address, • Define the range of cell, • Identify row range, column range, row & column range

2.	Apply formula and functions in spreadsheet	• Different types of data, • Entering data – Label, Values, Formula • Formula, how to enter formula, • Mathematical operators used in formulae, • Simple calculations using values and operators, • Formulae with cell addresses and operators, • Commonly used basic functions in a spreadsheet – SUM, AVERAGE, MAX, MIN, Count • Use of functions to do calculations.	• Demonstrate to enter the text, numeric data in a cell, • Identify the label, values and formula in the cell, • Demonstrate to enter formula in a cell, • Construct the formula using mathematical operators, • Identify formulae with cell addresses and operators, • Identify the correct syntax of formula, • Use the basic functions to perform calculations on data.
3.	Format data in the spreadsheet	• Formatting tool, • Use of dialog boxes to format values, • Formatting a range of cells with decimal places, • Formatting a range of cells to be seen as labels, • Formatting of a cell range as scientific, • Formatting a range of cells to display times, • Formatting alignment of a cell range, • Speeding up data entry using the fill handle, • Uses of fill handle to copy formulae.	• Identify the formatting tool, • Demonstrate to use of dialog boxes to format values, • Demonstrate to format range of cells with decimal places, • Demonstrate to format a range of cells to labels, • Demonstrate to format of a cell range as scientific, • Demonstrate to format a range of cells to display time, • Demonstrate to align cell data range, • Demonstrate to create • number series using fill handle, • Copy formula by dragging the formula using fill handle.
4.	Understand and apply Referencing	• Concept of referencing, • Relative referencing, ☐ Mixed referencing, • Absolute referencing.	• Demonstrate to use Relative referencing in spreadsheet, • Demonstrate to use Mixed referencing in spreadsheet, • Demonstrate to use Absolute referencing in spreadsheet.
5.	Create and insert different types of charts in a spreadsheet	• Importance of chart in spreadsheet, • Types of chart, Example of chart.	• Create different types of chart supported by a spreadsheet, • Illustrate the example of chart in a spreadsheet.

UNIT 5: DIGITAL PRESENTATION

S. No.	LEARNING OUTCOMES	THEORY	PRACTICAL
1.	Understand features of an effective presentation	• Concept of presentation, • Elements of presentation, • Characteristics of an effective presentation	• Identify and list the elements of presentation, • List the characteristics of an effective presentation.
2.	Create a presentation	• Introduction to presentation software, • Starting a presentation tool, • Parts of a presentation tool window, • Closing the presentation tool, • Creating a presentation using template, • Selecting slide layout, • Saving a presentation, • Running a slide show, • Save a presentation in PDF, ☐ Closing a presentation, ☐ Using Help.	• Start the presentation application • various components of main Impress window • Observe the different workspace views. • Create a new presentation using wizard. • Run the presentation, • Save the presentation, • Close the presentation, • Demonstrate to use Help in presentation.
3.	Work with slides	• Inserting a duplicate slide, • Inserting new slides, • Slide layout, Copying and moving slides, • Deleting and renaming slides in presentation, • Copying, moving and deleting contents of slide, • View a presentation, • Controlling the size of the view, • Workspace views – Normal, Outline, Notes, Slide sorter view.	• Demonstrate to insert a new slide and duplicate slide in a presentation, • Change the slide layout, • Demonstrate to copy and move slides in the presentation, • Demonstrate to copy, move and delete contents of the slide, • Demonstrate to view a presentation in different views.

S. No.	LEARNING OUTCOMES	THEORY	PRACTICAL
4.	Format text and apply animations	• Formatting toolbar, • Various formatting features, • Text alignment, • Bullets and numbering. • Custom Animation	• Identify and list the various options in formatting toolbar, • Apply the appropriate formatting option • Align the text in presentation, • Apply bullets and numbering to the list items in presentation. ☐ Apply Animation
5.	Create and use tables	• Inserting tables in presentation, • Entering and editing data in a table, • Selecting a cell, row, column, table, • Adjusting column width and row height, • Table borders and background	Demonstrate the following: • Insert table in presentation, • Enter and edit data in a table, • Select a cell, row, column, table, • Adjust column width and row height, • Assign table borders and background.
6.	Insert and format image in presentation	• Inserting an image from a file, • Inserting an image from the gallery, • Formatting images, • Moving images, • Resizing images, • Rotating images, • Formatting using the Image toolbar, • Drawing graphic objects – line, shapes, • Grouping and un-grouping objects	• Demonstrate to insert an image from file, gallery in presentation, • Apply formatting options to image in presentation, • Demonstrate to move, resize and rotate images, • Apply formatting options of Image toolbar, • Drawing line, shapes using graphic objects, • Demonstrate to group and ungroup objects.
7.	Work with slide master	• Slide masters, • Creating the slide masters, • Applying the slide masters to all slide, • Adding transitions.	• Create the slide masters, • Apply the slide masters to the • presentation, • Add transitions to presentation.

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
A	HARDWARE	
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	SOFTWARE	
1.	Operating System Linux and Windows	
2.	Anti-Virus Latest version	
3.	Productivity Suite, Example – Open Office, Google Suite etc.	
C	FURNITURE	
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 **OR** Bachelor Degree in Computer Application/ Science/ Information Technology (BCA, B. Sc. Computer Science/ Information Technology) **OR** Graduate with PGDCA OR DOEACC A Level Certificate. The suggested qualification is the minimum criteria. However higher qualifications will also be acceptable.	• The candidate should have a minimum of 1 year of work experience in the same job role. • S/He should be able to communicate in English and local language. • S/He should have knowledge of equipment, tools, material, Safety, Health & Hygiene.	• 18-37 years (as on Jan. 01 (year)) • Age relaxation to be provided as per Govt. rules

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 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 2021-2022

INFORMATION TECHNOLOGY (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 daily hour bases. The individual is responsible for electronic entry of data from the client side to the office site or viceversa. Individual tasks vary depending on the size and structure of the organization. This job requires the individual to have 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 OUTCOME:

On completion of the course, students should be able to:

- Apply effective oral and written communication skills to interact with people and customers;
- Identify the principal components of a computer system; Demonstrate the basic skills of using computer;
- Demonstrate self-management skills;
- Demonstrate the ability to provide a self-analysis in context of entrepreneurial skills and abilities;
- Demonstrate the knowledge of the importance of green skills in meeting the challenges of sustainable development and environment protection; □   Work safely on computer.
- Start the computer.
- Open and use the related software.
- Exit from the software.
- Shut down the computer.
- Use the computer for data entry process.
- Collect all necessary information about the query.
- Log any decision about the query on the data entry tracking form.
- Follow Rules and guidelines for data entry.
- Handle queries.
- Undertake data entry with speed and accuracy.
- Identify and control hazards in the workplace that pose a danger or threat to their safety or health, or that of others.

COURSE OBJECTIVES:

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:

  o   Data Entry and Keyboarding skills
  o   The concept of Digital Documentation
  o   The concept of Digital Presentation
  o   The concept of Electronic Spreadsheet
  o   The concept of Databases
  o   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

CLASS – X SESSION 2021-2022
Total Marks: 100 (Theory-50+Practical-50)

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 X opting for skill subject along with other subjects. The unit-wise distribution of hours and marks for class X is as follows: z

INFORMATION TECHNOLOGY (402) Class X
(Session 2021-22)

<table>
<tr><td></td><td>TERM</td><td>UNITS</td><td colspan="2">NO. OF HOURS
for Theory and
Practical 200</td><td>MAX. MARKS
for Theory and
Practical 100</td></tr>
<tr><td rowspan="6">Part A</td><td colspan="5">Employability Skills</td></tr>
<tr><td rowspan="3">TERM I</td><td>Unit 1 : Communication Skills-II</td><td colspan="2">10</td><td rowspan="3">5</td></tr>
<tr><td>Unit 2 : Self-Management Skills-II</td><td colspan="2">10</td></tr>
<tr><td>Unit 3 : Information and Communication Technology Skills-II</td><td colspan="2">10</td></tr>
<tr><td rowspan="2">TERM II</td><td>Unit 4 : Entrepreneurial Skills-II</td><td colspan="2">15</td><td rowspan="2">5</td></tr>
<tr><td>Unit 5 : Green Skills-II</td><td colspan="2">05</td></tr>
<tr><td colspan="2">Total</td><td colspan="2">50</td><td>10</td></tr>
<tr><td rowspan="6">Part B</td><td colspan="2">Subject Specific Skills</td><td>Theory
(In Hours)</td><td>Practical
(In Hours)</td><td>Marks</td></tr>
<tr><td rowspan="3">TERM I</td><td>Unit 1: Digital Documentation (Advanced)</td><td>12</td><td>18</td><td>8</td></tr>
<tr><td>Unit 2: Electronic Spreadsheet (Advanced)</td><td>15</td><td>23</td><td>10</td></tr>
<tr><td>Unit 3: Database Management System</td><td>04</td><td>07</td><td>02</td></tr>
<tr><td rowspan="2">TERM II</td><td>Unit 3: Database Management System</td><td>14</td><td>20</td><td>10</td></tr>
<tr><td>Unit 4: Web Applications and Security</td><td>15</td><td>22</td><td>10</td></tr>
<tr><td colspan="2">Total</td><td>60</td><td>90</td><td>40</td></tr>
<tr><td rowspan="3">Part C</td><td colspan="5">Practical Work</td></tr>
<tr><td colspan="4">Practical Examination
• Advanced Documentation: 5 Marks
• Advanced Spreadsheets: 5 Marks
• Databases : 10 Mark</td><td>20</td></tr>
<tr><td colspan="4">Viva Voce</td><td>10</td></tr>
<tr><td colspan="2">Total</td><td colspan="2"></td><td>30</td></tr>
</table>

Part D		**Project Work/Field Visit** 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
		PORTFOLIO/ PRACTICAL FILE: (Portfolio should contain printouts of the practical done using Writer, Calc and Base with minimum 5 problems of each)		10
		Total		**20**
		GRAND TOTAL	**200**	**100**

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-II	10
4.	Unit 4: Entrepreneurial Skills-II	15
5.	Unit 5: Green Skills-II	05
	TOTAL DURATION	**50**

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

Part-B – SUBJECT SPECIFIC SKILLS

S. No.	Units	Duration in Hours
1.	Unit 1: Digital Documentation (Advanced)	30
2.	Unit 2: Electronic Spreadsheet (Advanced)	38
3.	Unit 3: Database Management System	45
4.	Unit 4: Web Applications and Security	37
	TOTAL DURATION	**150**

	UNIT 1: DIGITAL DOCUMENTATION (ADVANCED)		
S. No.	**LEARNING OUTCOMES**	**THEORY**	**PRACTICAL**
1.	Create and Apply Styles in the document	• Styles/ categories in Word Processor • Styles and Formatting window. • Fill Format. • Creating and updating new style from selection • Load style from template or another document. • Creating a new style using drag-and-drop. • Applying styles.	• List style categories. Select the style from the Styles and Formatting window. • Use Fill Format to apply a style to many different areas quickly. • Create and update new style from a selection. • Load a style from a template or another document. • Create a new style using drag-and drop.
S. No.	**LEARNING OUTCOMES**	**THEORY**	**PRACTICAL**
2.	Insert and use images in document	• Options to insert image to document from various sources. • Options to modify, resize, crop and delete an image. Drawing objects and its properties. • Creating drawing objects and changing its properties. Resizing and grouping drawing objects. • Positioning image in the text.	• Insert an image to document from various sources. • Modify, resize, crop and delete an image. • Create drawing objects • Set or change the properties of a drawing object • Resize and group drawing objects • Position the image in the text

3.	Create and use template	• Templates. • Using predefined templates. • Creating a template. • Set up a custom default template. • Updating a document. • Changing to a different template. • Using the Template.	• Create a template. • Use predefined templates. • Set up a custom default template. • Update a document. • Change to a different template. • Use the Template.
4.	Create and customize table of contents	• Table of contents. Hierarchy of headings. Customization of table of contents. • Character styles. Maintaining a table of contents.	• Create table of contents. Define a hierarchy of headings. • Customize a table of contents. • Apply character styles. Maintain a table of contents.
5	Implement Mail Merge	• Advance concept of mail merge in word processing, • Creating a main document, • Creating the data source, • Entering data in the fields, • Merging the data source with main document, • Editing individual document, • Printing a letter and its address label	• Demonstrate to print the label using mail merge, do the following to achieve • Create a main document, • Create the data source, • Enter data in the fields, • Merge the data source with main document, • Edit individual document, • Print the letter and address label

S. No.	LEARNING OUTCOMES	THEORY	PRACTICAL
		UNIT 2: ELECTRONIC SPREADSHEET (ADVANCED)	
1.	Analyse data using scenarios and goal seek.	• Using consolidating data. Creating subtotals. • Using "what if" scenarios. Using "what if" tools • Using goal seek and solver.	• Use consolidating data Create subtotals • Use "what if" scenarios Use "what if" tools • Use goal seek and solver

2.	Link data and spreadsheets	• Setting up multiple sheets. Creating reference to other sheets by using keyboard and mouse.
		• Creating reference to other document by using keyboard and mouse.
		• Relative and absolute hyperlinks
		• Hyperlinks to the sheet.
		  o Linking to external data.
		  o Linking to registered data sources.
			• Setup multiple sheets by inserting new sheets.
			• Create reference to other sheets by using keyboard and mouse.
			• Create reference to other document by using keyboard and mouse.
			• Create, Edit and Remove hyperlinks to the sheet.
			• Link to external data.
			• Link to registered data source.

3.	Share and review a spreadsheet	• Setting up a spreadsheet for sharing. • Opening and saving a shared spreadsheet. Recording changes. • Add, Edit and Format the comments. • Reviewing changes – view, accept or reject changes. Merging and comparing.	• Set up a spreadsheet for sharing. • Open and save a shared spreadsheet. • Record changes. • Add, Edit and Format the comments. • Review changes – view, accept or reject changes. • Merge and compare sheets.
4.	Create and Use Macros in spreadsheet	• Using the macro recorder. Creating a simple macro. Using a macro as a function. • Passing arguments to a macro. • Passing the arguments areas values. • Macros to work like built-in functions. • Accessing cells directly. • Sorting the columns using macro.	• Use the macro recorder. Create a simple macro. Use a macro as a function. • Pass arguments to a macro. • Pass the arguments are as values. • Write macros that act like built-in functions • Access cells directly. • Sort the columns using macro.

UNIT 3: DATABASE MANAGEMENT SYSTEM			
S. No.	LEARNING OUTCOMES	THEORY	PRACTICAL
1.	Appreciate the concept of Database Management System	• Concept and examples of data and information, • Concept of database, • Advantages of database, • Features of database, • Concept and examples of Relational database, • Concept and examples of field, record, table, database, • Concept and examples of Primary key, composite primary key, foreign key, • Relational Data base management system (RDBMS) software.	• Identify the data and information, • Identify the field, record, table in the database, • Prepare the sample table with some standard fields. • Assign the primary key to the field, • Identify the primary key, composite primary key, foreign key.
2.	Create and edit tables using wizard and SQL commands	• Introduction to a RDBMS • Database objects – tables, queries, forms, and reports of the database, • Terms in database – table, field, record, • Steps to create a table using table wizard, Data types in Base, • Option to set primary key Table Data View dialog box ▢ DDL Commands	• Start the RDBMS and observe the parts of main window, • Identify the data base objects Create the sample table in any category using wizard, Practice to create different tables from the available list and choosing fields from the available fields. • Assign data types of field, Set primary key, • Edit the table in design view, Enter the data in the fields. • Create and edit table using DDL Commands
3.	Perform operations on table	• Inserting data in the table, • Editing records in the table, • Deleting records from the table, • Sorting data in the table, Referential integrity, • Creating and editing relationships – one to one, one to many, many to many, • Field properties.	Demonstrate to: • Insert data in the table, Edit records in the table, Delete records from table, Sort data in the table, • Create and edit relationships • one to one, one to many, many to many, • Enter various field properties.

S. No.	LEARNING OUTCOMES	THEORY	PRACTICAL
4.	Retrieve data using query	• Database query, • Defining query, • Query creation using wizard, • Creation of query using design view, • Editing a query, • Applying criteria in query – single field, multiple fields, using wildcard, • Performing calculations, • Grouping of data, • Structured Query Language (SQL).	• Prepare a query for given criteria, • Demonstrate to create query using wizard, and using design view, • Edit a query, • Demonstrate to apply various criteria in query – single field, multiple fields, using wild card, • Performing calculations using query in Base, • Demonstrate to group data, • Use basic SQL commands,
5.	Create Forms and Reports using wizard	• Forms in Base, • Creating form using wizard, • Steps to create form using Form Wizard, • Options to enter or remove data from forms • Modifying form, • Changing label, background, • Searching record using Form, • Inserting and deleting record using Form View, • Concept of Report in Base, • Creating Report using wizard, • Steps to create Report using Wizard.	• Illustrate the various steps to create Form using Form Wizard, • Enter or remove data from Forms, • Demonstrate to modify Forms, • Demonstrate to change label, background, • Search record using Form, • Insert and delete record using Form View, • Illustrate the various steps to create Report using Report Wizard, • Demonstrate various examples of Report.

		UNIT 4: WEB APPLICATIONS AND SECURITY	
S. No.	LEARNING OUTCOMES	THEORY	PRACTICAL
1.	Working with Accessibility Options.	• Understand various types of impairment that impact computer usage • Computer Accessibility Dialog box and its tabs • Serial Keys	• Illustrate use of various options under Computer Accessibility like Keyboard, mouse, sound, display setting serial keys, cursor options • use of toggle keys, filter keys, sticky keys, sound sentry, show sounds etc.
2.	Understand Networking Fundamentals	• Network and its types. • Client Server Architecture, Peer to-peer (P2P) Architecture, • internet, World Wide Web, • benefits of networking • internet, getting access to internet, • internet terminology • Some of the commonly used Internet connectivity options • Data transfer on the Internet	• Identify applications of Internet • comparing various internet technologies • identifying types of networks and selecting internet
3.	Introduction to Instant Messaging	• learn key features of instant messaging • Creating an instant messaging account • Launching Google Talk • Signing In into your Google Talk Account	• Illustrate steps to create instant messaging account • Signing In into your Google Talk Account
4.	Chatting with a Contact – Google Talk	• learn to chat with a contact that is already added to your contact list. • sending text chat messages instantly by double-clicking on a contact. • general rules and etiquettes to be followed while chatting. • chatting on various types of messengers	• Illustrate chat with a contact and send messages, • chatting with various messenger services
5	Creating and Publishing Web Pages – Blog …-	• learn and appreciate a blog and its creation with the help of some blog providers • set up title and other parameters in a blog posting comments • using offline blog editors	▫ Illustrate Blog Creation and setting various parameters in it

S. No.	LEARNING OUTCOMES	THEORY	PRACTICAL
6	Using Offline Blog Editors	⬜ Concept to create blogs using a blog application and publish the blog whenever internet connectivity is available.	• Demonstration on how to create blogs using a blog application offline. • posting messages in an offline application • Publish the blog whenever internet connectivity is available using various examples
7	Online Transaction	• concept of e-commerce and various online applications • importance of secure passwords	• Illustration of online shopping using various ecommerce sites • Demonstration of securing passwords for online transactions.
8.	Internet Security	• Need of internet security • Cyber threats like phishing, email-spoofing, char spoofing etc. • best practices for internet security and secure passwords • concept of browser, cookies, backup, antivirus • clearing data in browsers	• illustration of internet security threats through various ways • cyber security tips • tips for secure passwords • demonstration of strong passwords using various websites. • clearing data stored in browser applications.
9.	Maintain workplace safety	• Basic safety rules to follow at workplace – Fire safety, • Falls and slips, Electrical safety, Use of first aid. • Case Studies of hazardous situations.	• Practice to follow basic safety rules at workplace to prevent accidents and protect workers – Fire safety, • Falls and slips, Electrical safety, Use of first aid.
10.	Prevent Accidents and Emergencies	• Accidents and emergency, • Types of Accidents, • Handling Accidents • Types of Emergencies.	• Illustrate to handle accidents at workplace, • Demonstrate to follow evacuation plan and procedure in case of an emergency.
11.	Protect Health and Safety at work	• Hazards and sources of hazards, • General evacuation procedures, • Healthy living.	• Identify hazards and sources of hazards, • identify the problems at workplace that could cause accidents, • Practice the general evacuation procedures in case of an emergency.

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.

S. No.	ITEM NAME, DESCRIPTION & SPECIFICATION	QUANTITY
A	HARDWARE	
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	SOFTWARE	
1.	Operating System Linux and Windows	
2.	Anti-Virus Latest version	
3.	Productivity Suite, Example – Open Office, Google Suite etc.	

C	FURNITURE	
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 **OR** Bachelor Degree in Computer Application/ Science/ Information Technology (BCA, B. Sc. Computer Science/ Information Technology) **OR** Graduate with PGDCA OR DOEACC A Level Certificate. The suggested qualification is the minimum criteria. However higher qualifications will also be acceptable.	• The candidate should have a minimum of 1 year of work experience in the same job role. • S/He should be able to communicate in English and local language. • S/He should have knowledge of equipment, tools, material, Safety, Health & Hygiene.	• 18-37 years (as on Jan. 01 (year)) • Age relaxation to be provided as per Govt. rules

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 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