

# **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

**FOOTPRINTS WITHOUT FEET**

1. The Making of a Scientist
2. The Necklace
3. The Hack Driver
4. Bholi

**Each Semester**

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

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

परीक्षा भार विभाजन प्रथम सत्र			
	विषयवस्तु	उपभार	कुलभार
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 मूल्यांकन	10	10
	सामयिक आकलन	2.5	
	बहुविध आकलन	2.5	
	पोर्टफोलियो	2.5	
	श्रवण एवं वाचन	2.5	
	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 - ततार्रा - 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	14
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 - 2	06	
	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		26
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	
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	<b>आंतरिक मूल्यांकन</b>		10
अ	सामयिक आकलन	2.5	
ब	बहुविध आकलन	2.5	
स	पोर्टफोलियो	2.5	
द	श्रवण एवं वाचन	2.5	
<b>कुल</b>			<b>50</b>

**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

## 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	10 marks for the term
Multiple Assessments	2	
Portfolio	2	
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	10 marks for the term
Multiple Assessments	2	
Portfolio	2	
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  $30^\circ$ ,  $45^\circ$  and  $60^\circ$ . 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  $60^\circ$  and  $90^\circ$  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  $ax^2 + bx + c = 0$ , ( $a \neq 0$ ). 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  $n$ th 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  $30^\circ$ ,  $45^\circ$ ,  $60^\circ$ .

### 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

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

### **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.

## COURSE STRUCTURE

### CLASS X

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
<b>Total Theory (Term I+II)</b>		<b>80</b>
<b>Internal Assessment: Term I</b>		<b>10</b>
<b>Internal Assessment: Term II</b>		<b>10</b>
<b>Grand Total</b>		<b>100</b>

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### TERM - I

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**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.

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## **TERM - II**

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## **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.

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#### **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)  $\text{ZnSO}_4(\text{aq})$
  - (ii)  $\text{FeSO}_4(\text{aq})$
  - (iii)  $\text{CuSO}_4(\text{aq})$
  - (iv)  $\text{Al}_2(\text{SO}_4)_3(\text{aq})$

B. Arranging Zn, Fe, Cu and Al (metals) in the decreasing order of reactivity based on the above result.
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.
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)**

**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
<b>Demonstrate Knowledge and Understanding</b>	46 %
<b>Application of Knowledge/Concepts</b>	22 %
<b>Analyze, Evaluate and Create</b>	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
-



**COURSE STRUCTURE  
CLASS X (2021-22)**

**TERM - I**

<b>M. MARKS: 40</b>			
<b>No.</b>	<b>Units</b>	<b>No. of Periods</b>	<b>Marks</b>
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
	<b>Total</b>	<b>62</b>	<b>40</b>

**TERM- II**

<b>M. MARKS: 40</b>			
<b>No.</b>	<b>Units</b>	<b>No. of Periods</b>	<b>Marks</b>
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
	<b>Total</b>	<b>89</b>	<b>40</b>

**COURSE CONTENT - X**

<b>TERM- I</b>	
<b>Unit 1: India and the Contemporary World – II</b>	
<b>Themes</b>	<b>Learning Objectives</b>
<b>Section 1: Events and Processes</b>	
<b>1. The Rise of Nationalism in Europe</b> <ul style="list-style-type: none"> <li>The French Revolution and the Idea of the Nation</li> <li>The Making of Nationalism in Europe</li> <li>The Age of Revolutions: 1830-1848</li> <li>The Making of Germany and Italy</li> <li>Visualizing the Nation</li> <li>Nationalism and Imperialism</li> </ul>	<ul style="list-style-type: none"> <li>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.</li> <li>Establish the relationship and bring out the difference between European nationalism and anti-colonial nationalisms.</li> <li>Understand the way the idea of nationalism emerged and led to the formation of nation states in Europe and elsewhere.</li> </ul>

Unit 2: Contemporary India – II	
Themes	Learning Objectives
<b>1. Resources and Development</b> <ul style="list-style-type: none"> <li>Types of Resources</li> <li>Development of Resources</li> <li>Resource Planning in India</li> <li>Land Resources</li> <li>Land Utilization</li> <li>Land Use Pattern in India</li> <li>Land Degradation and Conservation Measures</li> <li>Soil as a Resource</li> <li>Classification of Soils</li> <li>Soil Erosion and Soil Conservation</li> </ul>	<ul style="list-style-type: none"> <li>Understand the value of resources and the need for their judicious utilization and conservation.</li> </ul>
<b>3. Water Resources</b> <ul style="list-style-type: none"> <li>Water Scarcity and The Need for Water Conservation and Management</li> <li>Multi-Purpose River Projects and Integrated Water Resources Management</li> <li>Rainwater Harvesting</li> </ul> <p><i>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.</i></p>	<ul style="list-style-type: none"> <li>Comprehend the importance of water as a resource as well as develop awareness towards its judicious use and conservation.</li> <li>Identify different Dams in the country.</li> </ul>
<b>4. Agriculture</b> <ul style="list-style-type: none"> <li>Types of farming</li> <li>Cropping Pattern</li> <li>Major Crops</li> <li>Technological and Institutional Reforms</li> <li>Impact of Globalization on Agriculture</li> </ul>	<ul style="list-style-type: none"> <li>Explain the importance of agriculture in national economy.</li> <li>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.</li> <li>Explain various government policies for institutional as well as technological reforms since independence.</li> </ul>

<b>Unit 3: Democratic Politics – II</b>	
<b>Themes</b>	<b>Learning Objectives</b>
<b>1. Power Sharing</b> <ul style="list-style-type: none"> <li>• Case Studies of Belgium and Sri Lanka</li> <li>• Why power sharing is desirable?</li> <li>• Forms of Power Sharing</li> </ul>	<ul style="list-style-type: none"> <li>• Familiarize with the centrality of power sharing in a democracy.</li> <li>• Understand the working of spatial and social power sharing mechanisms.</li> </ul>
<b>2. Federalism</b> <ul style="list-style-type: none"> <li>• What is Federalism?</li> <li>• What make India a Federal Country?</li> <li>• How is Federalism practiced?</li> <li>• Decentralization in India</li> </ul>	<ul style="list-style-type: none"> <li>• Analyse federal provisions and institutions.</li> <li>• Explain decentralization in rural and urban areas.</li> </ul>
<b>Unit 4: Economics</b>	
<b>Themes</b>	<b>Learning Objectives</b>
<b>1. Development</b> <ul style="list-style-type: none"> <li>• What Development Promises - Different people different goals</li> <li>• Income and other goals</li> <li>• National Development</li> <li>• How to compare different countries or states?</li> <li>• Income and other criteria</li> <li>• Public Facilities</li> <li>• Sustainability of development</li> </ul>	<ul style="list-style-type: none"> <li>• Familiarize with concepts of macroeconomics.</li> <li>• Understand the rationale for overall human development in our country, which includes the rise of income, improvements in health and education rather than income.</li> <li>• Understand the importance of quality of life and sustainable development.</li> </ul>
<b>2. Sectors of the Indian Economy</b> <ul style="list-style-type: none"> <li>• Sectors of Economic Activities</li> <li>• Comparing the three sectors</li> <li>• Primary, Secondary and Tertiary Sectors in India</li> <li>• Division of sectors as organized and unorganized</li> <li>• Sectors in terms of ownership: Public and Private Sectors</li> </ul>	<ul style="list-style-type: none"> <li>• Identify major employment generating sectors.</li> <li>• Reason out the government investment in different sectors of economy.</li> </ul>

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

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**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
<p><b>Section 1: Events and Processes</b></p> <p><b>2. Nationalism in India</b></p> <ul style="list-style-type: none"> <li>• The First World War, Khilafat and Non - Cooperation</li> <li>• Differing Strands within the Movement</li> <li>• Towards Civil Disobedience</li> <li>• The Sense of Collective Belonging</li> </ul> <p><b>Section 2: Livelihoods, Economies and Societies</b></p> <p>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:</p> <p><b>3. The Making of a Global World</b></p> <ul style="list-style-type: none"> <li>• The Pre-modern world</li> <li>• The Nineteenth Century (1815-1914)</li> <li>• The Inter war Economy</li> <li>• Rebuilding a World Economy: The Post-War Era</li> </ul> <p><b>4. The Age of Industrialization</b></p> <ul style="list-style-type: none"> <li>• Before the Industrial Revolution</li> <li>• Hand Labour and Steam Power</li> <li>• Industrialization in the colonies</li> <li>• Factories Come Up</li> <li>• The Peculiarities of Industrial Growth</li> <li>• Market for Goods</li> </ul>	<ul style="list-style-type: none"> <li>• Recognize the characteristics of Indian nationalism through a case study of Non-Cooperation and Civil Disobedience Movement.</li> <li>• Analyze the nature of the diverse social movements of the time.</li> <li>• Familiarize with the writings and ideals of different political groups and individuals.</li> <li>• Appreciate the ideas promoting Pan Indian belongingness.</li> </ul> <ul style="list-style-type: none"> <li>• Show that globalization has a long history and point to the shifts within the process.</li> <li>• Analyze the implication of globalization for local economies.</li> <li>• Discuss how globalization is experienced differently by different social groups.</li> </ul> <ul style="list-style-type: none"> <li>• Familiarize with the Pro- to-Industrial phase and Early – factory system.</li> <li>• Familiarize with the process of industrialization and its impact on labour class.</li> <li>• Enable them to understand industrialization in the colonies with reference to Textile industries.</li> </ul>



<ul style="list-style-type: none"> <li>• Why do we need Political Parties?</li> <li>• How many Parties should we have?</li> <li>• National Political Parties</li> <li>• State Parties</li> <li>• Challenges to Political Parties</li> <li>• How can Parties be reformed?</li> </ul> <p><b>7. Outcomes of Democracy</b></p> <ul style="list-style-type: none"> <li>• How do we assess democracy's outcomes?</li> <li>• Accountable, responsive and legitimate government</li> <li>• Economic growth and development</li> <li>• Reduction of inequality and poverty</li> <li>• Accommodation of social diversity</li> <li>• Dignity and freedom of the citizens</li> </ul>	<ul style="list-style-type: none"> <li>• Introduction to major political parties, challenges faced by them and reforms in the country.</li> <li>• Evaluate the functioning of democracies in comparison to alternative forms of governments.</li> <li>• Understand the causes for continuation of democracy in India.</li> <li>• Distinguish between sources of strengths and weaknesses of Indian democracy.</li> </ul>
<b>Unit 4: Economics</b>	
<b>Themes</b>	<b>Learning Objectives</b>
<p><b>3. Money and Credit</b></p> <ul style="list-style-type: none"> <li>• Money as a medium of exchange</li> <li>• Modern forms of money</li> <li>• Loan activities of Banks</li> <li>• Two different credit situations</li> <li>• Terms of credit</li> <li>• Formal sector credit in India</li> <li>• Self Help Groups for the Poor</li> </ul> <p><b>4. Globalization and the Indian Economy</b></p> <ul style="list-style-type: none"> <li>• Production across countries</li> <li>• Interlinking production across countries</li> <li>• Foreign Trade and integration of markets</li> <li>• What is globalization?</li> <li>• Factors that have enabled Globalization</li> <li>• World Trade Organization</li> <li>• Impact of Globalization on India</li> <li>• The Struggle for a fair Globalization</li> </ul>	<ul style="list-style-type: none"> <li>• Understand money as an economic concept.</li> <li>• Understand the role of financial institutions from the point of view of day-to-day life.</li> <li>• Explain the working of the Global Economic phenomenon.</li> </ul>

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

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**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        | f. Tuticorin      |
| b. Mumbai        | g. Chennai        |
| c. Marmagao      | h. Vishakhapatnam |
| d. New Mangalore | i. Paradip        |
| e. Kochi         | 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>	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
		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	<ul style="list-style-type: none"><li>• Classwork and Assignments</li><li>• Any exemplary work done by the student</li><li>• Reflections, Narrations, Journals, etc.</li><li>• Achievements of the student in the subject throughout the year</li><li>• Participation of the student in different activities like Heritage India Quiz</li></ul>				
Subject Enrichment Activity	5 Marks	<ul style="list-style-type: none"><li>• Project Work</li></ul>				
TOTAL	20 MARKS					

**PROJECT WORK**  
**CLASS X (2021-22)**

**05 Marks**

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

Consumer Awareness  
**OR**  
Social Issues  
**OR**  
Sustainable Development

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.***

## संस्कृतपाठ्यक्रमः (कोड नं. 122)

कक्षा – दशमी (2021 - 22)

“कोरोना” इत्याख्य-विषाणोः कारणात् अस्मिन् वर्षे परीक्षा भागद्वये आयोजयिष्यते।

प्रथमसत्रीयायै परीक्षायै संशोधितः पाठ्यक्रमः

(बहुविकल्पात्मकाः प्रश्नाः)

अनुप्रयुक्त- व्याकरणम्	<ol style="list-style-type: none"><li>1. सन्धिकार्यम् व्यञ्जनसन्धिः - वर्गीयप्रथमवर्णस्य तृतीयवर्णे परिवर्तनम्, प्रथमवर्णस्य पञ्चमवर्णे परिवर्तनम् विसर्गसन्धिः - विसर्गस्य उत्त्वं, विसर्गस्य स्थाने स, श, ष् 2. समासः - वाक्येषु समस्तपदानां विग्रहः विग्रहपदानां च समासः ➤ तत्पुरुषः – विभक्तिः ➤ अव्ययीभावः (अनु, उप, सह, निरु, प्रति, यथा) ➤ द्वन्द्वः (केवलम् इतरेतर-द्वन्द्वसमासः) 3. प्रत्ययाः ➤ तद्धिताः – मतुप्, त्व, ➤ स्त्रीप्रत्ययः – टाप् 4. वाच्यपरिवर्तनम् - केवलं लटलकारे ( कर्तृ-कर्म-क्रिया) 5. समयः - अङ्कानां स्थाने शब्देषु समयलेखनम् (सामान्य – सपाद – सार्ध – पादोन) 6. अव्ययपदानि उच्चैः, च, श्वः, ह्यः, अद्य, अत्र-तत्र, यत्र-कुत्र, इदानीम्, (अधुना, सम्प्रति, साम्प्रतम्) यदा, तदा, कदा, सहसा, वृथा, शनैः, अपि, कुतः, इतस्ततः, यदि-तर्हि, यावत्-तावत् । 7. अशुद्धि-संशोधनम् (वचन – लिङ्ग – पुरुष – लकार –दृष्ट्या संशोधनम्)</li></ol>
पठितावबोधनम्	<ol style="list-style-type: none"><li>8. वाक्येषु रेखाङ्कितपदानि अधिकृत्य पञ्चप्रश्नानां निर्माणम्</li><li>9. प्रसङ्गानुकूलं समुचितं शब्दार्थचयनम्</li><li>10. भाषिककार्याय तत्त्वानि (पाठाधारितानि) - ✓ वाक्ये कर्तृ – क्रिया पदचयनम् ✓ विशेषण – विशेष्य चयनम्, सर्वनाम ✓ पर्याय – विलोमपद – चयनम्</li></ol>

पुस्तकम् – 'शेमुषी -संस्कृत-पाठ्यपुस्तकम् द्वितीयः भागः (दशमश्रेण्यै)

प्रथमसत्रीयायै परीक्षायै निर्धारिताः पाठाः –

पाठसङ्ख्या	पाठनाम
प्रथमः पाठः	शुचिपर्यावरणम्
द्वितीयः पाठः	बुद्धिर्बलवती सदा
चतुर्थः पाठः	शिशुलालनम्
पञ्चमः पाठः	जननी तुल्यवत्सला

अवधातव्यम् -

अनुप्रयुक्तव्याकरणस्य अंशानां चयनं यथासम्भवं 'शेमुषी' पाठ्यपुस्तकात् करणीयम्।

यदि ततः न सम्भवति तर्हि 'अभ्यासवान् भव – द्वितीयो भागः' इत्यस्मात् कर्तुं शक्यम्।

## प्रथमसत्रान्तर्गतम् आन्तरिक-मूल्याङ्कनम् (10 अङ्काः)

उद्देश्यानि

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

क्र. सं.	गतिविधयः	उदाहरणानि	अङ्काः	निर्देशाः	मूल्याङ्कनविन्दवः
1.	आवधिक-परीक्षाः (पीरियोडिक- असैस्मैट)	लिखितपरीक्षा	2.5	विद्यालयेन समये समये लिखितपरीक्षाणाम् आयोजनं करणीयं भवति।	परीक्षासु यत्र विद्यार्थिनः श्रेष्ठाः अङ्काः स्युः तयोः द्वयोः परीक्षयोः एव अधिभारः ग्रहीतव्यः। अपि च आवधिकपरीक्षासु अपि प्रश्नेषु आन्तरिकविकल्पाः देयाः। मूल्याङ्कनसमये यदि छात्रः सर्वान् प्रश्नान् उत्तरति तर्हि छात्रहिताय यत्र अधिकाः अङ्काः सन्ति तेषाम् एव मूल्याङ्कनं करणीयम्।

2	बहुविधमूल्याङ्कनम्	<ul style="list-style-type: none"> <li>❖ कक्षायां पाठितस्य पाठस्य लघुमूल्याङ्कनम्</li> <li>❖ निर्गतपत्राणि</li> <li>❖ प्रश्नोत्तरी</li> <li>❖ मौखिकी परीक्षा</li> <li>❖ प्रतियोगिताः</li> <li>❖ प्रश्नमञ्चस्य आयोजनम्</li> </ul>	2.5	कक्षायां पाठित-पाठस्य विषयस्य वा बहुविधं मूल्याङ्कनम् अपेक्षितम् अस्ति। अनेन विद्यार्थिनां विविधकौशलानां मूल्याङ्कनं भवेत्।	<ul style="list-style-type: none"> <li>❖ मौलिकता</li> <li>❖ विषयसम्बद्धता</li> <li>❖ शुद्धता</li> <li>❖ समयबद्धता</li> <li>❖ प्रस्तुतीकरणम्</li> </ul>
3.	निवेशसूचिका (पोर्टफोलियो)	<ul style="list-style-type: none"> <li>❖ कक्षाकार्यम्</li> <li>❖ सामूहिक-मूल्याङ्कनम्</li> <li>❖ स्वमूल्याङ्कनम्</li> <li>❖ विद्यार्थिनः विषयगताः उपलब्धयः</li> </ul>	2.5	विद्यार्थिभिः कक्षायां कृतानां कार्याणाम् उपलब्धीनां च संरक्षणं संयोजनं च सञ्चिकायां पत्रावल्यां वा करणीयम्। एतेन समग्रं मूल्याङ्कनं प्रमाणिकत्वेन भवितुं शक्नोति।	<ul style="list-style-type: none"> <li>❖ सुलेखः</li> <li>❖ तथ्यात्मकता</li> <li>❖ प्रामाणिकता</li> <li>❖ समयबद्धता</li> </ul>
4.	भाषा-संवर्धनाय गतिविधयः (क) श्रवण-भाषण-कौशलम्	<ul style="list-style-type: none"> <li>❖ कथा</li> <li>❖ संवादः/ वार्तालापः</li> <li>❖ भाषणम्</li> <li>❖ नाटकम्</li> <li>❖ वार्ताः</li> <li>❖ आशुभाषणम्</li> <li>❖ संस्कृतगीतानि</li> <li>❖ श्लोकोच्चारणम्</li> </ul>	2.5	<ul style="list-style-type: none"> <li>❖ छात्राः कामपि कथां श्रावयितुं शक्नुवन्ति।</li> <li>❖ शिक्षकः कमपि विषयं सूचयित्वा परस्परं संवादं कारयितुं शक्नोति।</li> <li>❖ दूरदर्शने वार्तावली इत्याख्यः संस्कृत-कार्यक्रमः प्रसारितः भवति तं द्रष्टुं छात्राः प्रेरणीयाः।</li> <li>❖ श्रवण-कौशल-मूल्याङ्कनाय शिक्षकः स्वयम् अपि कथां श्रावयित्वा ततः सम्बद्ध-प्रश्नान् प्रष्टुं शक्नोति।</li> </ul>	<ul style="list-style-type: none"> <li>❖ उच्चारणम्</li> <li>❖ शुद्धता</li> <li>❖ समयबद्धता</li> <li>❖ प्रस्तुतीकरणम्</li> <li>आरोहावरोह-गतियति-प्रयोगः</li> </ul>
	(ख) लेखनकौशलम्	<ul style="list-style-type: none"> <li>❖ विविधविषयान् आधृत्य मौलिकलेखनम् यथा- देशः, माता, पिता, गुरुः, विद्या पर्यावरणम्, योगः, समयस्य सदुपयोगः, शिक्षा, अनुशासनम्</li> </ul>		<ul style="list-style-type: none"> <li>❖ छात्राः यथाशक्यं कक्षायामेव लेखनकार्यं कुर्युः।</li> <li>❖ टिप्पणी- पुस्तिकायाः निर्माणम्।</li> <li>❖ वैयक्तिकपरीक्षणम्।</li> </ul>	<ul style="list-style-type: none"> <li>❖ विषय-सम्बद्धता</li> <li>❖ शुद्धता (विशेषतः पञ्चमवर्णस्यप्रयोगः)</li> <li>❖ समयबद्धता</li> <li>❖ सुलेखः</li> <li>❖ प्रस्तुतीकरणम्</li> </ul>

	इत्यादयः । ❖ शैक्षिकभ्रमणस्य संस्कृतेन प्रतिवेदनलेखनम् । ❖ दैनन्दिनीलेखनम् । ❖ सङ्केताधारितं कथालेखनम् । ❖ भित्तिपत्रिकायाः निर्माणम् । ❖ श्रुतलेखः ❖ सूक्तिलेखनम्			
अवधातव्यम् –उपर्युक्त- गतिविधयश्च उदाहरणरूपेण प्रदत्ताः सन्ति । एतदतिरिच्य एतादृशाः अन्यविषयाः अपि भवितुमर्हन्ति ।				

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**संस्कृतपाठ्यक्रमः (कोड नं. 122)**  
**कक्षा –दशमी (2021- 22)**  
**वार्षिकपरीक्षायै संशोधितः पाठ्यक्रमः**  
**(वर्णनात्मकाः प्रश्नाः)**

<b>अपठित – अवबोधनम्</b>	<b>1. एकः गद्यात्मकः खण्डः</b> 80-100 शब्दपरिमितः गद्यांशः, सरलकथा, वर्णनं वा ➤ एकपदेन पूर्णवाक्येन च अवबोधनात्मकं कार्यम् ➤ शीर्षकलेखनम् ➤ अनुच्छेद – आधारितं भाषिकं कार्यम् भाषिककार्याय तत्त्वानि - ✓ वाक्ये कर्तु – क्रिया पदचयनम् ✓ कर्तु - क्रिया – अन्वितिः ✓ विशेषण – विशेष्य चयनम् ✓ पर्याय – विलोमपद – चयनम्
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रचनात्मकं कार्यम्	2. सङ्केताधारितम् औपचारिकम् अथवा अनौपचारिकं पत्रलेखनम् (मञ्जूषायाः सहायतया पूर्ण पत्रं लेखनीयम्) 3. चित्राधारितं वर्णनम् अथवा अनुच्छेदलेखनम् 4. हिन्दीभाषायाम् आङ्ग्लभाषायां वा लिखितानां पञ्चसरलवाक्यानां संस्कृतभाषायाम् अनुवादः
पठित – अवबोधनम्	5. गद्यांशम् अधिकृत्य अवबोधनात्मकं कार्यम् प्रश्नप्रकाराः – एकपदेन पूर्णवाक्येन च प्रश्नोत्तराणि । 6. पद्यांशम् अधिकृत्य अवबोधनात्मकं कार्यम् प्रश्नप्रकाराः – एकपदेन पूर्णवाक्येन च प्रश्नोत्तराणि । 7. नाट्यांशम् अधिकृत्य अवबोधनात्मकं कार्यम् प्रश्नप्रकाराः – एकपदेन पूर्णवाक्येन च प्रश्नोत्तराणि । 8. एकस्य श्लोकस्य अन्वयः/ एकस्य श्लोकस्य संस्कृतेन भावार्थः (मञ्जूषायाः सहायतया) 9. घटनाक्रमानुसारं कथालेखनम्

पुस्तकम् – ‘शेमुषी’-संस्कृत-पाठ्यपुस्तकम् द्वितीयः भागः (दशमश्रेण्यै)

वार्षिक-परीक्षायै निर्धारिताः पाठाः –

पाठसङ्ख्या	पाठनाम
षष्ठः पाठः	सुभाषितानि
सप्तमः पाठः	सौहार्दं प्रकृतेः शोभा
अष्टमः पाठः	विचित्रः साक्षी
नवमः पाठः	सूक्तयः

पाठ्यपुस्तकानि-

- |                                                    |           |                             |
|----------------------------------------------------|-----------|-----------------------------|
| 1. ‘शेमुषी’ पाठ्यपुस्तकम् भाग-2 , संशोधितसंस्करणम् | प्रकाशनम् | : रा.शै.प्र.अनु.परि. द्वारा |
| 2. ‘अभ्यासवान् भव’ भाग-2                           | प्रकाशनम् | : रा.शै.प्र.अनु.परि. द्वारा |
| 3. व्याकरणवीथिः (अतिरिक्तपठनार्थम्)                | प्रकाशनम् | : रा.शै.प्र.अनु.परि.        |

# वार्षिकपरीक्षान्तर्गतम् आन्तरिक-मूल्याङ्कनम्

## (10 अङ्काः)

### उद्देश्यानि

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

क्र. सं.	गतिविधयः	उदाहरणानि	अङ्काः	निर्देशाः	मूल्याङ्कनविन्दवः
1.	आवधिक-परीक्षा: (पीरियोडिक- असैस्मैट)	लिखितपरीक्षा	2.5	विद्यालयेन समये समये लिखितपरीक्षाणाम् आयोजनं करणीयं भवति।	परीक्षासु यत्र विद्यार्थिनः श्रेष्ठाः अङ्काः स्युः तयोः द्वयोः परीक्षयोः एव अधिभारः ग्रहीतव्यः। अपि च आवधिकपरीक्षासु अपि प्रश्नेषु आन्तरिकविकल्पाः देयाः। मूल्याङ्कनसमये यदि छात्रः सर्वान् प्रश्नान् उत्तरति तर्हि छात्रहिताय यत्र अधिकाः अङ्काः सन्ति तेषाम् एव मूल्याङ्कनं करणीयम्।
2	बहुविधमूल्याङ्कनम्	<ul style="list-style-type: none"> <li>❖ कक्षायां पाठितस्य पाठस्य लघुमूल्याङ्कनम्</li> <li>❖ निर्गतपत्राणि</li> <li>❖ प्रश्नोत्तरी</li> <li>❖ मौखिकी परीक्षा</li> <li>❖ प्रतियोगिताः</li> <li>❖ प्रश्नमञ्चस्य आयोजनम्</li> </ul>	2.5	कक्षायां पाठित-पाठस्य विषयस्य वा बहुविधं मूल्याङ्कनम् अपेक्षितम् अस्ति। अनेन विद्यार्थिनां विविधकौशलानां मूल्याङ्कनं भवेत्।	<ul style="list-style-type: none"> <li>❖ मौलिकता</li> <li>❖ विषयसम्बद्धता</li> <li>❖ शुद्धता</li> <li>❖ समयबद्धता</li> <li>❖ प्रस्तुतीकरणम्</li> </ul>
3.	निवेशसूचिका (पोर्टफोलियो)	<ul style="list-style-type: none"> <li>❖ कक्षाकार्यम्</li> <li>❖ सामूहिक-मूल्याङ्कनम्</li> <li>❖ स्वमूल्याङ्कनम्</li> <li>❖ विद्यार्थिनः विषयगताः उपलब्धयः</li> </ul>	2.5	विद्यार्थिभिः कक्षायां कृतानां कार्याणाम् उपलब्धीनां च संरक्षणं संयोजनं च सञ्चिकायां पत्रावल्यां वा करणीयम्। एतेन समग्रं मूल्याङ्कनं प्रमाणिकत्वेन भवितुं शक्नोति।	<ul style="list-style-type: none"> <li>❖ सुलेखः</li> <li>❖ तथ्यात्मकता</li> <li>❖ प्रामाणिकता</li> <li>❖ समयबद्धता</li> </ul>

4.	भाषा-संवर्धनाय गतिविधयः (क) श्रवण-भाषण- कौशलम्	<ul style="list-style-type: none"> <li>❖ कथा</li> <li>❖ संवादः/ वार्तालापः</li> <li>❖ भाषणम्</li> <li>❖ नाटकम्</li> <li>❖ वार्ताः</li> <li>❖ आशुभाषणम्</li> <li>❖ संस्कृतगीतानि</li> <li>❖ श्लोकोच्चारणम्</li> </ul>	2.5	<ul style="list-style-type: none"> <li>❖ छात्राः कामपि कथां श्रावयितुं शक्नुवन्ति ।</li> <li>❖ शिक्षकः कमपि विषयं सूचयित्वा परस्परं संवादं कारयितुं शक्नोति ।</li> <li>❖ दूरदर्शने वार्तावली इत्याख्यः संस्कृत-कार्यक्रमः प्रसारितः भवति तं द्रष्टुं छात्राः प्रेरणीयाः ।</li> <li>❖ श्रवण-कौशल-मूल्याङ्कनाय शिक्षकः स्वयम् अपि कथां श्रावयित्वा ततः सम्बद्ध-प्रश्नान् प्रष्टुं शक्नोति ।</li> </ul>	<ul style="list-style-type: none"> <li>❖ उच्चारणम्</li> <li>❖ शुद्धता</li> <li>❖ समयबद्धता</li> <li>❖ प्रस्तुतीकरणम्</li> </ul> <p>आरोहावरोह-गतियति-प्रयोगः</p>
	(ख) लेखनकौशलम्	<ul style="list-style-type: none"> <li>❖ विविधविषयान् आधृत्य मौलिकलेखनम् यथा- देशः, माता, पिता, गुरुः, विद्या पर्यावरणम्, योगः, समयस्य सदुपयोगः, शिक्षा, अनुशासनम् इत्यादयः ।</li> <li>❖ शैक्षिकभ्रमणस्य संस्कृतेन प्रतिवेदनलेखनम् ।</li> <li>❖ दैनन्दिनीलेखनम् ।</li> <li>❖ सङ्केताधारितं कथालेखनम् ।</li> <li>❖ भित्तिपत्रिकायाः निर्माणम् ।</li> <li>❖ श्रुतलेखः</li> <li>❖ सूक्तिलेखनम्</li> </ul>		<ul style="list-style-type: none"> <li>❖ छात्राः यथाशक्यं कक्षायामेव लेखनकार्यं कुर्युः ।</li> <li>❖ टिप्पणी- पुस्तिकायाः निर्माणम् ।</li> <li>❖ वैयक्तिकपरीक्षणम् ।</li> </ul>	<ul style="list-style-type: none"> <li>❖ विषय-सम्बद्धता</li> <li>❖ शुद्धता (विशेषतः पञ्चमवर्णस्यप्रयोगः)</li> <li>❖ समयबद्धता</li> <li>❖ सुलेखः</li> <li>❖ प्रस्तुतीकरणम्</li> </ul>
अवधातव्यम् –उपर्युक्त- गतिविधयश्च उदाहरणरूपेण प्रदत्ताः सन्ति । एतदतिरिच्य एतादृशाः अन्यविषयाः अपि भवितुमर्हन्ति ।					

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**FRENCH (CODE: 018)**  
**CLASS X TERM-WISE (RATIONALISED) SYLLABUS (2021-2022)**  
**TERM - I**

**TERM I: (MCQ): (50 % Weightage)** **50 Marks**

**SECTION A**

**Comprehension/ Reading:**

**5**

Unseen passage(s) (picture based text)

**SECTION B**

**Writing Skills**

**10**

Completing the text / message

**SECTION C**

**Grammar**

**15**

- Tenses (présent , impératif, passé composé, imparfait, futur proche, futur simple, passé récent, futur antérieur )
- Composed relative pronoun
- Personal pronouns with y and en
- Negation

**SECTION D**

**Culture and Civilisation**

**10**

Lessons 1-3

**SECTION E**

**10**

Internal Assessment

- Periodic Assessment
- Multiple Assessment
- Portfolio Assessment
- Listening & Speaking

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**Prescribed Book:**

Entre Jeunes, Class X (CBSE)

Lessons 1-3

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**FRENCH (CODE: 018)**  
**EXAMINATION STRUCTURE**  
**CLASS – X (2021-22) TERM - I**

<b>TERM I: (MCQ):</b>		<b>50 Marks</b>
Section A	Comprehension (Unseen)	5
Section B	Writing skills	10
Section C	Grammar	15
Section D	Culture and Civilisation	10
Section E	Internal Assessment	10

**TERM - 1 (MCQ Type)**

Section	Details of Topics/ Subtopics / Type of questions	Marks
Section A (Comprehension)	<b>Unseen passages</b> (picture based text) <u>(10 questions to be attempted out of 14)</u> <ul style="list-style-type: none"> <li>One-word answers</li> <li>Vocabulary search</li> <li>Nouns, verbs...</li> </ul>	5
Section B (Writing Skills)	<b>Complete the text/ message</b> <u>(10 blanks to be filled out of 14)</u> <ul style="list-style-type: none"> <li>Fill in the blanks</li> </ul>	10
Section C (Grammar)	<b>Grammar</b> <ul style="list-style-type: none"> <li>Tenses (présent , impératif, passé composé, imparfait, futur proche, futur simple, passé récent, futur antérieur)</li> </ul> <u>(2 questions to be attempted out of 3)</u> <ul style="list-style-type: none"> <li>Composed relative pronoun</li> <li>Personal pronouns with y and en</li> <li>Negation</li> </ul>	15
Section D (Culture& Civilisation)	<b>Lessons 1-3</b> <u>(10 questions to be attempted out of 14)</u> <ul style="list-style-type: none"> <li>Fill in the blanks</li> <li>Vrai ou Faux</li> <li>One-word answer questions</li> </ul>	10
Section E	<b>Internal Assessment</b>	10
	<ul style="list-style-type: none"> <li>Periodic Assessment</li> <li>Multiple Assessment</li> <li>Portfolio Assessment</li> <li>Listening &amp; Speaking</li> </ul>	2.5 2.5 2.5 2.5

**Note : The Question paper has to include 33% internal choice .**

**FRENCH (CODE: 018)**  
**CLASS X TERM-WISE (RATIONALISED) SYLLABUS (2021-2022)**  
**TERM - II**

**TERM- II (SUBJECTIVE): (50 % Weightage)** **50 Marks**

**SECTION A**

**Comprehension/ Reading:** **5**  
Unseen passage(s) (picture based text)

**SECTION B**

**Writing Skills** **10**  
Informal letter (about 80 words) based on Lessons 4,7, 8

**SECTION C**

**Grammar** **15**

- Tenses (présent , impératif, passé composé, imparfait, futur proche, futur simple, passé récent, futur antérieur, plus-que-parfait)
- Possessive Pronouns
- Reported Speech
- Forming Questions

**SECTION D** **10**

**Culture and Civilisation**  
**Lessons 4,7,8**

**SECTION E** **10**

Internal Assessment

- Periodic Assessment
- Multiple Assessment
- Portfolio Assessment
- Listening & Speaking

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**Prescribed Book:**

Entre Jeunes, Class X (CBSE)  
Lessons 4, 7, 8

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**FRENCH (CODE: 018)**  
**EXAMINATION STRUCTURE**  
**CLASS – X (2021-22) TERM - II**

**TERM- II (SUBJECTIVE):**

**50 Marks**

Section A	Comprehension (Passage(s) from the textbook)	5
Section B	Writing skills	10
Section C	Grammar	15
Section D	Culture and Civilisation	10
Section E	Internal Assessment	10

**TERM- II (SUBJECTIVE):**

Section	Details of Topics/ Subtopics / Type of questions	Marks
Section A (Comprehension)	<b>Unseen passage(s)</b> ( <u>5 questions to be attempted out of 7</u> ) <ul style="list-style-type: none"> <li>Short answers questions</li> </ul>	5
Section B (Writing Skills)	<b>Long composition</b> ( <u>1 letter to be attempted out of 3</u> ) Informal letter (Based on lessons 4,7 & 8)	10
Section C (Grammar)	<b>Grammar</b> <ul style="list-style-type: none"> <li>Tenses (présent , impératif, passé composé, imparfait, futur proche, futur simple, passé récent, futur antérieur, plus-que-parfait)</li> </ul> ( <u>2topics to be attempted out of 3</u> ) <ul style="list-style-type: none"> <li>Possessive pronouns</li> <li>Reported speech</li> <li>Forming questions</li> </ul>	15
Section D (Culture& Civilisation)	<b>Lessons 4,7,8</b> ( <u>5 questions to be attempted out of 8</u> ) <ul style="list-style-type: none"> <li>Short answer questions</li> </ul>	10
Section E	<b>Internal Assessment</b>	10
	<ul style="list-style-type: none"> <li>Periodic Assessment</li> </ul>	2.5
	<ul style="list-style-type: none"> <li>Multiple Assessment</li> </ul>	2.5
	<ul style="list-style-type: none"> <li>Portfolio Assessment</li> </ul>	2.5
	<ul style="list-style-type: none"> <li>Listening &amp; Speaking</li> </ul>	2.5

**Note : The Question paper has to include 33% internal choice .**

# **CBSE | DEPARTMENT OF SKILL EDUCATION**

## **CURRICULUM FOR SESSION 2021-2022**

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

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

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#### **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:
  - Data Entry and Keyboarding skills
  - The concept of Digital Documentation
  - The concept of Digital Presentation
  - The concept of Electronic Spreadsheet
  - The concept of Databases
  - Internet Technologies

## **SALIENT FEATURES:**

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

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

**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)					
	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-II	10		5
		Unit 2 : Self-Management Skills-II	10		
		Unit 3 : Information and Communication Technology Skills-II	10		
	TERM II	Unit 4 : Entrepreneurial Skills-II	15		5
		Unit 5 : Green Skills-II	05		
		Total	50		10
Part B	Subject Specific Skills		Theory (In Hours)	Practical (In Hours)	Marks
	TERM I	Unit 1: Digital Documentation (Advanced)	12	18	8
		Unit 2: Electronic Spreadsheet (Advanced)	15	23	10
		Unit 3: Database Management System	04	07	02
	TERM II	Unit 3: Database Management System	14	20	10
		Unit 4: Web Applications and Security	15	22	10
			Total	60	90
Part C	Practical Work				
		Practical Examination • Advanced Documentation: 5 Marks • Advanced Spreadsheets: 5 Marks • Databases : 10 Mark			20
		Viva Voce			10
		Total			30

<b>Part D</b>		<b>Project Work/Field Visit</b> Any Interdisciplinary Real World Case Study to be taken. Summarized data reports of same can be presented in base. Input should be taken using forms and output should be done using reports using base. Documentation of the case study should be presented using writer.		10
		<b>PORTFOLIO/ PRACTICAL FILE:</b> ( Portfolio should contain printouts of the practical done using Writer, Calc and Base with minimum 5 problems of each)		10
		<b>Total</b>		<b>20</b>
		<b>GRAND TOTAL</b>	<b>200</b>	<b>100</b>

#### **DETAILED CURRICULUM/TOPICS:**

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

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

**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
	<b>TOTAL DURATION</b>	<b>150</b>

### UNIT 1: DIGITAL DOCUMENTATION (ADVANCED)

S. No.	LEARNING OUTCOMES	THEORY	PRACTICAL
1.	Create and Apply Styles in the document	<ul style="list-style-type: none"> <li>• Styles/ categories in Word Processor</li> <li>• Styles and Formatting window.</li> <li>• Fill Format.</li> <li>• Creating and updating new style from selection</li> <li>• Load style from template or another document.</li> <li>• Creating a new style using drag-and-drop.</li> <li>• Applying styles.</li> </ul>	<ul style="list-style-type: none"> <li>• List style categories. Select the style from the Styles and Formatting window.</li> <li>• Use Fill Format to apply a style to many different areas quickly.</li> <li>• Create and update new style from a selection.</li> <li>• Load a style from a template or another document.</li> <li>• Create a new style using drag-and drop.</li> </ul>
S. No.	LEARNING OUTCOMES	THEORY	PRACTICAL
2.	Insert and use images in document	<ul style="list-style-type: none"> <li>• Options to insert image to document from various sources.</li> <li>• Options to modify, resize, crop and delete an image. Drawing objects and its properties.</li> <li>• Creating drawing objects and changing its properties. Resizing and grouping drawing objects.</li> <li>• Positioning image in the text.</li> </ul>	<ul style="list-style-type: none"> <li>• Insert an image to document from various sources.</li> <li>• Modify, resize, crop and delete an image.</li> <li>• Create drawing objects</li> <li>• Set or change the properties of a drawing object</li> <li>• Resize and group drawing objects</li> <li>• Position the image in the text</li> </ul>

3.	Create and use template	<ul style="list-style-type: none"> <li>• Templates.</li> <li>• Using predefined templates.</li> <li>• Creating a template.</li> <li>• Set up a custom default template.</li> <li>• Updating a document.</li> <li>• Changing to a different template.</li> <li>• Using the Template.</li> </ul>	<ul style="list-style-type: none"> <li>• Create a template.</li> <li>• Use predefined templates.</li> <li>• Set up a custom default template.</li> <li>• Update a document.</li> <li>• Change to a different template.</li> <li>• Use the Template.</li> </ul>
4.	Create and customize table of contents	<ul style="list-style-type: none"> <li>• Table of contents. Hierarchy of headings. Customization of table of contents.</li> <li>• Character styles. Maintaining a table of contents.</li> </ul>	<ul style="list-style-type: none"> <li>• Create table of contents. Define a hierarchy of headings.</li> <li>• Customize a table of contents.</li> <li>• Apply character styles. Maintain a table of contents.</li> </ul>
5	Implement Mail Merge	<ul style="list-style-type: none"> <li>• Advance concept of mail merge in word processing,</li> <li>• Creating a main document,</li> <li>• Creating the data source,</li> <li>• Entering data in the fields,</li> <li>• Merging the data source with main document,</li> <li>• Editing individual document,</li> <li>• Printing a letter and its address label</li> </ul>	<ul style="list-style-type: none"> <li>• Demonstrate to print the label using mail merge, do the following to achieve</li> <li>• Create a main document,</li> <li>• Create the data source,</li> <li>• Enter data in the fields,</li> <li>• Merge the data source with main document,</li> <li>• Edit individual document,</li> <li>• Print the letter and address label</li> </ul>

## UNIT 2: ELECTRONIC SPREADSHEET (ADVANCED)

S. No.	LEARNING OUTCOMES	THEORY	PRACTICAL
1.	Analyse data using scenarios and goal seek.	<ul style="list-style-type: none"> <li>Using consolidating data. Creating subtotals.</li> <li>Using “what if” scenarios. Using “what if” tools</li> <li>Using goal seek and solver.</li> </ul>	<ul style="list-style-type: none"> <li>Use consolidating data Create subtotals</li> <li>Use “what if” scenarios Use “what if” tools</li> <li>Use goal seek and solver</li> </ul>
2.	Link data and spreadsheets	<ul style="list-style-type: none"> <li>Setting up multiple sheets. Creating reference to other sheets by using keyboard and mouse.</li> <li>Creating reference to other document by using keyboard and mouse.</li> <li>Relative and absolute hyperlinks</li> <li>Hyperlinks to the sheet.                             <ul style="list-style-type: none"> <li>Linking to external data.</li> <li>Linking to registered data sources.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>Setup multiple sheets by inserting new sheets.</li> <li>Create reference to other sheets by using keyboard and mouse.</li> <li>Create reference to other document by using keyboard and mouse.</li> <li>Create, Edit and Remove hyperlinks to the sheet.</li> <li>Link to external data.</li> <li>Link to registered data source.</li> </ul>
3.	Share and review a spreadsheet	<ul style="list-style-type: none"> <li>Setting up a spreadsheet for sharing.</li> <li>Opening and saving a shared spreadsheet. Recording changes.</li> <li>Add, Edit and Format the comments.</li> <li>Reviewing changes – view, accept or reject changes. Merging and comparing.</li> </ul>	<ul style="list-style-type: none"> <li>Set up a spreadsheet for sharing.</li> <li>Open and save a shared spreadsheet.</li> <li>Record changes.</li> <li>Add, Edit and Format the comments.</li> <li>Review changes – view, accept or reject changes.</li> <li>Merge and compare sheets.</li> </ul>
4.	Create and Use Macros in spreadsheet	<ul style="list-style-type: none"> <li>Using the macro recorder. Creating a simple macro. Using a macro as a function.</li> <li>Passing arguments to a macro.</li> <li>Passing the arguments areas values.</li> <li>Macros to work like built-in functions.</li> <li>Accessing cells directly.</li> <li>Sorting the columns using macro.</li> </ul>	<ul style="list-style-type: none"> <li>Use the macro recorder. Create a simple macro. Use a macro as a function.</li> <li>Pass arguments to a macro.</li> <li>Pass the arguments are as values.</li> <li>Write macros that act like built-in functions</li> <li>Access cells directly.</li> <li>Sort the columns using macro.</li> </ul>

### UNIT 3: DATABASE MANAGEMENT SYSTEM

S. No.	LEARNING OUTCOMES	THEORY	PRACTICAL
1.	Appreciate the concept of Database Management System	<ul style="list-style-type: none"> <li>• Concept and examples of data and information,</li> <li>• Concept of database,</li> <li>• Advantages of database,</li> <li>• Features of database,</li> <li>• Concept and examples of Relational database,</li> <li>• Concept and examples of field, record, table, database,</li> <li>• Concept and examples of Primary key, composite primary key, foreign key,</li> <li>• Relational Data base management system (RDBMS) software.</li> </ul>	<ul style="list-style-type: none"> <li>• Identify the data and information,</li> <li>• Identify the field, record, table in the database,</li> <li>• Prepare the sample table with some standard fields.</li> <li>• Assign the primary key to the field,</li> <li>• Identify the primary key, composite primary key, foreign key.</li> </ul>
2.	Create and edit tables using wizard and SQL commands	<ul style="list-style-type: none"> <li>• Introduction to a RDBMS</li> <li>• Database objects – tables, queries, forms, and reports of the database,</li> <li>• Terms in database – table, field, record,</li> <li>• Steps to create a table using table wizard, Data types in Base,</li> <li>• Option to set primary key Table Data View dialog box</li> <li>□ DDL Commands</li> </ul>	<ul style="list-style-type: none"> <li>• Start the RDBMS and observe the parts of main window,</li> <li>• 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.</li> <li>• Assign data types of field, Set primary key,</li> <li>• Edit the table in design view, Enter the data in the fields.</li> <li>• Create and edit table using DDL Commands</li> </ul>
3.	Perform operations on table	<ul style="list-style-type: none"> <li>• Inserting data in the table,</li> <li>• Editing records in the table,</li> <li>• Deleting records from the table,</li> <li>• Sorting data in the table, Referential integrity,</li> <li>• Creating and editing relationships – one to one, one to many, many to many,</li> <li>• Field properties.</li> </ul>	<p>Demonstrate to:</p> <ul style="list-style-type: none"> <li>• Insert data in the table, Edit records in the table, Delete records from table, Sort data in the table,</li> <li>• Create and edit relationships</li> <li>• one to one, one to many, many to many,</li> <li>• Enter various field properties.</li> </ul>

S. No.	LEARNING OUTCOMES	THEORY	PRACTICAL
4.	Retrieve data using query	<ul style="list-style-type: none"> <li>Database query,</li> <li>Defining query,</li> <li>Query creation using wizard,</li> <li>Creation of query using design view,</li> <li>Editing a query,</li> <li>Applying criteria in query – single field, multiple fields, using wildcard,</li> <li>Performing calculations,</li> <li>Grouping of data,</li> <li>Structured Query Language (SQL).</li> </ul>	<ul style="list-style-type: none"> <li>Prepare a query for given criteria,</li> <li>Demonstrate to create query using wizard, and using design view,</li> <li>Edit a query,</li> <li>Demonstrate to apply various criteria in query – single field, multiple fields, using wild card,</li> <li>Performing calculations using query in Base,</li> <li>Demonstrate to group data,</li> <li>Use basic SQL commands,</li> </ul>
5.	Create Forms and Reports using wizard	<ul style="list-style-type: none"> <li>Forms in Base,</li> <li>Creating form using wizard,</li> <li>Steps to create form using Form Wizard,</li> <li>Options to enter or remove data from forms</li> <li>Modifying form,</li> <li>Changing label, background,</li> <li>Searching record using Form,</li> <li>Inserting and deleting record using Form View,</li> <li>Concept of Report in Base,</li> <li>Creating Report using wizard,</li> <li>Steps to create Report using Wizard.</li> </ul>	<ul style="list-style-type: none"> <li>Illustrate the various steps to create Form using Form Wizard,</li> <li>Enter or remove data from Forms,</li> <li>Demonstrate to modify Forms,</li> <li>Demonstrate to change label, background,</li> <li>Search record using Form,</li> <li>Insert and delete record using Form View,</li> <li>Illustrate the various steps to create Report using Report Wizard,</li> <li>Demonstrate various examples of Report.</li> </ul>



### UNIT 4: WEB APPLICATIONS AND SECURITY

S. No.	LEARNING OUTCOMES	THEORY	PRACTICAL
1.	Working with Accessibility Options.	<ul style="list-style-type: none"> <li>Understand various types of impairment that impact computer usage</li> <li>Computer Accessibility Dialog box and its tabs</li> <li>Serial Keys</li> </ul>	<ul style="list-style-type: none"> <li>Illustrate use of various options under Computer Accessibility like Keyboard, mouse, sound, display setting serial keys, cursor options</li> <li>use of toggle keys, filter keys, sticky keys, sound sentry, show sounds etc.</li> </ul>
2.	Understand Networking Fundamentals	<ul style="list-style-type: none"> <li>Network and its types.</li> <li>Client Server Architecture, Peer to-peer (P2P) Architecture,</li> <li>internet, World Wide Web,</li> <li>benefits of networking</li> <li>internet, getting access to internet,</li> <li>internet terminology</li> <li>Some of the commonly used Internet connectivity options</li> <li>Data transfer on the Internet</li> </ul>	<ul style="list-style-type: none"> <li>Identify applications of Internet</li> <li>comparing various internet technologies</li> <li>identifying types of networks and selecting internet</li> </ul>
3.	Introduction to Instant Messaging	<ul style="list-style-type: none"> <li>learn key features of instant messaging</li> <li>Creating an instant messaging account</li> <li>Launching Google Talk</li> <li>Signing In into your Google Talk Account</li> </ul>	<ul style="list-style-type: none"> <li>Illustrate steps to create instant messaging account</li> <li>Signing In into your Google Talk Account</li> </ul>
4.	Chatting with a Contact – Google Talk	<ul style="list-style-type: none"> <li>learn to chat with a contact that is already added to your contact list.</li> <li>sending text chat messages instantly by double-clicking on a contact.</li> <li>general rules and etiquettes to be followed while chatting.</li> <li>chatting on various types of messengers</li> </ul>	<ul style="list-style-type: none"> <li>Illustrate chat with a contact and send messages,</li> <li>chatting with various messenger services</li> </ul>
5	Creating and Publishing Web Pages – Blog ...-	<ul style="list-style-type: none"> <li>learn and appreciate a blog and its creation with the help of some blog providers</li> <li>set up title and other parameters in a blog posting comments</li> <li>using offline blog editors</li> </ul>	<ul style="list-style-type: none"> <li>□ Illustrate Blog Creation and setting various parameters in it</li> </ul>

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.	<ul style="list-style-type: none"> <li>• Demonstration on how to create blogs using a blog application offline.</li> <li>• posting messages in an offline application</li> <li>• Publish the blog whenever internet connectivity is available using various examples</li> </ul>
7	Online Transaction	<ul style="list-style-type: none"> <li>• concept of e-commerce and various online applications</li> <li>• importance of secure passwords</li> </ul>	<ul style="list-style-type: none"> <li>• Illustration of online shopping using various ecommerce sites</li> <li>• Demonstration of securing passwords for online transactions.</li> </ul>
8.	Internet Security	<ul style="list-style-type: none"> <li>• Need of internet security</li> <li>• Cyber threats like phishing, email-spoofing, char spoofing etc.</li> <li>• best practices for internet security and secure passwords</li> <li>• concept of browser, cookies, backup, antivirus</li> <li>• clearing data in browsers</li> </ul>	<ul style="list-style-type: none"> <li>• illustration of internet security threats through various ways</li> <li>• cyber security tips</li> <li>• tips for secure passwords</li> <li>• demonstration of strong passwords using various websites.</li> <li>• clearing data stored in browser applications.</li> </ul>
9.	Maintain workplace safety	<ul style="list-style-type: none"> <li>• Basic safety rules to follow at workplace – Fire safety,</li> <li>• Falls and slips, Electrical safety, Use of first aid.</li> <li>• Case Studies of hazardous situations.</li> </ul>	<ul style="list-style-type: none"> <li>• Practice to follow basic safety rules at workplace to prevent accidents and protect workers – Fire safety,</li> <li>• Falls and slips, Electrical safety, Use of first aid.</li> </ul>
10.	Prevent Accidents and Emergencies	<ul style="list-style-type: none"> <li>• Accidents and emergency,</li> <li>• Types of Accidents,</li> <li>• Handling Accidents</li> <li>• Types of Emergencies.</li> </ul>	<ul style="list-style-type: none"> <li>• Illustrate to handle accidents at workplace,</li> <li>• Demonstrate to follow evacuation plan and procedure in case of an emergency.</li> </ul>
11.	Protect Health and Safety at work	<ul style="list-style-type: none"> <li>• Hazards and sources of hazards,</li> <li>• General evacuation procedures,</li> <li>• Healthy living.</li> </ul>	<ul style="list-style-type: none"> <li>• Identify hazards and sources of hazards,</li> <li>• identify the problems at workplace that could cause accidents,</li> <li>• Practice the general evacuation procedures in case of an emergency.</li> </ul>

## **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
<b>A</b>	<b>HARDWARE</b>	
1.	Computer with latest configuration or minimum Pentium Processor with minimum 2GB RAM, 512 GB HDD, 17" LED Monitor, NIC Card, 3 button Mouse, 105 keys key board and built-in speakers and mic.	15
2.	Laser Printer - Black	01
3.	Inkjet Printers (Colour & Black)	01
4.	Scanner	01
5.	Online UPS 5 KVA	01
6.	16 Port Switches	01
7.	Air Conditioner 1.5 tonne	02
8.	Telephone line (For Internet)	01
9.	Fire extinguisher	01
<b>B</b>	<b>SOFTWARE</b>	
1.	Operating System Linux and Windows	
2.	Anti-Virus Latest version	
3.	Productivity Suite, Example – Open Office, Google Suite etc.	

<b>C</b>	<b>FURNITURE</b>	
1.	Class room chairs and desks	25
2.	Computer Tables	15
3.	Straight back revolving & adjustable chairs (Computer Chairs)	15
4.	Printer Tables	02
5.	Trainers Table	01
6.	Trainers Chair	01
7.	Steel cupboards drawer type	02
8.	Cabinet with drawer	01
9.	Steel Almira - big size	01
10.	Steel Almira- small size	01

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

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

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

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

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

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

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

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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

# ARTIFICIAL INTELLIGENCE (SUBJECT CODE 417)

## CLASS – X (SESSION 2021-2022)

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

	TERM	UNITS	NO. OF HOURS for Theory and Practical	MAX. MARKS for Theory and Practical
PART A	Employability Skills			
	TERM I	Unit 1: Communication Skills-II	10	5
		Unit 2: Self-Management Skills-II	10	
		Unit 3: ICT Skills-II	10	
	TERM II	Unit 4: Entrepreneurial Skills-II	15	5
		Unit 5: Green Skills-II	05	
	Total		50	10
PART B	Subject Specific Skills			Marks
	TERM I	Unit 1: Introduction to Artificial Intelligence		10
		Unit 2: AI Project Cycle		10
		Unit 3: Advance Python* (*To be assessed in Practicals only)		
	TERM II	Unit 4: Data Science* (*To be assessed in Practicals only)		
		Unit 5: Computer Vision* (*To be assessed in Practicals only)		
		Unit 6: Natural Language Processing		10
		Unit 7: Evaluation		10
	Total			40
PART C		<b>Practical Work:</b> <ul style="list-style-type: none"> <li>Unit 3: Advance Python</li> <li>Unit 4: Data Science</li> <li>Unit 5: Computer Vision</li> </ul>		20
		Practical Examination		10
		Viva Voce		5
	Total			35
PART D		Project Work / Field Visit / Practical File / Student Portfolio		10
		Viva Voce		5
	Total			15
		GRAND TOTAL	200	100



## DETAILED CURRICULUM/TOPICS FOR CLASS X

### 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
	<b>TOTAL</b>	<b>50</b>

**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 Artificial Intelligence (AI)
- ❖ Unit 2: AI Project Cycle
- ❖ Unit 3: Advance Python (To be assessed through Practicals)
- ❖ Unit 4: Data Science (To be assessed through Practicals)
- ❖ Unit 5: Computer Vision (To be assessed through Practicals)
- ❖ Unit 6: Natural Language Processing
- ❖ Unit 7: Evaluation

UNIT	SUB-UNIT	SESSION/ ACTIVITY/ PRACTICAL
<b>1. INTRODUCTION TO AI</b>	Foundational concepts of AI	<b>Session:</b> What is Intelligence?
		<b>Session:</b> Decision Making. <ul style="list-style-type: none"> <li>• How do you make decisions?</li> <li>• Make your choices!</li> </ul>
		<b>Session:</b> what is Artificial Intelligence and what is not?
	Basics of AI: Let's Get Started	<b>Session:</b> Introduction to AI and related terminologies. <ul style="list-style-type: none"> <li>• Introducing AI, ML &amp; DL.</li> <li>• Introduction to AI Domains (Data, CV &amp; NLP)</li> </ul>
		<b>Session:</b> Applications of AI – A look at Real-life AI implementations
		<b>Session:</b> AI Ethics
<b>2. AI PROJECT CYCLE</b>	Introduction	<b>Session:</b> Introduction to AI Project Cycle
	Problem Scoping	<b>Session:</b> Understanding Problem Scoping & Sustainable Development Goals
	Data Acquisition	<b>Session:</b> Simplifying Data Acquisition
	Data Exploration	<b>Session:</b> Visualising Data

UNIT	SUB-UNIT	SESSION/ ACTIVITY/ PRACTICAL
	Modelling	<b>Session:</b> Introduction to modelling <ul style="list-style-type: none"> <li>• Introduction to Rule Based &amp; Learning Based AI Approaches</li> <li>• Introduction to Supervised Unsupervised &amp; Reinforcement Learning Models</li> <li>• Neural Networks</li> </ul>
	Evaluation	<b>Session:</b> Evaluating the idea!
<b>3. ADVANCE PYTHON</b> (To be assessed through Practicals)	Recap	<b>Session:</b> Jupyter Notebook
		<b>Session:</b> Introduction to Python
		<b>Session:</b> Python Basics
<b>4. DATA SCIENCES</b> (To be assessed through Practicals)	Introduction	<b>Session:</b> Introduction to Data Science
		<b>Session:</b> Applications of Data Science
		<b>Session:</b> Revisiting AI Project Cycle
	Concepts of Data Sciences	<b>Session:</b> Python for Data Sciences
		<b>Session:</b> Statistical Learning & Data Visualisation
	K-nearest neighbour model	<b>Activity:</b> Personality Prediction
		<b>Session:</b> Understanding K-nearest neighbour model
<b>5. COMPUTER VISION</b> (To be assessed through Practicals)	Introduction	<b>Session:</b> Introduction to Computer Vision
		<b>Session:</b> Applications of CV
	Concepts of Computer Vision	<b>Session &amp; Activity:</b> Understanding CV Concepts <ul style="list-style-type: none"> <li>• Pixels</li> <li>• How do computers see images?</li> <li>• Image Features</li> </ul>
	OpenCV	<b>Session:</b> Introduction to OpenCV
		<b>Hands-on:</b> Image Processing
	Convolution Operator	<b>Session:</b> Understanding Convolution operator
		<b>Activity:</b> Convolution Operator
	Convolution Neural Network	<b>Session:</b> Introduction to CNN
		<b>Session:</b> Understanding CNN <ul style="list-style-type: none"> <li>• Kernel</li> <li>• Layers of CNN</li> </ul>
		<b>Activity:</b> Testing CNN
<b>6. NATURAL LANGUAGE PROCESSING</b>	Introduction	<b>Session:</b> Introduction to Natural Language Processing
		<b>Session:</b> NLP Applications
		<b>Session:</b> Revisiting AI Project Cycle
	Chatbots	<b>Activity:</b> Introduction to Chatbots
	Language Differences	<b>Session:</b> Human Language VS Computer Language

UNIT	SUB-UNIT	SESSION/ ACTIVITY/ PRACTICAL
	Concepts of Natural Language Processing	<b>Hands-on:</b> Text processing <ul style="list-style-type: none"> <li>• Data Processing</li> <li>• Bag of Words</li> <li>• TFIDF</li> <li>• NLTK</li> </ul>
<b>7. EVALUATION</b>	Introduction	<b>Session:</b> Introduction to Model Evaluation
	Confusion Matrix	<b>Session &amp; Activity:</b> Confusion Matrix
	Evaluation Score Calculation	<b>Session:</b> Understanding Accuracy, Precision, Recall & F1 Score
		<b>Activity:</b> Practice Evaluation

**\* NOTE: Unit 3, 4 & 5 should be assessed through Practicals only and should not be assessed with the Theory Exam.**

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

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

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

S. NO.	ITEM NAME, DESCRIPTION & SPECIFICATION
3	Internet Browser: Google Chrome
4	Productivity Suite: Any (Google+ Suite recommended)
5	Anaconda Navigator Distribution ( <a href="https://bit.ly/AI-installation-guide">https://bit.ly/AI-installation-guide</a> )
6	Conceptual installations ( <a href="https://bit.ly/AI-installation-guide">https://bit.ly/AI-installation-guide</a> )
7	Intel OpenVINO tools
8	Python

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

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

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Qualification	Minimum Competencies	Age Limit
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- 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.