KENDRIYA VIDYALAYA SANGATHAN

REGION - JABALPUR

तत् त्वं पूषन् अपावृणु
केन्द्रीय विद्यालय संगठन

75
आज़ादी का
अमृत महोत्सव

STUDENT HELP BOOK
CLASS - X
TERM - II
SESSION 2021-22

MATHS

ENGLISH

SCIENCE

HINDI

SOCIAL
SCIENCE

KENDRIYA VIDYALAYA SECL NOWROZABAD

OUR PATRONS

Sh. Tajuddin Shaik
Deputy Commissioner
KVS Regional Office, Jabalpur

Mrs. Vandana Sekar
Assistant Commissioner
KVS Regional Office, Jabalpur

GUIDANCE
Sh. Manish Gupta
Principal
KV SECL NOWROZABAD

Content Team of Kendriya Vidyalaya Nowrozabad
1. Mrs. Nimisha Mishra, PGT (Chem)
2. Sh. S.P.Soni, TGT (S.St.)
3. Sh. Naresh Kumar Garhwal, TGT (Maths)
4. Sh. Deepak Rai, TGT (Hindi)
5. Sh Ganpat Chaurasia, PGT (Phy)- Cont.
6. Ms. Richa Verma, PGT (Bio)- Cont.
7. Sh. Arvind Pathak, TGT (Eng.) - Cont.

Compilation
Sh. Vijay Kumar Yadav, TGT(WE)

Cover page Design
Sh. S.P.Soni,PRT (cont.)

CONTENT
SYLLABUS FOR TERM – II (as prescribed by CBSE)
ENGLISH, HINDI, MATHS, SCIENCE, SOCIAL SCIENCE
Question Bank & Revision Notes for Term 2
ENGLISH, HINDI, MATHS, SCIENCE, SOCIAL SCIENCE
SAMPLE PAPERS with Marking scheme for Term 2 (as issued by CBSE)
ENGLISH, HINDI, MATHS, SCIENCE, SOCIAL SCIENCE

English Language & Literature
Code No. 184
Class X (2021-22) TERM 2 SYLLABUS

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

हिन्दी पाठ्यक्रम -अ (HINDI COURSE-A)
Code No. 002
Class X (2021-22) TERM 2 SYLLABUS

		विषयवस्तु	उप भार	कुलभार
		परीक्षा भार विभाजनसत्र 2		
1		पाठ्यपुस्तक क्षितिज भाग - 2 व पूरक पाठ्यपुस्तक कृतिका भाग - 2		20
	अ	गद्य खंड		
		क्षितिज से निर्धारित पाठों के आधार पर विषय-वस्तु का ज्ञान बोध, अभिव्यक्ति आदि पर चार प्रश्न पूछे जाएंगे। (2x4)	8	
	ब	काव्य खंड		
		क्षितिज से निर्धारित कविताओं के आधार पर विद्यार्थियों का काव्यबोध परखने हेतु तीन प्रश्न पूछे जाएँगे। (2x3)	6	
	स	पूरक पाठ्यपुस्तक कृतिका भाग - 2		
		कृतिका के निर्धारित पाठों पर आधारित दो प्रश्न पूछे जाएँगे । (3x2)	6	
2		लेखन		20
	अ	विभिन्न विषयों और संदर्भों पर विद्यार्थियों के तर्कसंगत विचार प्रकट करने की क्षमता को परखने के लिए संकेत बिंदुओं पर आधारित समसामयिक एवं व्यावहारिक जीवन से जुडे हुए तीन विषयों में से किसी एक विषय पर लगभग150 शब्दों में अनुच्छेद लेखन। (5x1)	5	
	ब	अभिव्यक्ति की क्षमता पर केन्द्रित औपचारिक अथवा अनौपचारिक विषयों में से किसी एक विषय पर लगभग120 शब्दों में पत्र। (5x1)	5	
	स	विषयसेसंबंधितदोविज्ञापनों(प्रत्येकलगभग 50 शब्दोंवाला)कालेखन। (2.5 अंकx2 प्रश्न) (विकल्पसहित)	5	
	द	संदेशलेखन (शुभकामना, पर्व-त्योहारोंएवंविशेषअवसरोंपरदिएजानेवालेदोसंदेश) (प्रत्येकलगभग40 शब्दोंमें) (2.5 अंकx2 प्रश्न) (विकल्पसहित)	5	
3		**आंतरिकमूल्याङ्कन**		10
	अ	सामयिकआकलन	3	
	ब	बहुविधआकलन	2	
	स	पोर्टफोलियो	2	
	द	श्रवणएवंवाचन	3	
		कुल		50

सत्र-2 2021-22 मेंनिम्नलिखितपाठसम्मिलितकिएगएहैं –

पाठ्यपुस्तकक्षितिजभाग -2

काव्य – खंड

1.   सूर्यकांतत्रिपाठी 'निराला' - 'उत्साह', 'अटनहींरहीहै'

2.   ऋतुराज - कन्यादान

गद्य - खंड

3.   यशपाल - लखनवीअंदाज़

4. सर्वेश्वरदयालसक्सेना - मानवीयकरुणाकीदिव्यचमक

अनुपूरकपाठ्यपुस्तककृतिकाभाग -2

1. शिवपूजनसहाय - माताकाअँचल

2. कमलेश्वर - जॉर्जपंचमकीनाक

3. मधुकांकरिया - साना - सानाहाथजोड़ि

निर्धारित पुस्तकें :

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

2. **कृतिका, भाग-2,** एन.सी.ई.आर.टी., नई दिल्ली द्वारा प्रकाशितनवीनतम संस्करण

Mathematics
Code No. 041
Class X (2021-22) TERM 2 SYLLABUS

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 nth term and sum of the first n terms of A.P. and their application in solving daily life problems.
(Applications based on sum to n terms of an A.P. are excluded)

UNIT- GEOMETRY
3. CIRCLES
Tangent to a circle at, point of contact

1. (Prove) The tangent at any point of a circle is perpendicular to the radius through the point of contact.
2. (Prove) The lengths of tangents drawn from an external point to a circle are equal.

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

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

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

UNIT-STATISTICS & PROBABILITY
7. STATISTICS

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

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

PRESCRIBED BOOKS

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

Science
Code No. 086
Class X (2021-22) TERM 2 SYLLABUS

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

TERM - II

Theme: Materials

Unit I: Chemical Substances - Nature and Behaviour

Chapter – 4 Carbon and its compounds

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

Chapter – 5 Periodic classification of elements

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

Theme: The World of the Living

Unit II: World of Living

Chapter – 8 How do organisms reproduce?

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

Chapter – 9 Heredity and Evolution

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

7

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-II

LIST OF EXPERIMENTS

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

   Unit-IV:(Chapter-12)

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

PRESCRIBED BOOKS:

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

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

Theory   **TotalMaximum Marks: 80**

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

Note:

- Internal choice would be provided.

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

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

Social Science
Code No. 087
Class X (2021-22) TERM 2 SYLLABUS

TERM - II	
Unit 1: India and the Contemporary World – II	Marks - 10
Themes	**Learning Objectives**

Section 1: Events and Processes
 	
2. **Nationalism in India**
  • The First World War, Khilafat and Non - Cooperation
  • Differing Strands within the Movement
  • Towards Civil Disobedience
  • The Sense of Collective Belonging
	• Recognize the characteristics of Indian nationalism through a case study of Non-Cooperation and Civil Disobedience Movement.
	• Analyze the nature of the diverse social movements of the time.
	• Familiarize with the writings and ideals of different political groups and individuals.
	• Appreciate the ideas promoting Pan Indian belongingness.

Section 2: Livelihoods, Economies and Societies
 	
Note: Any one theme of the following. The theme selected should be assessed in the periodic test only and will not be evaluated in the board examination:
 	
3. **The Making of a Global World**
  • The Pre-modern world
  • The Nineteenth Century (1815-1914)
  • The Inter war Economy
  • Rebuilding a World Economy: The Post-War Era
 	
4. **The Age of Industrialization**
  • Before the Industrial Revolution
  • Hand Labour and Steam Power
  • Industrialization in the colonies
  • Factories Come Up
  • The Peculiarities of Industrial Growth
  • Market for Goods
	• Show that globalization has a long history and point to the shifts within the process.
	• Analyze the implication of globalization for local economies.
	• Discuss how globalization is experienced differently by different social groups.
	
	• Familiarize with the Pro- to-Industrial phase and Early – factory system.
	• Familiarize with the process of industrialization and its impact on labour class.
	• Enable them to understand industrialization in the colonies with reference to Textile industries.

Unit 2: Contemporary India – II	Marks – 10
Themes	**Learning Objectives**
5. Minerals and Energy Resources • What is a mineral? • Mode of occurrence of Minerals • Ferrous and Non-Ferrous Minerals • Non-Metallic Minerals • Rock Minerals • Conservation of Minerals • Energy Resources ○ Conventional and Non-Conventional • Conservation of Energy Resources Note: The theoretical aspect of chapter 'Minerals and Energy Resources' to be assessed in the Periodic Tests only and will not be evaluated in Board Examination. However, the map items of this chapter as given in the Map List will be evaluated in Board Examination	• Identify different types of minerals and energy resources and places of their availability • Feel the need for their judicious utilization
6. Manufacturing Industries • Importance of manufacturing • Contribution of Industry to National Economy • Industrial Location • Classification of Industries • Spatial distribution • Industrial pollution and environmental degradation • Control of Environmental Degradation	• Bring out the importance of industries in the national economy as well as understand the regional disparities which resulted due to concentration of industries in some areas. • Discuss the need for a planned industrial development and debate over the role of government towards sustainable development.
7. Life Lines of National Economy • Transport – Roadways, Railways, Pipelines, Waterways, Airways • Communication • International Trade • Tourism as a Trade	• Explain the importance of transport and communication in the ever-shrinking world. • Understand the role of trade and tourism in the economic development of a country.
Unit 3: Democratic Politics – II	Marks – 10
Themes	**Learning Objectives**
6. Political Parties	• Analyze party systems in democracies.

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

Unit 4: Economics   Marks –10

Themes	Learning Objectives

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

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

A. HISTORY (Outline Political Map of India)

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

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

B. GEOGRAPHY (Outline Political Map of India)

Chapter 5: Minerals and Energy Resources

Power Plants-(Locating and Labelling only)
a. **Thermal**
   - Namrup
   - Singrauli
   - Ramagundam
b. **Nuclear**
   - Narora
   - Kakrapara
   - Tarapur
   - Kalpakkam

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

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

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

Chapter 7: Lifelines of National Economy

Major Ports: (Locating and Labelling)

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

International Airports:

a. Amritsar (Raja Sansi)
b. Delhi (Indira Gandhi International)
c. Mumbai (Chhatrapati Shivaji)
d. Chennai (Meenam Bakkam)
e. Kolkata (Netaji Subhash Chandra Bose)
f. Hyderabad (Rajiv Gandhi)

INTERNAL ASSESSMENT

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

PROJECT WORK
CLASS X (2021-22)

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.

English Language & Literature
Code No.184
QUESTION BANK FOR Class X (2021-22) TERM 2

SECTION-A [READING] [10 MARKS)

Q.1 – Some important hints to solve a passage are;

1-Read the passage two or three times so that you could understand the main idea of the passage.

2-Read the questions carefully and then mark (underlined)most suitable portion in which your answers belong to.

3-Do not copy out the relevant lines which form the answers to the questions but write the answers in your own languages as for as possible.

4-Use complete sentences and write out each answer separately.

5-Answer should be revised it will help the students to correct their mistakes in the spellings and punctuation marks,etc.

6-To give the meaning of words or phrases you should express the idea as clearly as possible in your own words.

7-The title should not be in the form of a sentence and be as short as possible.

8-Your title should represent the central idea of the passage and the first letter of main words in the title should be in capital.

SECTION –B(WRITING AND GRAMMAR)(10 MARKS)

Main points related to write a formal letter;

1-Headings;Address of the writer and date on the left hand top of the letter .The heading may be punctuated .

2-Salutation of greeting;it is written on the left hand corner .The form of greeting will depend upon the relation in which you stand to the person to whom you are writing.

(a)In personal letter;

(1) To relatives;My dear uncle ,my dear father ,dear uncle.dear Raju ets.

(2) To friends;my dear Anjali,

(3) To strangers;Sir,Madam etc.

(4) Official letters;sir, madam

Purpose of the letter;(1) To express one's opinion on a wide range of issues

(2) To express and share one's observations and views in a public forum for example a magazine or a newspaper.

Language of the letter;(1) Formal language must be used.

(2) Repetition of ideas must be avoided'

(3) Subject paragraphs should be used in an organized way.

(4) Personal outlook must be included but based language should be avoided.

(5) Word limit must be kept in mind.

FORMAT OF A FORMAL LETTER

SENDER'S ADDRESS

DATE

ADDRESS OF THE ADDRESSEE

SIR/MADAM

(SUBJECT;……………………………………………………………………………………….)

BODY OF THE LETTER(IN 3-4 PARAGRAPHS)

(1) STATEMENT OF THE PROBLEM

(2) CAUSES OF THE PROBLEM

(3) OUTCOME OF THE PROBLEM

(4) SUGGESTIONS/REMEDIES

(5) CONCLUSION

YOURS FAITHFULLY/YOURS SINCERELY /YOURS TRULY

SENDER'S NAME

Some important rules of grammar

Determiners

Determiners are broadly classified into the following categories;

(1) Articles (2) possessive (3) demonstratives (4) Quantifiers (5) Distributives (6) Interrogatives

(1) ARTICLES

Use of an; An means **one** .An is used before vowel sound.

AS;He is an s.d.o.

Use of A; A means One. A is used before consonant sound.

As; I want such a book

Use of The; The is used before…

(1) The musical instruments

(2) The political parties

(3) Ships,aeroplanes,trains,newspapers,magazines,journals,and well known buildings

(4)The names of sacred books

(5) Natural things

(6) Nouns which are the names of things of which there is only one

(7)Proper,material and abstract nouns when they are specified

(8)The physical position

(9) The committee ,club.and foundation

Examples (1) sudha plays the table

(2) the bhartiya janta party,the congress party

(3) the victory ,the rajdhani express,the times of india ,the red fort

(4)the bible,the Ramayana

(5)the ganga,the Arabian sea, the bay of Bengal

(6)the earth, the sky

USE OF SOME;To express quantity some is used in affirmative sentences.

AS-There is some cheese in refrigerator

USE OF ANY;To express quantity any is used in negative sentences.

As-I did not give him any butter

USE OF FEW; Few is used before countable nouns

As-A few girls attended the class

USE OF LITTLE;Little is used before uncountable nouns……

As-A little knowledge is very dangerous thing

USE OF LESS; Less is used with reference to quantity .

As-I had less trouble in locating the building

USE OF EACH,EVERY,EITHER,NEITHER;EACH means one of two things or one of any number exceeding two.

EVERY is never used in speaking of one of two but is always used in speaking of some numberexceeding two.

Either has two meanings;one or two or each of two that is both.

NEITHER;Is the negative of either and means neither the one nor the other

Examples;(1)Each girl must get her share.

(2) Every man wishes to be happy.

(3) you can go by either road

USE OF MUCH/MANY

MUCH; Is used before uncountable nouns

As-you have much milk in your pot.

MANY is used before countable nouns

As-You have many books in your bag.

Some important uses of prepositions

Use of AT;At is used for point of time

to show rate of prices

to indicate age and condition

with the names of small town and villages

with noon ,night and dawn

Example;I go to bed at 10 o' clock

(2)milk sells at fourteen rupees a litre

(3)i got this job at the age of twenty-five.

Use of IN; For period of time

before the names of months,seasons and years

for countries and large towns

Examples;(1) She came here in july.

(2) He was born in 1982.

Use of BY; After verb in the passive voice to express the agent or doer of the action

with the watch

with the manner in which an action is done

Examples;(1) the boy was punished by the teacher.

Use of WITH; With the instrument with which action is done.

to indicate a manner

it is also used as under

i went to market with my friends

Use of FROM; From denotes a point of time but it is preceded by a verb in any case

source,origin;

because of,as a result of, separation instead of As being unlike in place or time

Examples;(1) Shops will remain open from 8 o' clock.

(2) I knew from him all about you.

(3) He died from loss of blood.

(4) The mango fell from the tree.

(5) sudha played the music from memory

SECTION C (LITERATURE)

Some important questions for Term 2

Glimpses of india

Q1-Describe the childhood memories of the author's time in Goa and his fondness for breadsand cakes?

Q2-Why is the presence of a baker's furnace in a Goan village a necessity?

Madam Rides the bus

Q3-What was the source of unending joy for valli and what was her strongest desire?

Q4-Why does valli collect information about the bus to the town?

Q5-How was valli's bus journey an induction into the mystery of life and death?

The tale of custard the dragon

Q6-Give a brief description of the pirate in the poem 'The Tale of Custard the Dragon.

Q7-Belinda was a sweet little girl who lived in her sweet little white house.who else lived with her in that house?

The sermon at benares

Q8-After her son's death why does Gotami go from house to house?

Q9-Which people are referred to as wise by the Buddha in his sermons?

The proposal

Q10-How much money was spent by Natalya and Lomovfor their pets?

Q11-Why does Chubukov suspect Lomov when he comes to his house?

Q12-Describe the first quarrel between Lomov and Natalya in the play,'The Proposal.

Q13-Write the characture sketch of Lomov.

Amanda

Q14Who is the mermaid in Amanda what does she wish todo?

Q15Bringing up teenagers can be both a challenge and fun.How far do you agree?Express your views with reference to Amanda's life?

Animals

Q16What is the relevance of tokens in the poem Animals?Who brings them to the poet?

The making of a scientist

Q17What lesson does Ebright learn when he does not win anything at all?

Q18-Who was Richard A.Weithere ?How did he help Richard Ebright?

The Necklace

Q19-Why did Jeanne not recognize her friend Matilda?

Q20-Matilda proved a roaring success due to Mme Forestier leading her the necklace.How would you attain the stature of being generous?

The Hack Driver

Q21-How did the narrator get to know about Bill's reality?

Bholi

Q22-Bholi's teacher was not an ordinary teacher;she was more than that suppose you become a teacher what qualities of bholi's teacher will you imbibe to help students to overcome social discrimination?

खंड - 'क ' (पाठ्यपुस्तक तथा पूरक पाठ्यपुस्तक)

महत्वपूर्ण प्रश्न"क्षितिज" -

गद्यखंड

1)लेखक को नवाब साहब के किन हाव-भावों से महसूस हुआ कि वे उनसे बातचीत करने के लिए उत्सुक नहीं है?

2) नवाब साहब को लेखक के सामने झिझक क्यों हो रही थी ?

3) 'लखनवी अंदाज ' पाठ में निहित व्यंग को स्पष्ट कीजिए ।

4) आप लखनवी अंदाज निबंध को और क्या नाम देना चाहेंगे ?

5) नवाब साहब ने बहुत ही यत्न से खीरा काटा, नमक-मिर्च बुरका, अंतत: सूँघकर ही खिड़की से बाहर फेंक दिया। उन्होंने ऐसा क्यों किया होगा? उनका ऐसा करना उनके कैसे स्वभाव को इंगित करता है?

6) लेखक ने फ़ादर बुल्के को 'मानवीय करुणा की दिव्य चमक' क्यों कहा है?

7) फ़ादर का सान्निध्य पाकर लेखक को ऐसा क्यों लगन्ना कि वह किसी देवदारु वृक्ष की छाया में खड़ा हो ?

8) मानवीय करुणा की दिव्य चमक' नामक पाठ में निहित संदेश स्पष्ट कीजिए।

पद्य खंड

1) अट नहीं रही है कविता में फागुन में ऐसा क्या होता है?, जो बाकी ऋतुओं से भिन्न होता है।

2) कवि निराला की आंख फागुन की सुंदरता से क्यों नहीं हट रही है?

3) बादलों की गर्जना का आह्वान कर कवि क्या कहना चाहता है ? उत्साह कविता के आधार पर बताइए।

4) उत्साह कविता में बादल किन- किन अर्थों की ओर संकेत करता है?

5) आग रोटियाँ सेंकने के लिए है।
   जलने के लिए नहीं।
   (क) इन पंक्तियों में समाज में स्त्री की किस स्थिति की ओर संकेत किया गया है?
   (ख) माँ ने बेटी को सचेत करना क्यों जरूरी समझा?

6) 'पाठिका थी वह धुंधले प्रकाश की

कुछ तुकों और कुछ लयबद्ध पंक्तियों की'

इन पंक्तियों को पढ़कर लड़की की जो छवि आपके सामने उभरकर आ रही है उसे शब्दबद्ध कीजिए।

7) माँ को अपर्च, बेटी 'अंतिम पूँजी' क्यों लग रही थी?

8) वैवाहिक संस्कार में कन्यादान खुशी का अवसर माना जाता है, पर यहाँ माँ दुखी क्यों थी?

महत्वपूर्ण प्रश्न कृतिका भाग-2

1) जॉर्ज पंचम की लाट की नाक को पुनः लगाने के लिए मूर्तिकार ने क्या-क्या यत्न किए ?

2) देश के छोटे बड़े सभी पूर्व महापुरुषों की नाकें जॉर्ज पंचम की नाक से बड़ी निकलने पर मूर्तिकार ने क्या उपाय सुझाया और उस जटिल समस्या का समाधान किस प्रकार हुआ? आप इस समाधान के विषय में अपने विचार व्यक्त कीजिए।

3) सरकारी तंत्र में जॉर्ज पंचम की नाक लगाने को लेकर जो चिंता या बदहवासी दिखाई देती है वह उनकी किस मानसिकता को दर्शाती है?

4) नाक मान-सम्मान व प्रतिष्ठा का द्योतक है। यह बात पूरी व्यंग्य रचना में किस तरह उभरकर आई है? लिखिए

5) आपने देखा होगा कि भोलानाथ और उसके साथी जब-तब खेलते-खाते समय किसी न किसी प्रकार की तुकबंदी करते हैं। आपको यदि अपने खेलों आदि से जुड़ी तुकबंदी याद हो तो लिखिए।

6) गंतोक को 'मेहनकश बादशाहों का शहर' क्यों कहा गया?

7) प्रकृति के उस अनंत और विराट स्वरूप को देखकर लेखिका को कैसी अनुभूति होती है?

8) कितना कम लेकर ये समाज को कितना अधिक वापस लौटा देती हैं।" इस कथन के आधार पर स्पष्ट करें कि आम जनता की देश की आर्थिक प्रगति में क्या भूमिका है?

निम्नलिखित विषयों में से किसी एक विषय पर दिए गए संकेत बिंदुओं के आधार पर 150 शब्दों में अनुच्छेद लिखिए।   [5x1 =5]

1) सैनिकों के प्रति सद्भाव ।

2) इंटरनेट का उपयोग ।

3) प्रकृति की रक्षा, मानव की सुरक्षा

4) परीक्षा के कठिन दिन

5) समय का महत्व

6) कोरोना – एक वैश्विक महामारी

पत्र

1)सार्वजनिक स्थलों पर बढ़ते हुए धूम्रपान तथा उसके कारण संभावित रोगों की ओर संकेत करते हुए किसी दैनिक समाचार पत्र के संपादक को 120 शब्दों में पत्र लिखिए।

2) आपके छोटे भाई बहन ने एक आवासीय विद्यालय में 1 माह पूर्व ही प्रवेश लिया है ,उसके मित्रों के चुनाव में सावधानी बरतने के लिए समझाते हुए एक पत्र 120 शब्दों में लिखिए.

3) आपका मित्र बोर्ड की परीक्षा में प्रथम घोषित किया गया है इस अवसर पर उसे लगभग 120 शब्दों में बधाई पत्र लिखिए

4)आपने दसवीं की परीक्षा मे प्रथम स्थान प्राप्त किया है, अतः फीसमाफ़ी के लिए प्राचार्य को लगभग 100 शब्दों में बधाई पत्र लिखिए ।

नीचे दिए गए विषयों में से किन्हीं दो विषयों पर 50 शब्दों में विज्ञापन तैयार कीजिए ।   [2.5x2 =5]

 1) 'स्वच्छ भारत अभियान' पर एक विज्ञापन तैयार कीजिए।

 2) विद्यालय के वार्षिकोत्सव के अवसर पर विद्यार्थियों द्वारा निर्मित हस्तकला की वस्तुओं की प्रदर्शनी के प्रचार हेतु एक विज्ञापन तैयार कीजिए।

 3) पर्यावरण विभाग की ओर से जल संरक्षण का आग्रह करते हुए एक विज्ञापन तैयार कीजिए ।

 4) 'फास्ट स्पीड ' नाम से एक मोबाइल मरम्मत करने की नई कंपनी के लिए 25-50 शब्दों में एक विज्ञापन तैयार कीजिये।

 5 अपने 'सफ़ेद मोती'नामक नहाने के साबुन के प्रचार के लिए एक विज्ञापन तैयारकीजिए।

 6) एक सुगंधित तेल 'चमेली'के अधिकाधिक बिक्री हेतु एक विज्ञापन तैयार कीजिए

निम्नलिखित में से किन्हीं दो विषयों पर लगभग 40 शब्दों में संदेश लिखिए ।   [2.5x2 =5]

1) आपके भाई को दसवीं की परीक्षा में प्रदेश में प्रथम आने से , उसके लिए बधाई संदेश लिखिए ।

2) चाचा और चाची की ओर से अजय को जन्म दिवस हेतु शुभकामना संदेश लिखिए।

3) होली पर्व पर भाई को शुभल्कमना संदेश लिखिए।

4) अपने विद्यालय मे मनाए जा रहे 72 वें गणतन्त्र दिवस समारोह के लिए संदेश लेखन तैयार कीजिये।
5) 'पोंगल' त्योहार मनाने की खुशी मे अपने मित्र को संदेश लिखिए ।

6) अपने प्रिय मित्र को नववर्ष -2022 के लिए शुभकामना संदेश लिखिए।

QUADRATIC EQUATIONS

KEY POINTS

1. The general form of a quadratic equation is $ax^2+bx+c=0$, $a\neq o$. a, b and c are real numbers.
2. A real number x is said to be a root of the quadratic equation $ax^2+bx+c=0$ where $a\neq o$ if $ax^2+bx+c=0$. The zeroes of the quadratic equation polynomial $ax^2+bx+c=0$ and the roots of the corresponding quadratic equation $ax^2+bx+c=0$ are the same.
3. Discriminant:- The expression b^2-4ac is called discriminant of the equation $ax^2+bx+c=0$ and is usually denoted by D. Thus discriminant $D= b^2-4ac$.
4. Every quadratic equation has two roots which may be real , co incident or imaginary.
5. IF α and β are the roots of the equation $ax^2+bx+c=0$ then

$$\alpha = \frac{-b+\sqrt{b^2-4ac}}{2a} \qquad And\ \beta = \frac{-b-\sqrt{b^2-4ac}}{2a}$$

6. Sum of the roots , $\alpha + \beta = -\frac{b}{a}$ and product of the roots, $\alpha\beta = \frac{c}{a}$
7. Forming quadratic equation, when the roots α and β are given.
   $x^2-(\alpha + \beta)x+ \alpha. \beta =0$
8. Nature of roots of $ax^2+bx+c=0$
   i.   If D>0, then roots are real and unequal.
   ii.   D=0, then the equation has equal and real roots.

   iii.   D<0, then the equation has no real roots

LEVEL-I

1. IF ½ is a root of the equation $x^2+kx-5/4=0$, then the value of K is
   (a) 2   [Ans(d)]
   (b) -2
   (c) ¼
   (d) ½
2. IF D>0, then roots of a quadratic equation $ax^2+bx+c=0$ are
   (a) $\frac{-b\pm\sqrt{D}}{2a}$ (b) $\frac{-b+\sqrt{D}}{2a}$ (c) $\frac{-b-\sqrt{D}}{2a}$ (d) None of these   [Ans(a)]

3. Discriminant of $x^2+5x+5=0$ is
   (a)5/2   (b) -5   (c) 5   (d)-4   [Ans(c)]

   4. The sum of roots of a quadratic equation $x^2+4x-320=0$ is
                                                                                                        [Ans(a)]
   (a)-4   (b)4   (c)1/4   (d)1/2

5. The product of roots of a quaradatic equation $2 x^2+7x-4=0$ is
                                                                                                        [Ans(d)]
   (a)2/7   (b)-2/7   (c)-4/7   (d)-2

6. Values of K for which the equation $9 x^2+2kx-1=0$ has real roots are:
                                                                                                        [Ans(b)]
   (a)k≥ ±3 (b)k≥3 or K≤-3   (c)K≥-3   (d) k≤ ±3

1. For what value of k, x=a is a solution of equation $x^2-(a+b)x+k=0$?

<div align="right">Ans. K=ab</div>

2. Represent the situation in the form of quadratic equation:-

   Rohan 's mother is 26 years older than him . the product of their ages (in years) 3 years from now will be 360. We would like to find Rohan's present age.

<div align="right">Ans . x^2+32x -273 = 0 where x(in years) is Rohan's present age</div>

3. Find the roots of x^2 -3x-10 = 0

<div align="right">Ans . -2 ,5</div>

4. Find two consecutive positive integers , sum of whose squares is 365.

<div align="right">Ans .13,14</div>

5. Find the roots of Quadratic equation $4x^2 +4\sqrt{3}x+3 = 0$ by using the quadratic formula.

<div align="right">Ans . $-\sqrt{\dfrac{3}{2}}$, $-\sqrt{\dfrac{3}{2}}$</div>

6. Find the discriminant of the Quadratic equation $2x^2$-4x+3 = 0 and hence find the nature of its roots .

<div align="right">Ans . D= -8<0 its no real roots.</div>

LEVEL - 3

1. If $x = 2 \; and \; x = 3$ are roots of the equation $3x^2 - 2kx + 2m = 0$ find the value of k and m.

<div align="right">Ans. $K = \dfrac{15}{2}, m = 9$</div>

2. Solve the equation:
   $$\frac{x}{x+1}+\frac{x+1}{x}=\frac{34}{15}, x \neq 0, x \neq -1$$

<div align="right">Ans. $x = \dfrac{3}{2} \; or \; x = \dfrac{-5}{2}$</div>

3. Solve the equation $2x^2 - 5x + 3 = 0$ by the method of completing square.

<div align="right">Ans. $x = \dfrac{3}{2} \; or \; x = 1$</div>

4. Using quadratic formula, solve the equation: $p^2x^2 + (p^2 - q^2)x - q^2 = 0$.

<div align="right">Ans. $x = -1, or \; x = \dfrac{q^2}{p^2}$</div>

5. The sum of two numbers is 15, if the sum of their reciprocals is $\dfrac{3}{10}, find \; the \; numbers$.

<div align="right">Ans. 10 and 5</div>

[LEVEL - 4]

1. In a class test , the sum of shefali's marks in maths and English is 30. Had she got 2 marks more in maths and 3 marks less in English, the product of their marks would have been 210. Find her marks in the two subjects.

<div align="right">Ans. Marks in maths = 12 , marks in English =18 or ,marks in maths = 13 , marks in English = 17</div>

2. Two water taps together can fill a tank in $9\frac{3}{8}$ hours. The tap of larger diameter takes 10 hours less than the smaller one to fill the tank separately. Find the time in which each tap can separately fill the tank.

<div align="right">Ans . 15 hours , 25 hours.</div>

3. Find the roots of equation $\frac{1}{x+4} - \frac{1}{x-7} = \frac{11}{13}$, x≠-4 , 7

4. Solve the following equation for 'x' $9x^2 - 9(a+b)x + (2a^2+5ab+2b^2) = 0$

Ans . $\frac{2a+b}{3}$, $\frac{a+2b}{3}$

5. If the roots of the equation (a-b) x^2+(b-c)x + (c-a) = 0 are equal , prove that 2a =b+c.

Self Evaluation

1. Find the value of p so that the equation $3x^2 - 5x + 2p = 0$ has equal roots. Also find the roots.

2. The sum of two numbers is 15. If the sum of their reciprocals is $\frac{3}{10}$, $find\ the\ two\ numbers$.

3. Find a and b such that x+1 and x+2 are factors of the polynomials $x^3 + ax^2 - bx + 10$.

4. Find the quadratic equation whose roots are 2 + $\sqrt{3}$ and 2 - $\sqrt{3}$

5. A person on tour has Rs. 360 for his daily expenses. If he exceeds his tour program me by four days, he must cut down his daily expenses by Rs 3 per day. Find the number of days of his tour program me.

6. Divide 29 into two parts so that the sum of squares of the parts is 425.

7. Solve for x: $9x^2 - 6ax + (a^2 - b^2) = 0$

8. If the equation $(1 + m^2)x^2 + 2mcx + c^2 - a^2 = 0\ has\ equal\ roots$, show that $c^2 = a^2(1 + m^2)$

ARITHMETIC PROGRESSION
(Key Points)

- Arithmetic progression (A.P.) :- An A.P. is a list of numbers in which each term is obtained by adding a fixed number to the preceding term except the first term.
- This fixed number is called the common difference of the A.P.
- If a is first term and d is common difference of an A.P. , then the A.P is a , a+d , a+2d , 2+3d .....
- The nth term of an a.p is denoted by a_n and a_n = a+(n-1) d , where a = first term and d = common difference.
- n^{th} term from the end = l – (n-1) d , where l = last term.
- Three terms a-d , a , a+d are in A.P with common difference d.
- Four terms a-3d , a-d , a+d ,a+3d are in A.P with common diff. 2d .
- The sum of first n natural number is $\frac{n(n+1)}{2}$
- The sum of n terms of an A.P with first term a and common difference d is denoted by $S_n = \frac{n}{2}\{$ 2a+(n-1) d $\}$ also , $S_n = \frac{n}{2}$(a+l) where , l = last term.
- a_n = S_n-S_{n-1}. Where a_n=n^{th} term of an A.P
- D = a_n-a_{n-1}. Where d = common difference of an A.P.

[LEVEL -1]

1. Find n^{th} term of $-$ 15 , -18 , -21 , ...

Ans .-3 (n+4)

2. Find the common diff. of A.P 1 , -2 ,-5 ,-8 ,………

Ans . -3

3. Find the A.P whose first term is 4 and common difference is − 3

<div align="right">Ans . a.p = 4 , 1 -2, -5, -8…………</div>

4. Find 5th term from end of the AP : 17 , 14 ,11…………-40.

<div align="right">Ans . -28</div>

5. If 2p, p+10 , 3p+2 are in AP then find p.

<div align="right">Ans . p= 6</div>

6. If arithmetic mean between 3a and 2a-7 is a+4 , then find a.

<div align="right">Ans . a= 5</div>

7. Find sum of all odd numbers between 0 & 50.

<div align="right">Ans . 625</div>

8. If a = 5 , d = 3 and a_n = 50 , then find n.

<div align="right">Ans .n =16</div>

9. For what value of n are the nth term of two AP , 63 , 65 , 67 ,…… and 3 , 10 , 17 ,…….equal?

<div align="right">Ans . n = 13.</div>

10. If sum of n terms of an AP is $2n^2$+5n , then find its nth term.

<div align="right">Ans. 4n+3.</div>

[LEVEL - 2]

1. Find n^{th} term of an AP is 7-4n. find its common difference.

<div align="right">Ans. -4.</div>

2. Which term of an AP 5,2,-1,….will be -22 ?

<div align="right">Ans . 10th term .</div>

3. Write the next term of an AP $\sqrt{8}, \sqrt{18}, \sqrt{32}$,…….

<div align="right">Ans. $5\sqrt{2}$.</div>

4. Determine 27th term of an AP whose 9th term is -10 and common difference is$1\frac{1}{4}$

<div align="right">Ans. $927 = \frac{25}{2}$.</div>

5. Find the sum of series 103=+101+99+…..49.

<div align="right">Ans. 2128.</div>

6. Which term of the AP 3,15,27,39,….will be 132 more than its 54th term ?

<div align="right">Ans. 65th term .</div>

7. How many three digit numbers are divisible by 7 ?

<div align="right">Ans. 128.</div>

8. Given a = 2 , d = 8 , s_n = 90 , find n and a_n.

<div align="right">Ans. N = 5 & a_n = 34</div>

(LEVEL- 3)

1. Which term of the sequence -1, 3, 7, 11 …………. Is 95?

<div align="right">Ans. 25th term</div>

2. How many terms are there in the sequence 3, 6, 9, 12, ……111?

3. The first term of an AP is -7 and the common difference 5, find its 18th term and the general term.

4. How many numbers of two digits are divisible by 3?

5. If the nth term of an AP is (2n+1), find the sum of first n terms of the AP.

6. Find the sum of all natural numbers between 250 and 1000 which are exactly divisible by 3.
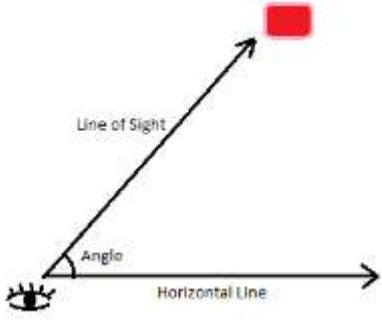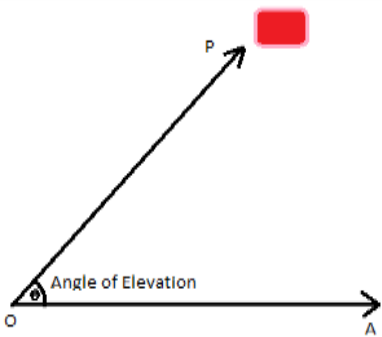
Problems for self evaluation.

1. Show that the sequence defined by $t_n=4_n+7$ is an AP.

2. Find the number of terms for given AP :7,13 ,19,25,.....,205.

3. The 7th term of an AP is 32 and it 13th term is 62. Find AP.

4. Find the sum of all two digit odd positive nos.

5. Find the value of 'x' for AP. 1+6+11+16+….+X=148.

6. Find the 10th term from the end of the AP 8,10,12,…126.

7. The sum of three numbers of AP is 3 and their product is -35.Find the numbers.

8. A man repays a loan of Rs3250 by paying Rs20 in the first month and then increase the payment by Rs15 every month .How long will it take him to clear the loan ?

9. The ratio of the sums of m and n terms of an AP is $m^2 :n^2$ .show that the ratio of the mth and nth terms is (2m-1) : (2n-1).

10. In an AP , the sum of first n terms is $\frac{3n^2}{2} + \frac{5n}{2}$, Find it 25th term.

APPLICATIONS OF TRIGONOMETRY
(HEIGHT AND DISTANCES)

KEY POINTS

Line of sight Line segment joining the object to the eye of the observer is called the line of sight.	
Angle of elevation When an observer sees an object situated in upward direction, the angle formed by line of sight with horizontal line is called angle of elevation.	

Angle of depression	
Angle of depression When an observer sees an object situated in downward direction the angle formed by line of sight with horizontal line is called angle of depression.	
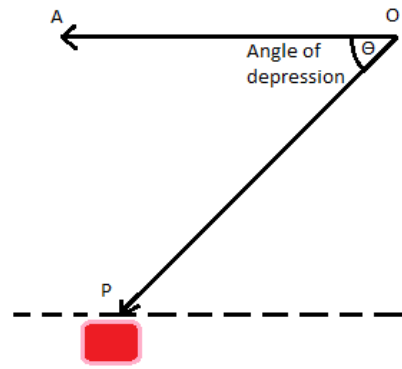
LEVEL- 1

1. A *ploe* 6cm high casts a shadow $2\sqrt{3}$m long on the ground, then find the sun's elevation?

    Ans. 60^0

2. If $\sqrt{3}tan\vartheta = 1$, then find the value of $sin^2\theta - cos^2\vartheta$

    Ans. -1/2

3. An observer 1.5m tall is 20.5 metres away from a tower 22m high. Determine the angle of elevation of the top of the tower from the eye of the observer.

    Ans. $45^°$

4. A ladder 15m long just reaches the top of vertical wall. If the ladder makes an angle 60^0 with the wall, find the height of the wall

    Ans. 15/2 m

5. In a rectangle ABCD, AB =20cm $\angle BAC=60^0$ then find the length of the side AD.

    Ans. $20\sqrt{3}$cm

6. Find the angle of elevation of the sun's altitude when the height of the shadow of a vertical pole is equal to its height:

    Ans. 45^0

7. From a point 20m away from the foot of a tower ,the angle of elevation of top of the tower is 30°,find the height of the tower.

    Ans.$\frac{20}{\sqrt{3}}$m

8. In the adjacent figure, what are the angles of depression of the top and bottom of a pole from the top of a tower h m high:

    Ans 45^0, 60^0
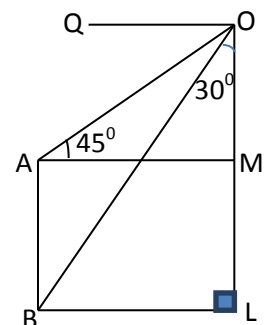
LEVEL -2

1. In $\Delta ABC, \angle B = 45^0, \ \angle C = 45^0, AB = 5cm$ then find the length of the other two sides.

    Ans.$5cm, 5\sqrt{2}cm$

2. From a point 20 m away situated from the foot of the tower, the angle of elevation of the top of the tower is 30^0, find the height of the tower.

    Ans.$\frac{20\sqrt{3}}{3}m$

3. A ladder 50m long just reaches the top of a vertical wall. If the ladder makes an angle of 60^0 with the wall, find the height of the wall.

Ans. 25 m

4. A circus artist is climbing a 20m long rope, which is tightly stretched and tied from the top of a vertical pole to the ground. Find the height of the pole, if the angle made by the rope with the ground level is 30^0.

Ans. 10 m

5. A tree breaks due to storm and the broken part bends so that the top of the tree touches the ground making an angle 30^0 with it. The distance between the foot of the tree to the point where the top touches the ground is 8m. Find the height of the tree.

Ans.$8\sqrt{3}m$

LEVEL - 3

1. The shadow of a tower standing on a level plane is found to be 50m longer when sun's elevation is 30^0 then when it is 60^0. Find the height of the tower.

Ans. $25\sqrt{3}m$

2. The angle of depression of the top and bottom of a tower as seen from the top of a 100m high cliff are 30^0 and 60^0 respectively. Find the height of the tower.   [Ans.66.67m]

3. From a window (9m above ground) of a house in a street, the angles of elevation and depression of the top and foot of another house on the opposite side of the street are 30^0 and 60^0 respectively. Find the height of the opposite house and width of the street.

[Ans.12m,$3\sqrt{3}$m]

4. From the top of a hill, the angle of depression of two consecutive kilometer stones due east are found to be 30^0 and 45^0. Find the height of the hill.

Ans.1.37 km

5. Two poles of equal heights are standing opposite each other on either side of the road ,which is 80m wide . From a point between them on the road the angles of elevation of the top of the poles are 60∘ and 30∘. Find the heights of pole and the distance of the point from the poles.

[Ans; h=34. 64m; 20m , 60m] .

6. The angle of elevation of a jet fighter from a point A on the ground is 60^0 . After a flight of 15 seconds, The angle of elevation changes to 30∘. If the jet is flying at a speed of 720km/ hr, find the constant height at which the jet is flying.

[Ans;1500m]

7. A window in a building is at a height of 10m above the ground . The angle of depression of a point P on the ground from the window is 30^0. The angle of elevation of the top of the building from the point P is 60^0 . Find the height of the building .

[Ans; 30m]

8. A boy , whose eye level is 1.3m from the ground , spots a ballon moving with the wind in a horizontal line at same height from the ground. The angle of elevation of the ballon from the eyes of the boy at any instant is 60^0. After 2 seconds , the angle of elevation reduces to 30^0 If the speed of the wind at that moment is $29\sqrt{3}$ m/s , then find the height of the ballon from the ground .

[Ans; 88.3m]

9. A man on the deck on a ship 14m above water level , observes that the angle of elevation of the top of a cliff is $60^0$and the angle of depression of the base of the cliff is 30^0. Calculate the distance of the cliff from the ship and the height of the cliff .

[Ans ; h= 56m , distance 24.25m]

10. A straight highway leads to the foot of a tower . A man standing at the top of the tower observes

a car at an angle of depression of 30°, which is approaching the foot of tower with a uniform speed Six minutes later , the angle of depression of the car is found to be 60° . Find the time taken by the car to

reach the foot of the tower . [Ans.3 minutes]

SELF EVALUATION/HOTS

1. An aeroplane when flying at a height of 3125m from the ground passes vertically below another

plane at an instant when the angle of elevation of the two planes from the same point on the ground are 30°and 60° respectively . Find the distance between the two planes at that instant .

[Ans ; 6250m]

2. From the top of a building 60m high , the angels of depression of the top and botton of a vertical lamp post are observed to be 30° and 60°respectively. Find [i] horizontal distance between the building and the lamp post [ii] height of the lamp post .

[Ans. 34.64m h=40m]

3. A vertical tower stands on a horizontal plane and is surmounted by a vertical flag staff of height h m. At a point on the plane , the angles of elevation of the bottom and the top of the flag staff are $\propto$ and β, respectively. Prove that the height of the tower is $\frac{h\tan\propto}{\tan\beta - \tan\propto}$

4. The angle of elevation of a cloud from a point 60m above a lake is 30∘ and the angle of depression of the reflection of the cloud in the lake is 60° . Find the height of the cloud from the surface of the lake.

[Ans 120m]

CIRCLE

Circle at only one point.
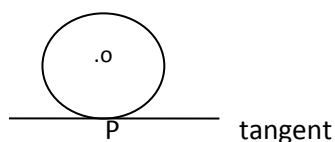
P= point of contact

- There is only one tangent at a point on a circle.
- There are exactly two tangents to a circle through appoint lying out side the circle.
- The tangent at any point of a circle is perpendicular to the radius through the point of contact.
- The length of tangents drown from an external point to a circle are equal.

(1 Mark Questions)
1. If radii of the two concentric circles are 15cm and 17cm , then find the length of each chord of one circle which is tangent to one other.

Ans. 16cm

2. If two tangents making an angle of 120^0 with each other , are drawn to a circle of radius 6cm, then find the angle between the two radii, which are drawn to the tangents.

Ans. 60°

3. In the adjoining figure ,Δ ABC is circumscribing a circle , then find the length of BC.

Ans. 9cm

4. PQ is a chord of a circle and R is point on the minor arc. If PT is a tangent at point P such that ∠QPT = 60° then find <PRQ.
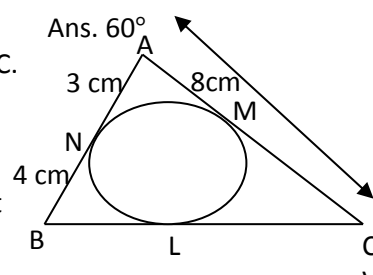
Ans. 120°

5. If a tangent PQ at a point P of a circle of radius 5cm meets a line through the centre O at a point Q such that OQ = 12 cm then find the length of PQ.

Ans. $\sqrt{119}$cm

6. From a point P, two tangents PA and PB are drawn to a circle C(O,r) . If OP =2r ,then what is the type of Δ APB.

Ans. Equilateral triangle

7. If the angle between two radii of a circle is 130°,then find the angle between the tangents at the end of the radii.

Ans. 50°.

8. ABCD is a quadrilateral. A circle centred at O is inscribed in the quadrilateral. If AB = 7cm , BC = 4cm , CD = 5cm then find DA.

9. In a Δ ABC , AB = 8cm , ∠ABC = 90°. Then find the radius of the circle inscribed in the triangle.

Ans. 2cm

(Two Marks Questions)

1. Two tangents PA and PB are drawn from an external point P to a circle with centre O. Prove that OAPB is a cyclic quadrilateral.

2. If PA and PB are two tangents drawn to a circle with centre O , from an external point P such that PA=5cm and ∠APB = 60°, then find the length of the chord AB.

Ans. 5cm

3. CP and CQ are tangents from an external point C to a circle with centre O .AB is another tangent which touches the circle at R and intersects PC and QC at A and B respectively . If CP = 11cm and BR = 4cm, then find the length of BC.

Ans. 7cm

4. If all the sides of a parallelogram touch a circle, show that the parallelogram is a rhombus.

5. Prove that the perpendicular at the point of contact to the tangent to a circle passes through the centre of the circle.

6. In adjacent figure; AB & CD are common tangents to two circles of unequal radii. Prove that AB=CD.
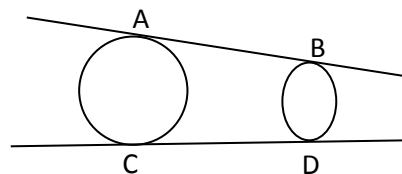
(Three Marks Questions)

1. If quadrilateral ABCD is drawn to circumscribe a circle then prove that AB+CD=AD+BC.

2. Prove that the angle between the two tangents to a circle drawn from an external point, is supplementary to the angle subtended by the line segment joining the points of contact to the centre.

3. AB is a chord of length 9.6cm of a circle with centre O and radius 6cm.If the tangents at A and B intersect at point P then find the length PA.

Ans. 8cm

4. The incircle of a ΔABC touches the sides BC, CA &AB at D,E and F respectively. If AB=AC, prove that BD=CD.

5. Prove that the intercept of a tangent between two parallel tangents to a circle subtends a right angle at the centre of the circle.

6. PQ and PR are two tangents drawn to a circle with centre O from an external point P. Prove that ∠QPR=2∠OQR.

(Four Marks Questions)

1. Prove that the length of tangents drawn from an external point to a circle are equal. Hence, find BC, if a circle is inscribed in a ΔABC touching AB,BC &CA at P,Q &R respectively, having AB=10cm, AR=7cm &RC=5cm.

    Ans. 8cm

2. Prove that the tangent at any point of a circle is perpendicular to the radius through the point of contact. Using the above, do the following: If O is the centre of two concentric circles, AB is a chord of the larger circle touching the smaller circle at C, then prove that AC=BC.

3. A circle touches the side BC of a ΔABC at a point P and touches AB and AC when produced, at Q & R respectively. Show that AQ=1/2 (perimeter of ΔABC).

4. From an external point P, a tangent PT and a line segment PAB is drawn to circle with centre O, ON is perpendicular to the chord AB. Prove that $PA.PB=PN^2-AN^2$.

5. If AB is a chord of a circle with centre O, AOC is diameter and AT is the tangent at the point A, then prove that ∠BAT=∠ACB.

6. The tangent at a point C of a circle and diameter AB when extended intersect at P. If ∠PCA=110^0, find ∠CBA.

    Ans. 70^0

[Self Evaluation/HOTS Questions]

1. If PA and PB are tangents from an external point P to the circle with centre O, the find ∠AOP+∠OPA.

    Ans. 90^0

2. ABC is an isosceles triangle with AB=AC, circumscribed about a circle . Prove that the base is bisected by the point of contact.

3. AB is diameter of a circle with centre O. If PA is tangent from an external point P to the circle with ∠POB=115^0 then find ∠OPA.

    Ans. 25^0

4. PQ and PR are tangents from an external point P to a circle with centre . If ∠RPQ=120^0, Prove that OP=2PQ.

5. If the common tangents AB and CD to two circles C(O,r) and C'(O'r') intersect at E, then prove that AB=CD.

6. If a, b, c are the sides of a right triangle where c is the hypotenuse , then prove that radius r of the circle touches the sides of the triangle is given by r= (a+b-c)/2.

CONSTRUCTION

<u>**KEY POINTS**</u>

1. Division of line segment in the given ratio.

2. Construction of triangles:-

   a. When three sides are given.
   b. When two sides and included angle given.
   c. When two angles and one side given.
   d. Construction of right angled triangle.

3. Construction of triangle similar to given similar to given triangle as per given scale.

4. Construction of triangles to a circle.

LEVEL - I

1. Divide a line segment in given ratio.

2. Draw a line segment AB=8cm and divide it in the ratio 4:3.

3. Divide a line segment of 7cm internally in the ratio 2:3.

4. Draw a circle of radius 4 cm. Take a point P on it. Draw tangent to the given circle at P.

5. Construct an isosceles triangle whose base 7.5 cm and altitude is 4.2 cm.

LEVEL –II

1. Construct a triangle of sides 4cm , 5cm and 6cm and then triangle similar to it whose side are 2/3 of corresponding sides of the first triangle.

2. Construct a triangle similar to a given ΔABC such that each of its sides is $2/3^{rd}$ of the corresponding sides of ΔABC. It is given that AB=4cm BC=5cm and AC=6cm also write the steps of construction.

3. Draw a right triangle ABC in which $\angle B=90^0$ AB=5cm, BC=4cm then construct another triangle ABC whose sides are 5/3 times the corresponding sides of ΔABC.

4. Draw a pair of tangents to a circle of radius 5cm which are inclined to each other at an angle of 60^0.

5. Draw a circle of radius 5cm from a point 8cm away from its centre construct the pair of tangents to the circle and measure their length.
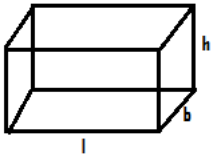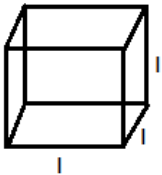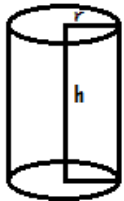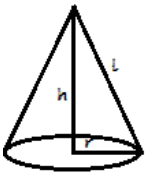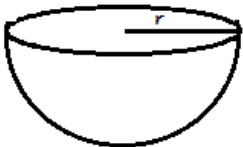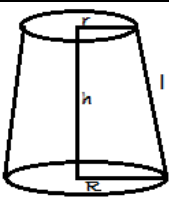
6. Construct a triangle PQR in which QR=6cm $\angle Q=60^0$ and $\angle R=45^0$. Construct another triangle similar to ΔPQR such that its sides are 5/6 of the corresponding sides of ΔPQR.

SURFACE AREAS AND VOLUMES

IMPORTANT FORMULA

TAKE A LOOK

SNo	NAME	FIGURE	LATERAL CURVED SURFACE AREA	TOTAL SURFACE AREA	VOLUME	NOMENCLATURE
1	Cuboid		$2(l+b)\times h$	$2(lxb + bxh + hx\ l)$	$l \times b \times h$	L=length, b=breadth, h=height
2	Cube		$4l^2$	$6l^2$	l^3	l=edge of cube
3	Right Circular Cylinder		$2\pi rh$	$2\pi r(r+h)$	πr^2h	r= radius h=height
4	Right Circular Cone		πrl	$\pi r(l+r)$	$\frac{1}{3}\pi r^2h$	r=radius of base, h=height , l=slant height = $\sqrt{r^2 - h^2}$
5	Sphere		$4\pi r^2$	$4\pi r^2$	$\frac{4}{3}\pi r^3$	r=radius of the sphere
6	Hemisphere		$2\pi r^2$	$3\pi r^2$	$\frac{2}{3}\pi r^3$	r=radius of hemisphere
7	Spherical shell		$2\pi(R^2 + r^2)$	$3\pi(R^2 - \pi r^2)$	$\frac{4}{3}\pi(R^3 - r^3)$	R=External radius, r=internal radius
8	Frustum of a cone		$\pi l(R+r)$ where $l^2=h^2+(R-r)^2$	$\pi[R^2 + r^2 + l(R+r)]$	$\pi h/3[R^2 + r^2 + Rr]$	R and r = radii of the base, h=height, l=slant height.

9. Diagonal of cuboid = $\sqrt{l^2 + b^2 + h^2}$

10. Diagonal of Cube = $\sqrt{3}l$

(LEVEL - 1)

[1] The height of a cone is 60 cm.A small cone is cut off at the top by a plane parallel to the base and its volume is $\frac{1}{64}^{th}$ the volume of original cone. Find the height from the base at which the section is made?

ANS :- 45 cm

[2] Find the volume of the largest right circular cone that can be cut out from a cube of edge 4.2 cm?

ANS:- 19.4 cm^3.

[3] A cubical ice cream brick of edge 22cm is to be distributed among some children by filling ice cream cones of radius 2cm and height 7cm up to its brim.how many children will get ice cream cones?

ANS :-363.

[4] Find the volume of the largest right circular cone that can be cut out from a cube of edge 4.9 cm is?

ANS :- 30.8cm^3.

[5] The slant height of a frustum of a cone is 4 cm and the perimeter of its circular ends are18cm and 6cm. Find the curved surface area of the frustum [use $\pi = \frac{22}{7}$].

ANS :- 48cm^2.

[6] A plumbline is a combination of which geometric shapes?

ANS :-A cone with hemisphere.

LEVEL - 2

[1] The slant height of the frustum of a cone is 5 cm . If the difference between the radii of its two circular ends is 4cm . write the height of the frustum.

ANS :- 3cm

[2] A cylinder, a cone and a hemisphere are of same base and of same height . Find the ratio of their volumes?

ANS :- [3:1:2].

[3] A cone of radius 4cm is divided into two parts by drawing a plane through the midpoint of its axis and parallel to its base, compare the volume of the two parts.

ANS :- 1:7

[4] How many spherical lead shots each having diameter 3cm can be made from a cuboidal lead solid of dimensions 9cm X 11cm X 12cm .

ANS :- 84

[5] Three metallic solid cubes whose edges are 3cm, 4cm, and 5cm are melted and converted into a single cube .Find the edge of the cube so formed?

ANS :- 6cm .

(LEVEL-3)

[1] How many shots each having diameter 4.2 cm can be made from a cuboidal lead solid of dimensions 66cm X 42cm X 21cm?

ANS:-1500

[2] Find the number of metallic circular disk with 1.5cm base diameter and of height 0.2 cm to be melted to form a right circular cylinder of height 10cm and diameter 4.5cm ?

ANS:-450

[3] From a solid cube of side 7cm,a conical cavity of height 7cm and radius 3cm is hollowed out . Find the volume of remaining solid?

ANS:-277cm^3.

[4] A cubical block of side 7cm is surmounted by a hemisphere. what is the greatest diameter of the hemisphere can have? Find the surface area of the solid?

ANS:- 7cm,332.5cm^2.

[5] A heap of rice is in the form of a cone of diameter 9m and height 3.5m .Find the volume of the rice .How much canvas cloth is required to just cover the heap?

ANS:-74.25m^3, 80.61 m^2 .

[6] A square field and an equilateral triangle park have equal perimeter .If the cost of ploughing the field at the rate of Rs 5/m^2 is Rs 720. Find the cost of maintain the park at the rate of Rs10/m^2?

ANS:-Rs1108.48

(LEVEL -4)

[1] A well of diameter 3cm and 14m deep in dug. The earth, taken out of it, has been evenly spread all around it in the shape of a circular ring of width 4m to form an embankment.find the height of embankment?

ANS:-$\frac{9}{8}$ m.

[2] 21 glass spheres each of radius 2cm are packed in a cuboidal box of internal diamenions 16cmX8cmX8cmand then the box is filled with water. Find the volume of water filled in the box?

ANS:-320cm^3.

[3] The slant height of the frustum of a cone is 4cm and the circumferences of its circular ends are 18cm and 6cm. Find curved surface area and total surface area of the frustum.

ANS:-48cm^2, 76.63cm^2.

[4] A farmer connects a pipe of internal diameter 25cm from a canal into a cylindrical tank in his field, which is 12m in diameter and 2.5m deep. If water flows through the pipe at the rate of 3.6km/hr, in how much time will the tank be filled? Also find the cost of water, if the canal department charges at the rate of Rs0.07/m^3?

ANS:-96min, Rs19.80

[5] A spherical glass vessel has a cylindrical neck 7cm long and 4cm in diameter . The diameter of the spherical part is 21cm Find the quantity of water it can hold.

ANS:-4939cm^3.

[6] The surface area of a solid metallic sphere is 616cm^2. It is melted and recast into a cone of height 28cm. Find the diameter of the base of the cone so formed.

SELF EVALUTION/HOTS QUESTIONS

[1] A spherical copper shell , of external diameter 18cm,is melted and recast into a solid cone of base radius 14cm and height 4cm. Find the inner diameter of the shell.

ANS:-16cm.

[2] A bucket is in the form of a frustum of a cone with a capacity of 12308.8cm^3. The radii of the top and bottom circular ends of the bucket are 20cm and 12cm respectively. Find the height of the bucket and also the area of metal sheet used in making it [take π 3.14]?

ANS:- $l = 14cm$, $AREA = 2160.32cm2$.

[3] The volume of a solid metallic sphere is 616cm^3.its is melted and recast into a cone of height 28cm. Find the diameter of the base of the cone so formed?

ANS:-21cm.

[4] From a solid cylinder whose height is 8cm and radius 6cm , a conical cavity of height 8cm and of base radius 6cm , is hollowed out. Find the volume of the remaning solid correct to two places of decimals. Also find the total surface area of the remaining solid [take π=3.14] ?

ANS:-603.19cm^3, 603.19cm^2 .

[5] A cylindrical vessel, with internal diameter10cm and height 10.5 cm is full of water. A solid cone of base diameter 7cm and height 6cm is completely immersed in water. Find the volume of :-

(i) water displaced out of the cylindrical vessel.

(ii) water left in the cylindrical vessel.

ANS:- (i): 77cm^3, (ii) 748cm^3.

[6] A wooden article was made by scooping out a hemisphere from each ends of a solid cylinder. If the height of the cylinder is 20cm, and radius of the base is 3.5cm , find the total surface area of the article.

ANS:-544cm^2.

[7] A building is in the form of a cylinder surmounted by a hemishperical vaulted dome and contains $41\frac{19}{21}$ m^{3}of air. If the internal diameter of the building is equal to its total height above the floor, find the height of the building?

ANS:-4m .

[8] A shuttle cock used for playing badminton has the shape of a frustum of a cone mounted on a hemisphere. The external diameters of the frustum are 5cm and 2cm , the height of the entire shuttle cock is 7cm . Find the external surface area.

ANS:-74.38cm^2.

KEY POINTS

The three measures of central tendency are :

i.   Mean

ii.   Median

iii.   Mode

- Mean Of grouped frequency distribution can be calculated by the following methods.

(i)   Direct Method

Mean = $\bar{X} = \frac{\sum_{i=1}^{n} f_i x_i}{\sum_{i=1}^{n} f_i}$

Where X_i is the class mark of the ith class interval and f_i frequency of that class

(ii)   Assumed Mean method or Shortcut method

Mean = $\bar{X}$ = a + $\frac{\sum_{i=1}^{n} f_i d_i}{\sum_{i=1}^{n} f_i}$

Where a = assumed mean

And $d_i = X_i - a$

(iii)   Step deviation method.

Mean = $\bar{X}$ = a + $\frac{\sum_{i=1}^{n} f_i u_i}{\sum_{i=1}^{n} f_i} \times h$

Where a = assumed mean

h = class size

And $u_i = (X_i - a)/h$

- Median of a grouped frequency distribution can be calculated by

Median = l + $\left(\frac{\frac{n}{2} - cf}{f}\right) \times h$

Where

l = lower limit of median class

n = number of observations

cf = cumulative frequency of class preceding the median class

f = frequency of median class

h = class size of the median class.

- Mode Of grouped data can be calculated by the following formula.

Mode = l + $\left(\frac{f1 - fo}{2f1 - fo - f2}\right) \times h$

Where

l = lower limit of modal class

h = size of class interval

f1 = Frequency of the modal class

fo = frequency of class preceding the modal class

f2= frequency of class succeeding the modal class

- Empirical relationship between the three measures of central tendency.

3 Median = Mode + 2 Mean

Or, Mode = 3 Median – 2 Mean

- Ogive

Ogive is the graphical representation of the cumulative frequency distribution. It is of two types:

(i)   Less than type ogive.

(ii)   More than type ogive

- Median by graphical method
  The x-coordinated of the point of intersection of 'less than ogive' and 'more than ogive' gives the median.

LEVEL – 1

Slno	Question	Ans
1	What is the mean of 1st ten prime numbers ?	12.9
2	What measure of central tendency is represented by the abscissa of the point where less than ogive and more than ogive intersect?	Median
3	If the mode of a data is 45 and mean is 27, then median is _____.	33
4	Find the mode of the following	Mode =40

X_i	35	38	40	42	44	
f_i	5	9	10	7	2	

5	Write the median class of the following distribution.	30-40

Class	0-10	10-20	20-30	30-40	40-50	50-60	60-70
Frequency	4	4	8	10	12	8	4

LEVEL – 2

Slno	Question	Ans
1	Calculate the mean of the following distribution	78

Class interval	50-60	60-70	70-80	80-90	90-100
Frequency	8	6	12	11	13

2	Find the mode of the following frequency distribution	33.33

Marks	10-20	20-30	30-40	40-50	50-60
No. of students	12	35	45	25	13

3	Find the median of the following distribution	28.5

Class interval	0-10	10-20	20-30	30-40	40-50	50-60
Frequency	5	8	20	15	7	5

4	A class teacher has the following absentee record of 40 students of a class for the whole term.	

No. of days	0-6	6-10	10-14	14-20	20-28	28-38	38-40
No. of students	11	10	7	4	4	3	1

Write the above distribution as less than type cumulative frequency distribution.

Answer :

No. of days	Less Than 6	Less Than 10	Less Than 14	Less Than 20	Less Than 28	Less Than 38	Less Than 40
No. of students	11	21	28	32	36	39	40

LEVEL – 3

| Slno	Question	Ans
1	If the mean distribution is 25 <table><tr><td>Class</td><td>0-10</td><td>10-20</td><td>20-30</td><td>30-40</td><td>40-50</td></tr><tr><td>Frequency</td><td>5</td><td>18</td><td>15</td><td>P</td><td>6</td></tr></table> Then find p.	P=16
2	Find the mean of the following frequency distribution using step deviation method <table><tr><td>Class</td><td>0-10</td><td>10-20</td><td>20-30</td><td>30-40</td><td>40-50</td></tr><tr><td>Frequency</td><td>7</td><td>12</td><td>13</td><td>10</td><td>8</td></tr></table>	25
3	Find the value of p if the median of the following frequency distribution is 50 <table><tr><td>Class</td><td>20-30</td><td>30-40</td><td>40-50</td><td>50-60</td><td>60-70</td><td>70-80</td><td>80-90</td></tr><tr><td>Frequency</td><td>25</td><td>15</td><td>P</td><td>6</td><td>24</td><td>12</td><td>8</td></tr></table>	P=10
4	Find the median of the following data <table><tr><td>Marks</td><td>Less Than 10</td><td>Less Than 30</td><td>Less Than 50</td><td>Less Than 70</td><td>Less Than 90</td><td>Less Than 110</td><td>Less Than 130</td><td>Less than 150</td></tr><tr><td>Frequency</td><td>0</td><td>10</td><td>25</td><td>43</td><td>65</td><td>87</td><td>96</td><td>100</td></tr></table>	76.36

LEVEL – 4

Slno	Question	Ans
1	The mean of the following frequency distribution is 57.6 and the sum of the observations is 50. Find the missing frequencies f_1 and f_2. <table><tr><td>Class</td><td>0-20</td><td>20-40</td><td>40-60</td><td>60-80</td><td>80-100</td><td>100-120</td><td>Total</td></tr><tr><td>Frequency</td><td>7</td><td>f_1</td><td>12</td><td>f_2</td><td>8</td><td>5</td><td>50</td></tr></table>	f_1 =8 and f_2 =10
2	The following distribution give the daily income of 65 workers of a factory <table><tr><td>Daily income (in Rs)</td><td>100-120</td><td>120-140</td><td>140-160</td><td>160-180</td><td>180-200</td></tr><tr><td>No. of workers</td><td>14</td><td>16</td><td>10</td><td>16</td><td>9</td></tr></table> Convert the above to a more than type cumulative frequency distribution and draw its ogive.	
3	Draw a less than type and more than type ogives for the following distribution on the same graph. Also find the median from the graph. <table><tr><td>Marks</td><td>30-39</td><td>40-49</td><td>50-59</td><td>60-69</td><td>70-79</td><td>80-89</td><td>90-99</td></tr><tr><td>No. of students</td><td>14</td><td>6</td><td>10</td><td>20</td><td>30</td><td>8</td><td>12</td></tr></table>	

SELF – EVALUATION

1. What is the value of the median of the data using the graph in figure of less than ogive and more than ogive?
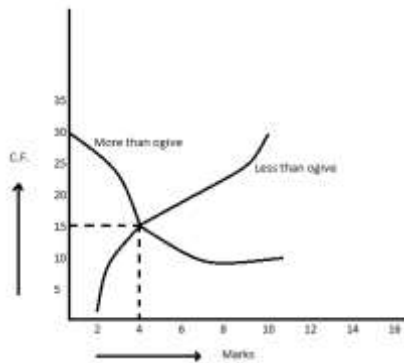
2. If mean =60 and median =50, then find mode using empirical relationship.

3. Find the value of p, if the mean of the following distribution is 18.

Variate (x_i)	13	15	17	19	20+p	23
Frequency (f_i)	8	2	3	4	5p	6

4. Find the mean, mode and median for the following data.

Classes	0-10	10-20	20-30	30-40	40-50	50-60	60-70
frequency	5	8	15	20	14	8	5

5. The median of the following data is 52.5. find the value of x and y, if the total frequency is 100.

Class Interval	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	80-90	90-100
frequency	2	5	X	12	17	20	Y	9	7	4

6. Draw 'less than ogive' and 'more than ogive' for the following distribution and hence find its median.

Classes	20-30	30-40	40-50	50-60	60-70	70-80	80-90
frequency	10	8	12	24	6	25	15

7. Find the mean marks for the following data.

Marks	Below 10	Below 20	Below 30	Below 40	Below 50	Below 60	Below 70	Below 80	Below 90	Below 100
No. of students	5	9	17	29	45	60	70	78	83	85

8. The following table shows age distribution of persons in a particular region. Calculate the median age.

Age in years	Below 10	Below 20	Below 30	Below 40	Below 50	Below 60	Below 70	Below 80
No. of persons	200	500	900	1200	1400	1500	1550	1560

9. If the median of the following data is 32.5. Find the value of x and y.

Class Interval	0-10	10-20	20-30	30-40	40-50	50-60	60-70	Total
frequency	x	5	9	12	y	3	2	40

Chapter 4
CARBON AND ITS COMPOUNDS
1MARK

1. How an atom of carbon attain noble gas configuration?
2. Draw the electron dot structure of a molecule of water.
3. Define catenation.
4. The kerosene/gas stove used at home has inlets for air. Give reason.
5. Write only the chemical equation for dehydration of ethanol by hot conc. Sulphuric acid.
6. Write the number of covalent bonds present in propane.
7. Define the term: oxidising agent
8. Write the formula for first member of ketone
9. Write the molecular formula of an alkyne containing 10 atoms of hydrogen.

2 MARKS

1. Define saponification. Write a chemical equation for it.
2. Covalent compounds generally don't conduct electricity. Why?
3. Specify the condition in which ethanol undergo oxidation to form ethanoic acid. Write the chemical equation.
4. Define isomerism. Draw the structures of the two isomers of butane.
5. Identify the functional group present in the following compounds: HCOOH, HCHO, CH3Br and C10H21OH

3 MARKS

1. What is a homologous series? Write any two characteristic features of any homologous series using one example.

5 MARKS
1. Differentiate between ethanol and ethanoic acid on the basis of any three physical properties and two chemical properties.
2. An organic compound 'A' is used as a preservative in pickles and has molecular formula C2H4O2 . This compound reacts with ethanol to form a sweet smelling compound 'B'.
 i) Determine the compound 'A'.
ii) Write the chemical equation for its reaction with ethanol to form compound 'B'.

iii) Write any two uses of compound 'B'.
iv) Which gas is produced when compound 'A' reacts with washing soda? Write the chemical equation
v) How can vinegar be obtained from compound 'A'?

Chapter 5

PERIODIC CLASSIFICATION OF ELEMENTS

Very Short Answer type Questions. (1 mark)

1. Write down three elements which represent Dobereiner's triad.
2. Write down two drawbacks of Newland's law of octaves.
3. Which important property did Mendeleev used to classify the elements in his periodic table.
4. Explain why the number of elements in the third period is 8?
5. Name the most metallic and most non-metallic element in the periodic table.
6. Define Isotopes.
7. What was the need for classification of elements?
8. Name two elements that have two electrons in their outermost shell.
9. How many vertical columns and horizontal rows are there in modern periodic table. What is the special name assigned to them?
10. Name the element having electronic configuration 2, 8, 2.

Short Answer type Questions (2 Marks)

1. Why He, Ne and Ar are called inert gases?
2. Which one has greater atomic size – Cl or Br?
3. What were the drawbacks of Mendeleev's periodic table? Write any two.
4. How does the tendency to lose electrons will change in a group and why?
5. Justify the statement – Atomic size of an element decreases along a period whereas increasing down the group.
6. Why metallic oxides are basic in nature whereas Non-metallic oxides are acidic in nature.

Long Answer Type (3 Marks)
1. How do we calculate the valency of an element from its electronic configuration? – How does the valency vary in a period? – How does the valency vary in going down a group?
2. Study the variation in the atomic radii of elements given below and arrange them in an increasing order Na Li Rb Cs K 186 152 246 262 231 ii) Name the element which has the smallest and the largest atoms. iii) How does the atomic size vary as we go down a group.

3. Four elements ABCD along with their electronic configurations are given below Elements – A B C D Electronic Configuration – 2, 1 2, 8 2, 8, 1 2, 8, 8 4. Now answer the following questions a) Which two elements belong to the same period, b) Which two elements belong to the same group c) Which element out of A and C is more reactive and why?

Long Answer Type Question (5 Marks)

1. Write down five major differences between Mendeleev periodic table and modern periodic table. 2. Examine elements of the third period and classify them as metals and non metals. ii) On which side of the table do you find metals and why. iii) On which side of the table do you find the non-metals and why?
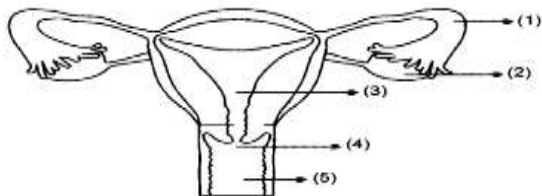
Chapter -8 :- How do Organism Reproduce?

Q.1 is fertilizations possible without pollination.

Q.2 What is role of prostate gland.

Q.3 Define pollination. Explain the different types of pollination. List two agents of pollination?   How does suitable pollination lead to fertilization? Q.4 Identify the given diagram. Name the parts 1 to 5.

Q.5 What is contraception? List three advantages of adopting contraceptive measures. [5]

Q.6 Draw a labelled diagram in the proper sequence to show budding in hydra.

Q.7 Write one main difference between the asexual and sexual mode of reproduction. Which species is likely to have comparatively better chances of survival the one reproducing asexually or the one reproducing sexually ? Give reasons to justify your answer.

Q.8 Write the function of following parts in human female reproductive system:
(i) Ovary
(ii) Oviduct
(iii) Uterus

Q.9 Describe in brief the structure and function of placenta.

Q.10 Name the process by which an amoeba reproduces. Draw the various stages of its reproduction in a proper sequence.

Q.11 A student is viewing under a microscope a permanent slide showing various stages of asexual reproduction by budding in yeast. Draw diagram of what he observes in the proper sequence.

Q.12 When a cell reproduces, what happens to its DNA?

Q.13 Reproduction is one of the most important characteristics of living beings. Give three reasons in support of the statement.

Q.14 What is vegetative propagation ? State two advantages and two disadvantages of this method.

Q.15 List three techniques that have been developed to prevent pregnancy. Which one of these techniques is not meant for males ? How does the use of these techniques have a direct impact on the health and prosperity of a family?

Q.16 Name the method by which spirogyra reproduces under favourable conditions. Is this method sexual or asexual?

Q.17 What happens when:

1. Accidently, Planaria gets cut into many pieces?
2. Bryophyllum leaf falls on the wet soil?
3. On maturation sporangia of Rhizopus bursts?

Q.18 State the basic requirement for sexual reproduction. Write the importance of such reproduction in nature.

Q.19 State the changes that take place in the uterus when:
(a) Implantation of embryo has occurred.
(b) Female gamete/egg is not fertilised. [3]

Q.20 (a) Name the organ that produces sperms as well as secretes a hormone in human males. Name the hormone it secretes and writes its functions.
(b) Name the parts of the human female reproductive system where fertilisation occurs.
(c) Explain how the developing embryo gets nourishment inside the mother's body.

Q.21 (a) Name the following:
(i) Thread like non-reproductive structures present in Rhizopus.
(ii) 'Blobs' that develop at the tips of the non-reproductive threads in Rhizopus.

(b) Explain how these structures protect themselves and what is the function of the structures released from the 'blobs' in Rhizopus.

Q.22 Name the parts A, B and C shown in the diagram and write their functions.
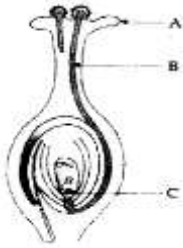
Q.23 Suggest three contraceptive methods to control the size of human population which is essential for the health and prosperity of a country. State the basic principle involved in each.

Q.24 What is DNA?

Q.25 draw labeled diagram of flower.

CHAPTER: 9 HEREDITY AND EVOLUTION

Q.1 Name the plant Mendel used for his experiment. What type of progeny was obtained by Mendel in F1 and F2 generations when he crossed the tall and short plants? Write the ratio he obtained in F2 generation plants.

Q.2 List two differences between acquired traits and inherited traits by giving an example of each.

Q.3 A Mendelian experiment consisted of breeding pea plants bearing violet flowers with pea plant bearing white flowers. What will be the result in F_1 progeny?

Q.4 How did Mendel explain.that it is possible that a trait is inherited but not expressed in an organism?

Q.5 How do Mendel's experiments show that
(a) Traits may be dominant or recessive?
(b) Inheritance of two traits is independent of each other?

Q.6 How do organisms, whether reproduced asexually or sexually maintain a constant chromosome number through several generations? Explain with the help of suitable example.

Q.7 In one of his experiments with pea plants Mendel observed that when a pure tall pea plant is crossed with a pure dwarf pea plant, in the first generation, F1 only tall plants appear. What happens to the traits of the dwarf plants in this case?

Q.8 When the F_1 generation plants were self-fertilised, he observed that in the plants of second generation, F_2 both tall plants and dwarf plants were present. Why it happened? Explain briefly.

Q.9 How did Mendel interpret his result to show that traits may be dominant or recessive? Describe briefly.

Q.10 In a mono hybrid cross between tall pea plants (TT) and short pea plants (tt) a scientist obtained only tall pea plants (Tt) in the F_1 generation. However, on selfing the F_2 generation pea plants, he obtained both tall and short plants in F_2 generation. On the basis of above observations with other angiosperms also, can the scientist arrive at a law? If yes, explain the law. If not, give justification for your answer.

Q.11 "We cannot pass on to our progeny the experiences and qualifications earned during our life time". Justify the statement giving reason and examples.

Q.12 How many pairs of chromosomes are present in human beings? Out of these how many are sex chromosomes? How many types of sex chromosomes are found in human beings? "The sex of a newborn child is a matter of chance and none of the parents may be considered responsible for it". Draw a flow chart showing determination of sex of a newborn to justify this statement.

Q.13 What is genetics, heredity, inherited character's.

Chapter 12
ELECTRICITY
Very Short Answers (1 Mark)

1. Define the SI unit of (one mark each)
(a) Current   (b) Potential Difference   (c) Resistance   (d) Electric Power   (e) Electric Energy.
2. What is the conventional direction of flow of current?
3. Define the term resistivity?
4. On what factors does the resistance of a conductor depend?
5. How is the voltmeter and ammeter connected in the electric circuit?
6. Heating effect of current carrying conductor is due to –
7. Why the filament of bulb has high melting point?

8. How does use of a fuse wire protect electrical appliance?

9. What is the relationship between power, current and potential difference

10. How many joules are there in 1KWh?

Short Answer (2-3 marks) type Questions

1. Draw a schematic diagram of a circuit consisting of a battery of six cell of 1.5V each, three resistor each of 3W in series and a plug key.

2. State Ohm's law. Draw the graph between V & I?

3. What is joule's heating effect of current, derive its expression?

4. A wire of length L and R is stretched so that its length's doubled and the area of cross section is halved. How will its

(i) Resistance change

(ii) Resistivity change.

5. An electrical appliance of power 2KW works at potential difference of 220V. Does it require fuse of 5A, give reason?

Long Answer (5 Marks) type Questions

1. On what factor the resistance of conductor depends give its mathematical expression. Give the SI unit of resistivity?

2. Calculate the resistivity of a metal of length 2m at 20°C having the resistance of 20W and diameter 0.3mm?

3. Three resistance of 2W , 3W and 5W are connected in the electric circuit. Calculate the

(1) Maximum effective resistance

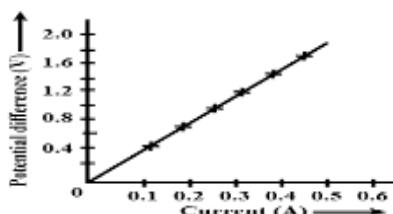(2) Minimum effective resistance

1. Draw a labelled diagram to show reddish appearance of the sun at the sunrise or the sunset and white appearance of the sun at noon when it is overhead.

    [2020]   2. A V-I graph for a nichrome wire is given below. What do you infer from this graph? Draw a labelled circuit diagram to obtain such a graph.

    [2020]

3. (a) write the mathematics expression for joule's law of heating

(b) compute the heat generated while transferring 96000coulomb of charge in two hours through a potential of 40V.   [2020]

Chapter 13
## *MAGNETIC EFFECT OF ELECTRIC CURRENT*

Very Short Answers (1 Mark)

1. What is the frequency of AC used in India?
2. Name the point where the iron filling are collected more?
3. Who discovered electromagnetic induction?
4. Why does a compass needle get deflected when brought near the bar magnet?
5. If both the coil and the magnet are stationary, will there be deflection in galvanometer?
6. Why magnetic field lines do not intersect each other?
7. What is the advantage of Alternate Current over Direct current?
8. What do you understand by short circuiting?
9. When the force experienced by a current carrying conductor placed in a magnetic field is maximum?
10. Write the factors affecting the magnetic field due to a straight conductor?

Short Answers (2 Marks)

1. A charged particles enters at right angles into a uniform magnetic field. What is the nature of charge particle, if it experiences a force in a direction pointing vertically out of the page.
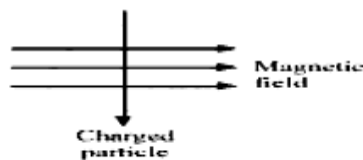
2. Name the Rule–
(a) Force experience by a current - carrying conductor placed in a magnetic field.
(b) Direction of magnetic field lines associated with a current carrying conductor.
(c) Direction of induced current in a coil due to its rotation in magnetic field.
3. What is solenoid? Where the magnetic field is uniform in solenoid?
4. Draw the pattern of magnetic field lines due to current carrying straight conductor?
Long Answer (5 Marks)

1. Explain the phenomenon of Electromagnetic Induction with the help of an activity. Write its one application.

2. Draw the schematic diagram of domestic circuit. Write the colour and function of Neutral wire, Live wire and Earth wire.

1. (a) What is an electromagnet? List any two uses.

(b) Draw a labelled diagram to show how an electromagnet is made.

(c) State the purpose of soft iron core use in making an electromagnet.

(d) List two way of increasing the strength of an electromagnet if the material of the electromagnet is fixed.

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2. A simple motor is made in a school laboratory. A coil of wire is mounted on an axle between the poles of a horseshoe magnet, as illustrated.
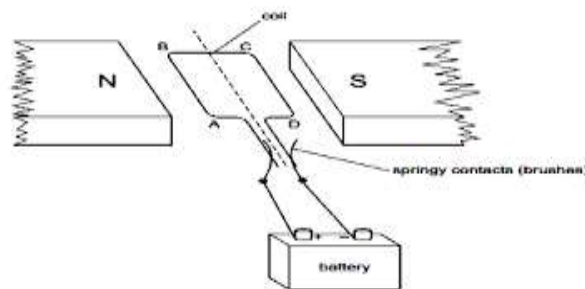
In the example above, coil ABCD is horizontal and the battery is connected as shown.

a. For this position, state the direction of the force on the arm AB.

b. Why does the current in the arm BC not contribute to the turning force on the coil?

3. A circuit contains a battery, a variable resistor and a solenoid. The figure below shows the magnetic field pattern produced by the current in the solenoid.
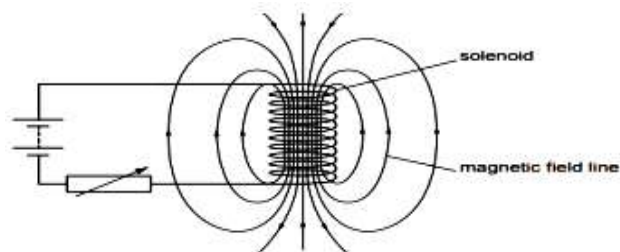
a. State how the magnetic field pattern indicates regions where the magnetic field is stronger.

b. What happens to the magnetic field when the current in the circuit is reversed?

CHAPTER: 15 Our Environment

1. Define Biomagnification
2. Expand the term CFC & U.N.E.P.
3. Define Ozone hole
4. Which of the following is/are Biodegradable plastic cups, cowdung, Aluminium foil, cotton.
5. Define food web
6. Define Ecosystem
7. Differentiate between Biodegradable and non biodegradable wastes.
8. Use of Kulhads was not environment friendly idea. Why?
9. Draw an Energy Pyramid showing different trophic level.
10. What is the advantage of disposable paper cup use over plastic cups?
11. How can we help in reducing the the problem of waste disposal? Give any two methods.
12. What is role of decomposer in Ecosystem.
13. Give any two ways in which non biodegradable substance would affect the environment.
14. What are trophic levels? Give an example of a food chain and state the different trophic levels in it.
15. What will happen if we kill all the organisms in one trophic level?
16. Study the food chain given below.
I Grass fi Grasshopper fi Frog
II Wheat fi Rat fi Snake fi Hawk
Which of the two consumers frog/hawk will get more available energy and why?
17. . Write the name of the main constituent of biogas. Also, state its percentage.
18. Give reason to justify the following:
1.The existence of decomposers is essential in a biosphere.
2. Flow of energy in a food chain is unidirectional.
19. List two biotic components of a biosphere.
20. Why are green plants called producers?

3 Marks Questions
1. What was the role of women in the Civil Disobedience Movement?
Ans. 1) Participated in the salt Satyagraha in large number.
2) They participated in protest marches and also manufactured salt.
3) Many women went to jail
In rural areas the women considered service to the nation a sacred duty.
2. Explain the problems faced in unifying people.
Ans. All credits of glorious past were attributed to the Aryans and their contributions. Therefore, it became difficult to bring all communities on a single platform.
3. Why and how is the identity of a nation symbolized in a Figure?
Ans. (1) It helps to create an image with which people can identify the nation.
2) With the growth of nationalism identity of India came to be associated with the image of Bharat Mata.
4. Which political solutions were adopted by Dalits leaders to the problems of their community?
Ans. 1. Many Dalits leaders were keen on different political solutions to the problems of the community.
2.   They began organizing themselves and demanding reserved seats in electoral institutions.
3.   They also asked for separate electorate that would choose Dalits members for legislative councils.
4.   They believed Political empowerment would resolve the problems of their social disabilities.
5.Dr B R Ambedkar organized the Dalits and formed a Depressed classes Association in 1930s.
6.These voluntary organizations also receive financial support from the government for creating awareness among people.
6. Why did the Rich peasant communities become active in the Civil Disobedience Movement?
Ans. 1. Rich peasant communities –like Patidars of Gujarat and the Jatts of Uttar Pradesh- were active in the movement.
2.   Being producers of cash crops, they were very hard hit by the trade depression and falling prices.
3.   As their cash income disappeared, they found it impossible to pay the government's revenue demand. And the refusal of the government to reduce the revenue demand led to widespread resentment.
4.   Due to this reason rich peasants become enthusiastic supporters of the civil Disobedience Movement.
7. What was the impact of famous Jallianwalla Bagh incident over Society and British Government?
Ans. 1. As the news of Jallianwalla Bagh spread, crowds took to the streets in many north Indian towns.
2. There were strikes, clashes with the police and attacks on government buildings.
3.   The government responded with brutal repression, seeking to humiliate and terrorize people.
4.   Satyagrahis were forced to rub their noses on the ground, crawl on the streets, and do salute to all sahibs.
5.   People were flogged and village around Gujranwala in Punjab now in Pakistan were bombed.
8.What is separate electorate? Why do you think Gandhiji was against the demand of separate electorate by B R Ambedkar?
Ans. Separate electorates are usually demanded by minorities who feel it would otherwise be difficult for them to get fair representation in government. Separate electorate for Dalits means that Dalits will choose their separate leader by separate elections for Dalits.
Gandhiji was against the demand of separate electorate of Dr B R Ambedkar because he believes that separate electorates for Dalits would slow down the process of their integration into society consumer movement in India has led to the formation of various organizations locally known as.
9.Why martial law was imposed in Punjab during the month of April in 1919?
Ans. The martial law was imposed in Punjab because Rowlatt Act was introduced by the British Government. Against this act rallies were organized in various cities. Workers went on strike in railway workshops and shops closed down. British Government decided to clamp down on the nationalist leaders. Local leaders were picked up from Amritsar. Mahatma Gandhi was barred from entering Delhi. On 10 April, the police in Amritsar fired upon a peaceful procession, provoke widespread attacks on

banks post offices and railway stations. Due to this martial law was imposed and General Dyer took command.

10.Why were Indians reacted against Rowlett Act?

Ans. 1. This Act had been hurriedly passed through the Imperial Legislative Council despite the united opposition of Indian Members.

2.   It gave the government enormous power to repress political activities, and allowed detention of political prisoners without trial for two years.

3.   The Rowlett Act acted as an instrument of suppression of civil rights of the Indians hence produced widespread discontent among masses.

11. Mention the features of the flag which was designed by Gandhiji?

Ans. In 1921 Gandhiji had designed the swaraj flag.

1.   It was a tricolor flag and had a spinning wheel in the centre representing the Gandhian ideal of selfhelp.

2.   Tricolors were-red, green and white.

3.   Carrying the flag, holding it aloft, during marches became a symbol of defiance.

12.What were three proposals regarding Non- Cooperation movement, as suggested by Mahatma Gandhi

Ans. 1. The movement was to be unfolded in stages.

2. It should begin with the surrender of titles awarded by the government and boycott of civil services, army, police, courts, legislative council, schools and foreign goods.

3. Then, In case, the government used repression, a civil disobedience movement would be launched.

13. A. Two features A and B are marked in the given political map of India. Identify these features with the help of the following information and write their correct names on the lines marked on the map.
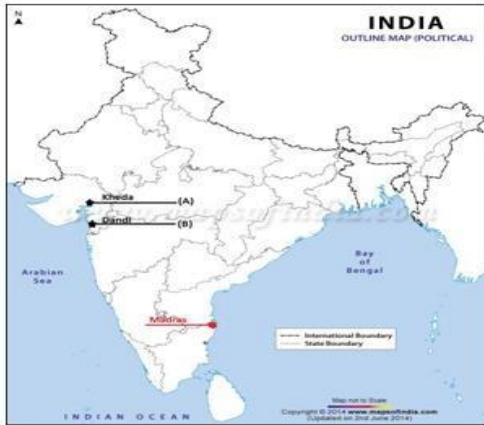
1. The place of Peasants Satyagraha.

2. The place associated with the Civil Disobedience Movement

B. Locate and Label the place where Congress Session was held in 1927.

Ans.

14. Can you explain why some congress leaders were reluctant to boycott the council elections of November 1920?

Ans. Many within the congress were, however concerned about the proposals given by Gandhiji. They were reluctant to boycott the council elections of November 1920 because the feared that the Movement might lead to popular violence. In the months between September and December there was instance tussle within the congress. For a while there seemed no meeting point between the supporters and the opponents of the movement. Finally, at the Congress session at Nagpur in December 1920, a compromise was worked out and the Non-cooperation program was adopted.

15. What were the methods used by peasants of Awadh to achieve their goal? Explain.

Ans. 1. In man y places *nai-dhobi bandhs* were organized by panchayats to deprive landlords of the service of even barbers and washer men.

2. The peasant movement demanded reduction of revenue, abolition of beggar and social boycott of oppressive landlords.

3. Some peasants denied doing beggar-work without at landlords' farms without any payment.

4. As the movement spread in 1921, the houses of talukdars and merchants were attacked, bazaars were looted.

16. Why was the Non-Cooperation movement withdrawn by Gandhiji?

Ans. 1. The movement was **turning violent**.

2. At **Chauri-Chaura** in Gorakhpur in Uttar Pradesh, a peaceful demonstration in bazaar turned into a violent clash in which more than 20 policemen were killed.

17. Why martial law was imposed in Punjab during the month of April in 1919?

Ans. 1. Gandhiji in 1919 decided to launch a nationwide Satyagraha against the proposed Rowlett Act (1919).

2.   Rallies were organized in various cities, workers went on strike in railway workshops, and shops closed down.

3.   In April, the police in Amritsar fired upon a peaceful procession, provoke widespread attacks on banks, post office and railway stations.

4.   The British administration decided to clampdown on nationalists. Martial law was imposed and General Dyer took command.

18. What was the outcome of the Poona pact? How did it benefit the Dalits?

Ans. The Poona pact of sept 1932 gave the depressed classes reserved seat in provincial and central legislative councils but they were to be voted in by the general electorate.

19. How did Mahatma Gandhi organize Satyagraha in various places in India?

Ans. 1) In 1917 he went to Champaran, Bihar to inspire the peasants to struggle against oppressive plantation system.

2) In 1919, he organized Satyagraha to support peasants of Kheda in Gujarat.

3) In 1918, he went to Ahmedabad to organize this movement amongst cotton mill workers.

4) In 1919, he launched Satyagraha against Rowlatt act.

20. Explain the factors responsible for the growth of nationalism in the later half of the 19thcentury.

Ans. 1) Economic exploitation

2) Administrative and economic unification of the country.

3) Western education

4) Development of Press.

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21. What is the manufacturing sector? Why is it considered as the backbone of development? Interpret the reason.

Ans. Production of goods in large quantities after processing raw materials into more valuable products is called manufacturing. It is considered as a backbone of development because:

(i)   It not only helps in modernising agriculture but also forms the backbone of our economy.

(ii)   Industrial development is a precondition for the eradication of unemployment and poverty from our country.

(iii)   Export of manufactured goods expands trade and commerce.

(iv)   Countries that transform their raw materials into a wide variety of finished goods of higher value are prosperous.

22.Explain with examples any five factors that are responsible for industrial location.

Ans. Five factors responsible for industrial location:

1. Availability of raw material at low cost.

2. Government policies.

3. Availability of specialized labour.

4. Availability of markets and services facilities like banking, transport, etc.

5. Availability of power.

23."Industrialisation and urbanisation go hand in hand". Validate the statement.(HOTS)

(i)   After an industrial activity starts in a town, urbanisation follows. Industry provides employment to the people of the area. Population migrates from rural hinterlands to seek jobs. Housing and transport facilities are developed to accommodate these people. Other infrastructural developments take place leading to growth and development of the town into a city.

(ii)   Sometimes industries are located in or near the cities.

(iii)   Cities provide markets for manufactured goods.

(iv)   Cities provide various services like banking and insurance etc.

24.Classify industries on the basis of source of raw material. How are they different from each other?

Ans. On the basis of sources of raw material, industries are classified as:

   (i)   Agro-based industries: These industries are based on agricultural raw material, e.g., cotton, jute, silk, rubber, sugar, tea, coffee and edible oils.
   (ii)   Mineral-based industries: Industries that use minerals and metals as raw materials are called mineral-based industries, e.g., iron and steel, cement, aluminium, machine tools, petrochemicals, etc.

25.Classify industries on the basis of their main role. How are they different from each other?

Ans. Classification according to their main role:

   (i)   Basic or key industries which supply their products or raw materials to manufacture other goods,
            e.g., iron and steel, copper smelting, aluminium smelting.
   (ii)   Consumer industries that produce goods for direct use by consumers–sugar, toothpaste, paper, sewing machines, fans, etc.

Ans. Agriculture gives boost to the industrial sector:

(i)   Agriculture provides raw material to industries.

(ii)   Agriculture provides a market for industrial products.

(iii)   Agriculture helps boost new industrial products.

(iv)   The industries such as cotton, jute, silk, woollen textiles, sugar and edible oil, etc., are based on agricultural raw materials.

26.Why is the cotton textile industry the largest industry in India today? Give any three reasons.

Ans. (i) Cotton textile industry contributes 14 per cent of the total industrial production.

(ii) It provides employment to 35 million persons directly – the second largest after agriculture.

(iii) It earns foreign exchange of about 24.6 per cent (4 percent of GDP).

27.Explain any three factors responsible for the location of the cotton textile industry in Mumbai and Ahmedabad.

Ans. (i) Availability of raw cotton, market and transport including accessible port facilities.

(ii) Cheap labour.

(iii) Moist climate has caused the concentration of cotton textile industries in Mumbai and Ahmedabad region.

28.Explain any three factors which were responsible for the concentration of cotton textile industry in Maharashtra and Gujarat in early years.

Ans. (i) Availability of raw cotton.

(ii) Ready markets are available.

(iii) Well-developed means of transportation.

(iv) Abundant skilled and unskilled labour at cheap rate.

(v) Moist climate which is suitable for the cotton industry.

29. What are the problems faced by road transportation in India?
Ans. The road network is inadequate in proportion to the volume of traffic and passengers. About half of the roads are unmetalled which makes them useless during rainy season. The National Highways are inadequate and lack roadside amenities. The roadways are highly congested in cities. Most of the bridges and culverts are old and narrow.

30.How are roads classified In India?
Ans- The roads in India are classified six classes:-
(1) Golden quadrilateral or super highways. (2) National highways. (3) State highways. (4) District highways. (5) Other roads. (6) Border roads.

31.What is super highway? Name any two roads.
Ans- The super highway have been planned to meet the requirements of the fast movement of traffic. The government has launched a major road development project linking Delhi-KolkataChennai-Mumbai and Delhi by six lane super highway:
(1) The north-south corridor linking Srinagar (Jammu and Kashmir) and kanyakumari (Tamilnadu).
(2) The east-west corridor connecting silcher (Assam) and pobander (Gujarat)

32.What are the problems faced by Indian Railways?
Ans. Problems faced by the Indian Railways:
Many passengers travel without tickets.
Thefts and damaging of railway property by miscreants.
People stop the trains and pull chains unnecessarily that cause heavy damage to the railways and also causes delays.

33.Write three merits of waterways in India.
Ans. Waterways are the cheapest means of transport.
Waterways are a fuel efficient and environment friendly mode of transport.
They are most suitable for carrying heavy and bulky goods.

India's trade with foreign countries is carried from the ports located along the coast, and more than 95% of the country's trade volume is moved by the sea.

34.Give reasons for which foreign tourists visit India.
Ans. Foreigners visit India for various purposes. These are: Heritage tourism, Eco-tourism, Adventure tourism, Cultural tourism, Medical tourism, Business tourism.

35.What is international trade? What do you mean by Balance of trade? What is the importance of trade?
Ans. Trade between two countries is called international trade. It includes exchange of commodities, services, information and knowledge.
Relation or difference between nation's exports and imports is called balance of trade.
It has two types:
   (i)   Surplus trade: when the value of exported goods and services is more than the value of imported goods and services it is called favourable trade balance.
   (ii)   (ii) Trade Deficit: when the value of exported goods and services is less than the value of imported goods and services, it is called unfavourable trade balance.
The importance of trade is:
1.   No country can survive without international trade because resources are space bound.

2.   Advancement of international trade of a country leads to its economic prosperity because such a trade provides so many jobs to workers as well as business to traders.

3.   It is through international trade that we earn much of our foreign exchange which is required for importing many essential goods.

4.   Foreign trade helps in transfer of technology.

36.Mention the different means of transport in India.

Ans. Means of transport in India are:-

(i) Roadways, (ii) Waterways, (iii) Airways, (iv) Pipelines, (v) Railways.

37.What are the means of mass communication? Explain features of any two media.

Ans. These are those means of communication through which one can communicate with several people at the same time. For example- Radio, newspaper and T.V.(Television):- (i) It is one of the largest and essential networks in the world.

(ii) It provides entertainment and keeps the viewers well informed about the world.

Radio:-

(i) It is the cheapest and the most effective means of communication.

(ii) Besides entertainment, it also provides information and promotes social education.

38.What are the different types of roads in India?

Ans. There are six types of roads. They are:

1. Golden Quadrilateral Super Highways or Expressway National Highways 2. National Highways 3. State Highways 4. District Roads 5. Other Roads or Rural Roads or Village Roads 6. Border Roads

39.What do you mean by pipeline transport?

Ans. Transportation of liquid, gases or slurries through pipes made of durable metal or a plastic tube is called pipeline transport. It is the most convenient mode of transport for crude oil, petroleum products and natural gas even solids like iron ore in slurry form to refineries, fertilizer factories, industries and big thermal power plants. For example:

From oil field in From Salaya in Gujarat to Jalandhar in Punjab, via Viramgam, Mathura, Delhi and Sonipat. It has branches to connect Koyali (near Vadodara, Gujarat) Chakshu and other places.
 Gas pipeline from Hazira in Gujarat connects Jagdishpur in Uttar Pradesh, via Vijaipur in Madhya Pradesh. It has branches to Kota in Rajasthan, Shahajahanpur, Babrala and other places in Uttar Pradesh (HVJ).

40.What are the advantages of pipeline transportation?

Ans . Advantages of pipeline transportation:

*   Pipelines can transport liquids, gases and solids (in slurry form) to any distance.
*   Pipelines are used for transporting crude oil, petroleum products and natural gas from oil and natural gas fields to refineries, fertilizer factories and big thermal power plants.
*   Initial cost of laying pipelines is high but subsequent running costs are minimal.
*   It reduces trans-shipment losses and delays.
*   They can be laid in any terrain and even through the water-bodies.

41.Why is air travel preferred in north eastern states?

Ans:- i. Air transport is the fastest, most comfortable and prestigious mode of transport. ii. It can travel very high terrains, vast deserts dense forests, and large oceanic stretches with great ease where other modes of transportation are difficult. iii. The north eastern part of India is marked with the presence of big rivers, frequent floods dissected relief, rugged topography, dense forests and international frontiers. Other modes of transportation are impossible especially at times of emergencies.

42.What are 'Border Roads'? What is their significance?

Ans:- Border roads run along the land frontiers of our country in the northern and north-eastern border areas. The Border Road Organisation (BRO) — a department of the Central Government was established in 1960 for the development of border roads. Their construction and maintenance are the responsibility of the Central Government.

Importance of Border Roads:

These roads are of strategic importance. They have increased the accessibility in areas of difficult terrain and have helped in the economic development of these areas. They are the supply lines for our jawans (soldiers) who guard our land frontiers.

"Pipeline transport network is a new arrival on the transportation map of India." Explain.

Ans. (i) Previously these were used to transport water to cities and industries. (ii) Presently these are used to transport crude oil, petroleum products and natural gas. (iii) Initial cost of laying pipelines is

high but running costs are minimal. (iv) It rules out delays and losses. Some networks are from an oilfield in upper Assam to Kanpur.

43.Name the longest National Waterway of India. Write any three points of importance of waterways.

Ans. The longest National Waterway of India is the Ganga river between Allahabad and Haldia

Importance of waterways: (i) It is most suitable for carrying heavy and bulky goods. (ii) It is a fuel efficient and environment friendly. (iii) More than 95% of the country's trade volume is moved by the sea. (iv) It is the cheapest means of transport. (v) They are the natural routes which do not involve cost of construction.

44.Explain any five characteristics of Kandla port.

Ans. Characteristics of Kandla port: (i) First ports were developed soon after India got Independence. (ii) Reduced the volume of traffic on Mumbai port. (iii) Tidal port. (iv) Caters exports and imports of highly productive granary and industrialised states. (v) Free trade zone.

45.''Roadways still have an edge over railways in India.'' Support the statement with examples.

Ans. Roadways have edge over railways in India:

1.   Roads are easy to be built and maintained as compared to railways.
2.   Construction cost of roads is much lower than that of railway lines.
3.   Roads as compared to railways lines can negotiate higher gradients of slopes easily and as such can traverse mountains like Himalayas.
4.   Road transport is economical in transportation of people and goods for shorter distances.
5.   Roads provide door-to-door service, which railways cannot do.
6.   Road transport is also used as feeder to other modes of transport and provide a link between airports, sea ports and railway stations.

Political Parties

SHORT ANSWER TYPE QUESTION

1. Describe any three broad guidelines for devising ways and means for political reform In India .

   Ans. (a) Anti- Defection Law – According to this law, MLAs of MPs cannot change the party after the election-

   (b)   Details of Property and Criminal cases – In order to reduce the influence of money and criminals , the Supreme Court of India passed an order .
   Now It becomes mandatory for every candidate to file an Affidavit giving details of his property and Criminal cases pending against him.
   (c)   File an Income Tax Return- The Election Commission passed an order Making it necessary to file their income tax returns.

2. When is Democracy considered successful? Explain.   CBSE 2016

   Ans.   The Democracy is considered successful in the following conditions
(a) when the rulers elected by the people take all major decision in favour of all people.
(b) When elections offer a free choice and opportunity to the people.
(c) When choice available to all the people is based on political equality.

3.How is democratic government known as responsive government?   CBSE 2014

   Ans. In democracy, people have the right to choose their rulers and people have control over the rulers. In democracy, citizens have the right and the means to examine the process of decision making. Democracy is responsive to the needs and expectations of the citizens. For example, in democracy, the government is taking more time to take a decision about any subject to protect the interest of the citizens.

4.''Democratic government is a legitimate government'' Explain.   CBSE 2016

   Ans. Following features of a democratic government make it a legitimate government.
-      The laws are applicable to all the citizen whether rich or poor.
-      In a democracy, there is political equality i.e. every vote counts equally.
-      People have the right to challenge the government policies and actions.
   If the people are not satisfied with the working of the government, they have
   the right to change it.

5.Explain how democracies lead to peaceful and harmonious life among citizens?

CBSE 2011.2013

Ans.
- Democracy is a government based on consultations and discussions. It provides a peaceful solution to every problem.
- India, a country which has diversity of religion, caste, creeds and language, discussions provide a peaceful solution to problems.
- In democracy. all the citizens are equal and enjoy equal social and political rights. It gives a chance to every citizen to express his /her view on every issue.

6.Why is democracy considered much superior to any form of government in promoting freedom and

dignity of the individual?   CBSE 2008, 2011,2016   Ans.

- Every individual wants that he should be respected by fellow persons. The passion for respect and freedom are the basis of democracy.
- It enhances dignity of the individual. It gives equal rights and freedom to all the individuals.
- It gives right to vote and right to fight election for all the citizens.
- Democracy provides an effective method to solve disputes and to correct mistakes.

MONEY AND CREDIT

Shorts Answer Type Questions(3 Marks each)

Mention any three limitations of the barter system.

Ans. (i) Two people with different types of needs and goods must be there to satisfy each other's needs. (ii) There are many products which cannot be divided.
(iii) Valuation of goods is very difficult.
(iv) Barter system is time consuming.

Describe the significance of the Reserve Bank of India.

Ans. (i) The formal resources work under the supervision of the Reserve Bank of India or the RBI. All the commercial banks maintain a minimum cash balance out of the deposits they receive. The RBI monitors that the banks actually maintain the cash balance.
(ii)The RBI monitors that the banks give loans not just to profit-making businesses and traders, but also to small cultivators, small scale industries, to small borrowers, etc.
(iii) The rate of interest of the formal lenders is decided by the RBI. So normally, the interest rates are very low.

Why are demand deposits considered as money?

Ans. (i) Demand deposits are the deposits which can be encashed by the account holder any time.
(ii) They can be used as a medium of exchange.
(iii) They help in settling payments without the use of cash.
(iv) They are easily acceptable.

Analyze the role of money as a medium of exchange.

Ans. (i) The medium of exchange is an important function of money. It means that money acts as an intermediary for the goods and services in an exchange of transactions. Use of money as a medium of exchange has removed the major difficulty of double coincidence of wants in the barter system.
(ii) The ´medium of exchange´ function of money implies that money is generally acceptable by the people.
They can buy goods and services they need using money. That is, money facilitates multilateral trade.

(iii) Money also offers economic freedom to the people.

How is money transferred from one bank account to another bank account ? Explain with an example.
Ans. There are various ways to transfer money one bank to another:
(i)   Cheque: Money from one bank to another can be transferred through a cheque. A cheque is a paper which instructs the bank to pay a specific amount from the persoń's account to the person in whose name the cheque has been issued.
(ii)   Net banking: These days money can also be transferred through net banking.
(iii)   Demand Draft: Money can also be transferred through demand draft.

Higher order thinking skills (Hots) questions.

¨Credit has its own unique role for development¨. Justify the statement with argument.
Ans. (i) If cheap credit is not provided to the farmers they will be forced to arrange the capital at the highest rate which will increase the cost of production. The high cost of production put the farmers into a debt trap. (ii) Cheap and affordable credit is also a must in the manufacturing sector to purchase raw material and other inputs.
(iii)   Cheap and affordable credit is required to decrease the dependency on informal sources of credit.
(iv)   Most of the Indian farmers are very poor so they do not have any surplus savings.
(v)   Cheap and affordable credit is also required for establishing new manufacturing units especially small scale units.

Case based Questions

Megha has taken a loan of Rs 5 lakhs from the bank to purchase a house. The annual interest rate on the loan is 12 percent and the loan is to be repaid in 10 years in monthly installments. Megha had to submit to the bank,documents showing her employment records and salary before the bank agreed to give her the loan. The bank retained as collateral the papers of the new house, which will be returned to Megha only when she repays the entire loan with interest.

(i)   Is Megha taking a loan from a formal or informal source of credit? Ans. Formal source,Bank

(ii)   Define collateral.
Ans. Collateral is an asset that the borrower owns (such as land, building, vehicle, livestocks, deposits with banks) and uses this as a guarantee to a lender until the loan is repaid.

(iii)   Identify the term:
It comprises interest rate, collateral, documentation requirement and the mode of payment. Ans. Terms of credit

Short Answer Type Questions (3 Marks)

1. "The Indian government, after independence, has put many such barriers on foreign trade and foreign investment." Why was this considered necessary?
Ans. (i) To protect the producers within the country from foreign competition: Industries were just coming up in the 1950s and the 1960s and competition from imports at that stage would not have allowed these industries to come up. Thus, India allowed imports of only essential items such as machinery, fertilizers, etc.

(ii) To establish basic industries: Some restrictions were levied to provide boost to basic industries like iron and steel, coal, etc. Around 1991, government felt that it was the proper time for Indian

producers to face competition and improve quality of products in comparison to foreign producers.

iii) To check free flow of goods : Government can use trade barriers to increase or decrease foreign trade and to decide   what kinds of goods and how much of each, should come into the country.

2. How do the MNCs help in the growth of local companies?

Ans. (i) Availability of modern techniques and management:

Modern technology and managerial services are made available to the local companies or to the host country. As a result, the productivity of the local enterprises increases and the resources are optimally utilized.

(ii)   Capital: MNCs can provide capital (money and machines) for faster production. The MNCs, also keep the flow of work.

(iii)   Market: MNCs are helping the local producers by expanding their market i.e., with the help of MNCs local producers can sell their product in the international market.

3.How did the Indian companies gain after the trade barriers were removed by the government? Explain any three points.

Ans. (i) Expansion of Market: Removal of trade barriers has helped the local companies to expand their market. Now local companies can sell their product in the international market.

(ii)   Competition: Removal of trade barriers has developed the spirit of competition among the local companies.

(iii)   Technology: With the removal of trade barrier the local companies are free to import modern technology. This has helped in lowering the cost of production.

4. State any four drawbacks of Globalisation.

Or

Give any three arguments against Globalisation.

Ans.

(i)   Globalisation has failed to solve the problem of poverty.

(ii)   Globalisation and the pressure of competition have substantially changed the lives of the workers. Faced with growing competition, most employers these days prefer to employ workers 'flexibly'. This means that workers' jobs are no longer secured.

(iii)   Only rich and educated class has benefitted from Globalisation.

(iv)   Globalisation has widened the gap between the rich and the poor.

5. Mention many four features of Multinational Corporations.

Ans.

(i) These companies own or control production in more than one nation.

(ii) Production is organized in increasingly complex ways.

(iii) The production process is divided into small parts, and spread out across the globe.

(iv) The companies have large size.

Higher order thinking skills Questions

What changes have occurred in India due to the adaptation of the policy of Liberalisation and Globalisation?

Ans.   (i) Variety of products: Due to the New Economic Policy, many MNCs have invested their capital in India. So, the Indian consumers are getting variety and quality products at cheaper rates.

(ii) Development in the infrastructure: Due to the policy of Globalisation and Privatisation, the condition of infrastructure has improved considerably. Much progress can be seen in the communication sector. At present many private companies are providing better services to the consumers.

(iii)   Boost to foreign direct investment: The policy of Liberalisation and Globalisation has provided a big boost to foreign direct investment in developing countries.

(iv)   Boost to the Indian companies: Due to the policy of Globalisation and Liberalisation, the private sector has gained a big push. Now the private sector is free to import raw material and technology from other countries. Moreover, Globalisation has enabled some large Indian companies to emerge as multinationals themselves. Tata Motors (automobiles), Infosys (IT), etc.

(v)   Boost to the service sector: Globalisation has also created new opportunities for companies providing services, particularly those involving information and communication techno-logies.

Case based Question

In recent years, the central and state governments in India are taking special steps to attract foreign companies to invest in India. Industrial zones, called Special Economic Zones (SEZs), are being set up. SEZs are to have world class facilities: electricity, water, roads, transport, storage, recreational and educational facilities. Companies who set up production units in the SEZs do not have to pay taxes for an initial period of five years.

Government has also allowed flexibility in the labour laws to attract foreign investment. The companies in the organized sector have to obey certain rules that aim to protect the workers' rights. In the recent years, the government has allowed companies to ignore many of these. Instead of hiring workers on a regular basis, companies hire workers 'flexibly' for short periods when there is intense pressure of work. This is done to reduce the cost of labour for the company.

However, still not satisfied, foreign companies are demanding more flexibility in labour laws.

(I) What is foreign investment?
Ans.   Investments by citizens or company of one nation to other nation is known as investment. Investment made by MNCs is also called foreign investment.

(ii) What is SEZ (Special Economic Zone)?
Ans. Special Economic Zone are industrial zones setup by government to direct foreign companies to invest in India.

(iii) Analyze the impact of flexibility of labour laws?
Ans:

Flexibility in the labour laws helps the companies to hire workers at a lower wage.

Companies hire workers for short period and not on a regular basis.

Flexibility in the labour laws does not favour workers as they lose their right to regular salary, paid leave and their incentives.

TERM II
SAMPLE QUESTION PAPER (2021-22)
ENGLISH – Language and Literature (184)
CLASS-X

Time allowed: 2 Hrs.   **Maximum Marks: 40**

General Instructions:
1. The Question Paper contains THREE sections-READING, WRITING & GRAMMAR and LITERATURE.
2. Attempt questions based on specific instructions for each part.

Q. No.	SECTION A- READING (10 marks)	Marks
1	**Read the passage given below.** Technology is making advancements at a rapid rate but at the cost of a valued tradition—the crafts industry. The traditional crafts industry is losing a lot of its trained and skilled craftsmen. With that, the art of embellishing brass and copper utensils with fine engravings is also disappearing. The government has identified around 35 crafts as languishing craft. The speciality of handcrafted items is its design, an association with long traditions belonging to a specific region. The word 'handcrafted' does not imply the involvement of dexterous human fingers or an agile mind with a moving spirit anymore. Lessening drudgery, increasing production and promoting efficiency have taken precedence. The labour-saving devices are taking the place of handcrafted tools and this has jeopardized the skills of these artisans. Mechanisation has made its way into everything - cutting, polishing, edging, designing etc. Ideally, the use of machinery should be negligible and the handicrafts should be made purely by hand with a distinguishable artistic appeal. However, with the exception of small-scale industries, the export units are mostly operated by machines. The heavily computerised designs contribute to a faster production at lower costs. Although mechanization of crafts poses a challenge to safeguarding traditional crafts, the artisans are lured with incentives in order to impart handicrafts training. Some makers do see machines as a time-saving blessing since they are now able to accomplish difficult and demanding tasks with relative ease. These machines might give a better finesse to these products but they don't stand out as handcrafted. Quantity has overtaken quality in this industry. A need to highlight the importance of the handmade aspect is required by both the government and private sectors, in order to amplify awareness and also support the culture of making handicrafts. A few artisans are still trying their best to rejuvenate and revive their culture and heritage but it's an uphill task competing with the machine-made goods. A multitude of artisans have changed their professions and are encouraging their progeny to follow suit. There are others who have stayed their ground but are clearly inclined towards buying machines. Nearly two decades ago, there were around 65 lakh artisans in the country. Three years ago, when the government started the process of granting a unique number to the artisans based on the Aadhaar card, 25 lakhs were identified. Loss of traditional crafts is clearly a worrying issue, but it stands to reason that forcing any artisan to follow old ways when concerns of livelihood overrule other considerations, is unfair.	

Based on your understanding of the passage, answer ANY FIVE questions from the six given below.

1*5

  i.   What does the writer mean by calling handicrafts a 'valued tradition'?

1

  ii. Rewrite the following sentence by replacing the underlined phrase with a word that means the same from lines 5– 15.
If it continues, the workcation (work + vacation) trend will be a powerful boost to domestic tourism operators <u>failing to make progress</u> in the economic slump caused due to the pandemic.

1

  iii. State any two reasons why artisans are choosing to work via machines rather than handcrafted tools.

1

  iv. Why do the artisans need to be 'lured with incentives' to impart handicrafts training?

1

  v. List one likely impact of the support of government and private sectors towards the culture of making handicrafts.

1

  vi. How does the writer justify an artist's act of abandoning her/his traditional craft for a more lucrative option?

2. **Read the following excerpt from a case study titled *Impacts of Festivities on Ecology*.**

Festivals are synonymous with celebration, ceremony and joy. However, festivals bring to fore the flip side of celebrations – pollution – air, water, soil and noise. This led to the need of assessing the awareness level among people about ecological pollution during festivals. So, a study was conducted by scholars of an

5   esteemed university in India. This study was titled *Awareness Towards Impact of Festivals on Ecology.*

There were two main objectives of the study. The first one was to assess the awareness level among people about ecological protection during festivities. Exploring solutions to bring awareness about celebrating festivals without

10   harming ecology was the second objective. The method used to collect data was a simple questionnaire containing 6 questions, shared with 50 respondents across four selected districts of a state in the southern region of India.

The research began by understanding the socio-economic conditions of the respondents before sharing the questionnaire. Once the responses were

15   received, the data collected was tabulated (Table 1), for analysis.

Table-1: Awareness level among respondents

QUESTIONS	YES %	NO %	CAN'T SAY%
1. Do you feel that bursting crackers is a must during festivities?	46	54	0
2. Do you think most people abuse environmental resources during celebration of festivals?	72	28	0
3. Do you think that celebrations & festivities result in uniting people?	64	32	4
4. Do you enjoy bursting crackers for amusement?	68	32	0

		5. Do you feel pressured to burst crackers during festivals as an expectation of your social status?	82	12	6	
		6. Are you aware of waste segregation & disposal guidelines for better ecology?	56	40	4	

20   The study recommended the imposition of strict rules and regulations as opposed to a total ban on all festive activities which have a drastic impact on our environment. The researchers believed that such measures would help in harnessing some ill-effects that add to the growing pollution and suggested further studies be taken up across the country to assess awareness about ecological degradation.

25   The observations made in the study pointed to the environmental groups and eco-clubs fighting a losing battle due to city traffic issues, disposal of plastics, garbage dumping and all sorts of ecological degradation. The researchers stressed that the need of the hour is increasing awareness among people to reduce ecological pollution which can be facilitated by celebrating all festivals in an eco-friendly manner.

Largely adapted from
https://www.researchgate.net/publication/325366454_Awareness_towards_Impact_of_Festivals_on_Ecology_Need_for_Social_Work_Intervention

	On the basis of your understanding of the passage, answer <u>ANY FIVE</u> questions from the six given below.	**1*5**
i	Why do the researchers call pollution the 'flip side' of festivals?	**1**
ii	Comment on the significance of the second objective of the study with reference to lines 7-12.	**1**
iii	Justify the researchers' recommendation for limiting the drastic impact of festival pollution on the environment with reference to lines 16-21.	**1**
iv	Why do the researchers feel that environmental groups and eco-clubs are fighting a losing battle in the given scenario?	**1**
v	Even though a larger number of people say 'no' to bursting crackers than those who say 'yes', festival pollution persists. How does evidence from table 1 support this statement?	**1**
vi	What purpose does the 'Can't Say' column serve in the questionnaire (table 1)?	**1**
	SECTION B - WRITING AND GRAMMAR (10 marks)	
3.	**Attempt <u>ANY ONE</u> from i and ii.**	
i.	Study the concept chart from the self-help magazine section of a monthly publication.	**5**

Situation: Setback

Experience: Feeling upset

Healthy Processing

Inability to process fully

Desire to:
Feel it
Learn from it
Let it go

Block feeling

Block Learning:
Overwhelm
Self-criticism
Self-Doubt

Feel/Reflect/Learn/Align:
Observe the pattern!
Rework beliefs on adequacy and
process childhood memories
Assess magnitude of setback
Assess difficulty of work & likelihood
of future success by doing the work
Build grit to do the work
Access healing states to experience and
transform anxiety

Can't come to terms
with:
I can fail sometimes
Everything can't be
controlled
Learning takes time
and effort

Stuck in rumination
Experience listlessness
Attention diverted
from potential learning

Unacceptance of
Situations
Inadequacy
Incompetency
Danger and Threat
Blaming others

Triggers:
Apathy
Anger
Anxiety
Depression

Unconscious/Implicit memories:
Habitual process blocks
Scary early life experiences of being
reprimanded for not meeting
expectations

Write a paragraph in not more than 120 words, analysing the listed responses to the situation when one faces setbacks.

FOR THE VISUALLY IMPAIRED CANDIDATES

Read the following excerpt from an article that appeared in a monthly newsletter circulated among residents of a township.

The by-laws of some residential associations and management that ban owners and tenants from keeping pets in their apartments, are justified.

Write a paragraph to analyse the given argument.
You could think about what alternative explanations might weaken the given conclusion and include rationale / evidence that would strengthen / counter the given argument.

ii	You are Samina Zaveri, Class X, Vadodara, Gujarat. You come across the following information on a local library's notice board.	5

Create Your Own Board Game Competition!

Create an educational board game, and send it to us at Teen-Toggle Games Pvt. Ltd, 307, Satija building, Colaba, Mumbai by July 2022. The top 10 winning board games will be featured on our international portal. Attractive scholarships for the winners!

You wish to participate but require more information. Write a letter to Teen-Toggle Games Pvt.Ltd in about 120 words, enquiring about rules, scholarship details and deadlines. Also enquire about specifications for solo or group entries.

4.	The following paragraph has not been edited. There is one error in each line. Identify the error and write its correction against the correct blank number. Remember to underline the correction. The first one has been done for you.	1*3
		Error **Correction**	
	Have you ever learn from a mistake you have made? **E.g.** learn <u>learnt</u>	
	Many shouldn't admit doing so. For those who do, a)	1
	there was no need for guilt. We often make mistakes b)	1
	while taking risks, but all brush them aside and learn. c)	1
	With that, they usually don't make mistakes the next time.	
5.	Read the conversation between a teacher and student and complete the passage that follows.	
	Biology Teacher: I instructed you to draw the diagram of bacteria. Why did you submit a blank sheet? **Sameer**: Sir, I had drawn the diagram of bacteria, but you can't see it because it is not visible to the naked eye.	
	The biology teacher had instructed Sameer to draw the diagram of a bacterial cell and asked him (a) …………………………………………a blank sheet. Sameer respectfully answered that he had drawn the diagram but (b) ……………………………………………to the naked eye.	1 1
	SECTION C- LITERATURE (20 marks)	
6.	**Answer <u>ANY SIX</u> questions in 30-40 words each.**	2*6
i.	What is the significance of the Buddha's request for a handful of mustard seeds and the addition of a condition to it?	2
ii.	Justify how 'Animals' by Walt Whitman is a criticism of mankind and its ways.	2
iii.	Comment on the tone of the speaker when she says 'Will you please look at me when I'm speaking to you, Amanda!'.	2
iv.	A ballad includes the telling of a tale as well as a surprise ending. Using evidence from the poem, explain how these features are included in 'The Tale of Custard the Dragon'.	2
v.	Which two issues about himself convinced Lomov of his decision to get married?	2
vi.	Briefly state how Matilda invited 'a dreadful life of necessity' into her family.	2
vii.	The hack driver successfully trapped the narrator in his web of words. Comment.	2
7.	**Answer <u>ANY TWO</u> of the following in about 120 words each.**	4*2
i.	Parents play a crucial role in the upbringing of their children. Critically examine the parents of Bholi and Ebright, highlighting their impact on their children's lives.	4
ii.	Pranjol and Rajvir discuss their next vacation destination. They shortlist Coorg and Goa. Rajvir is keen on Coorg and tries to convince Pranjol. Develop a conversation between the two, based on your understanding of *Glimpses of India*. You may begin like this:	4

	Rajvir: Hey Pranjol! I think we should be visiting Coorg. It is a beautiful place with coffee plantations. I can smell the aroma already! Pranjol: I gave you the opportunity to explore a tea plantation last year, in Assam; I want to…	
iii.	Farce is a kind of comedy which includes situations and dialogues that are ridiculous, exaggerated and even absurd. Evaluate the play, *The Proposal*, as a farce.	**4**

TERM II-MARKING SCHEME (2021-22)
ENGLISH – Language and Literature (184)
CLASS-X

Time allowed: 2 Hrs.   **Maximum Marks: 40**

READING (10 MARKS)

Note:

(i) The Reading Section focuses on testing a candidate's ability to comprehend.

(ii) Marks should be awarded only if the answer reveals formation of a response to the question.

(iii) **No marks to be awarded** if a chunk/exact line/s is/are transcribed from the passage without evidence of structure or semblance of coherent thought, in an attempt to pass off as a response.

Objective: This section evaluates the reading and comprehension skills of the students and their ability to analyse, infer (information / meanings) and evaluate the given information.

1.   UNSEEN PASSAGE 1*5=5
(ANY 5 OUT OF 6)
i. What does the writer mean by calling handicrafts a 'valued tradition'?   (1 mark)

Value Points	Guidance
• valued – showcase talents that are associated with artisans' lifestyle and history • tradition – represent rich our artistic culture / heritage / tradition	The learner is required to respond to— Why are handicrafts valued? Why are they considered a part of our tradition? ▪ Award maximum 1 mark for the complete correct answer ▪ Award partial credit of ½ mark if just 'valued'/ 'tradition' is addressed in the response.

ii. Rewrite the following sentence by replacing the underlined phrase with a word that means the same, from lines 5– 15.   (1 mark)
If it continues, the workcation (work + vacation) trend will be a powerful boost to domestic tourism operators failing to make progress in the economic slump caused due to the pandemic.

VALUE POINTS	GUIDANCE
If it continues, the workcation (work + vacation) trend will be a powerful boost to domestic tourism operators languishing in the economic slump caused due to the pandemic.	▪ 1 mark for the correct answer ▪ No partial credit ▪ No marks to be deducted if the learner fails to rewrite the complete sentence and

	just lists the chosen meaning—the purpose of the given sentence is to share a context.

iii. State any two reasons why artisans are choosing to work via machines rather than
handcrafted tools. (1 mark)

VALUE POINTS	GUIDANCE
Saves labour / reduces drudgery / increases production / finesse / efficiency	The learner is required to state 2 clear points that indicate the advantage of using machines over working with hands and tools ▪ Award 1 mark for any two points (½ + ½) ▪ ½ mark as partial credit for one point stated

iv. Why do the artisans need to be 'lured with incentives' to impart handicrafts training?
(1 mark)

VALUE POINTS	GUIDANCE
Because if artisans impart training to mass/bulk producers, they run the risk of losing their traditional livelihood to them and hence need to be tempted via benefits or rewards, to do so.	The learner is required to rationalise why the bulk producers have to tempt/ attract/ entice artisans to share their craft secrets/ training with them. ▪ Award 1 mark for complete rationalisation. ▪ ½ mark for partial explanation –just elaborating on either the reason or the effect.

v. List one likely impact of the support of government and private sectors towards the culture
of making handicrafts. (1 mark)

VALUE POINTS	GUIDANCE
Creation of awareness and public support for the artisans and their work / more artisans would be incentivized to continue their tradition / artisans wouldn't change their professions seeking better livelihood	The learner is required to list an advantage that is the outcome of the support of government and private sectors towards handicraft making. ▪ Award 1 mark for any one impact ▪ No partial credit

vi. How does the writer justify an artist's act of abandoning her/his traditional craft for a more
lucrative option? (1 mark)

VALUE POINTS	GUIDANCE
Via the argument that the artisans cannot be expected to continue their profession if it is not profitable, even though the loss of traditional crafts is perturbing.	The learner is required to state how the writer agrees that an artisan is justified in moving to options that pay better than traditional handicraft making, in order to support his livelihood.

	▪ Award 1 mark for the correct answer. ▪ No partial credit ▪ No marks for lines just copied from the text

2. UNSEEN PASSAGE 1*5=5
(ANY 5 OUT OF 6)

i. Why do the researchers call pollution the 'flip side' of festivals?

VALUE POINTS	GUIDANCE
▪ because the accepted norm is that festivals are synonymous with celebration/joy and people fail to see the other side, which is pollution OR ▪ festivals and pollution are two sides of the same coin currently/ polar opposites/ completely in contrast, yet together with each other—where we associate festivals with joy and celebration, we can't deny that pollution is an ignored reality	The learner is required to explain how pollution is the darker side of festivals and unfortunately goes hand-in-hand, often, with festivities ▪ Award maximum 1 mark for the complete correct answer. ▪ There is no partial credit. ▪ Accept any other similar complete interpretation, with reference to the given passage that convey the reason why pollution is the flip side of festivals.

ii. Comment on the significance of the second objective of the study with reference to lines 7-12.

VALUE POINTS	GUIDANCE
Second objective-Exploring solutions Significance- important for knowing steps that need to be taken to address the problem investigated in the research/ knowing what are the immediate actions that need to be implemented to address the issue studied/ helps focus on what needs to be corrected & what needs to be avoided to solve the problem focussed on in the research	▪ Award maximum 1 mark for the mention of any one valid significance. ▪ There is no partial credit.

iii. Justify the researchers' recommendation for limiting the drastic impact of festival pollution on the environment with reference to lines 16-21.

VALUE POINTS	GUIDANCE
▪ Researcher's recommendation: Strict rules ▪ Justification: Strict rules are better than a total ban because banning does not serve the purpose of awareness/ people	The learner is required to state the recommendation and then defend it against the other stated alternative.

do not generally conform to banning and tend to revolt/ strict rules pose some restrictions but still give the needed freedom.	▪ Award maximum 1 mark for the complete correct answer. ▪ Award partial credit of ½ mark if just the recommendation is listed or 'strict rules' is the response, without substantiation.

iv. Why do the researchers feel that environmental groups and eco-clubs are fighting a losing battle, in the given scenario?

VALUE POINTS	GUIDANCE
▪ the festivals cause pollution along with other issues (give examples) that add to it. ▪ awareness is the only solution but the lack of it only adds to the problem.	The learner is required to rationalise why environmental groups and eco-clubs aren't succeeding in their purpose. ▪ Award maximum 1 mark for the complete correct answer including both situation and the reason ▪ Award partial credit of ½ mark if just either aspect is listed.

v. Even though a fair percentage of people say 'no' to bursting crackers, festival pollution persists. How does evidence from table 1 support this statement?

VALUE POINTS	GUIDANCE

▪ a large percentage of people (72%) abuse environmental resources to celebrate festivals
▪ a high percentage of people (82%) use crackers to celebrate festivals in order to live up to the expectation of their social status
	The learner is required to study table 1 and
	  ▪ choose data that indicates what number percentage of people partake in activities that add to pollution.
	  ▪ Then, check to see if the number is higher than the number about 'no to bursting crackers'
	  ▪ Finally rationalise the data to prove the Q statement, by using the evidence data.
	
	▪ Award maximum 1 mark for the mention of any one point—identification + listing of percentage
	▪ Award partial credit of ½ mark if the questionnaire point is listed without the percentage/ percentage is listed without the mention of the questionnaire point.

vi. What purpose does the 'Can't Say' column serve in the questionnaire (table 1)?

VALUE POINTS	GUIDANCE
▪ gives a provision to/ allows the respondents to choose not to express/ not to answer/ allows an option to those who lack clarity/ are unwilling to respond	The learner is required to explain the role of the "can't say" section, with reference to study table 1.

	▪ Award maximum 1 mark for the complete correct answer-- any one point. ▪ No partial credit

SECTION B - WRITING AND GRAMMAR (10 MARKS)

3. Attempt <u>ANY ONE</u> from i and ii.   5*1

i. ANALYTICAL PARAGRAPH WRITING

Study the concept chart from the self-help magazine section of a monthly publication.
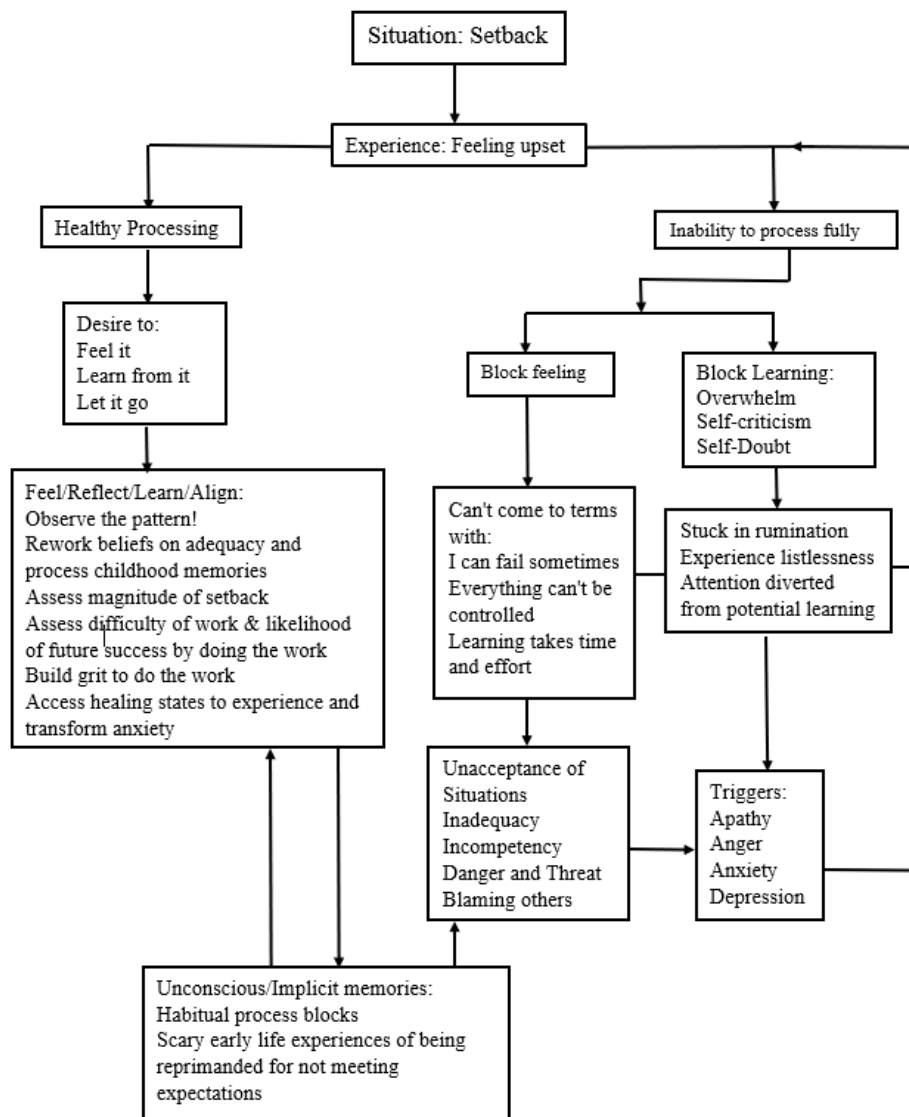
Write a paragraph in not more than 120 words, analysing the listed responses to setbacks.

The question tests the following writing LOs:

▪ convey ideas convincingly using appropriate language

- organize the content and structure the ideas logically, sequentially, cohesively
- use a range of vocabulary and sentence structure appropriate to the content and context
- use of functional language to show comparison, contrast, emphasis, conclusion etc.

GUIDANCE

Award 3 marks for content—
- Topic sentence identifying the two responses to setbacks in the concept map – ½ mark

For Instance:
Setbacks often leave one with a feeling of disappointment and sometimes even worse. / The concept chart given below displays two ways to handle setbacks, for the better or for the worse/ the two ways of processing setbacks – healthy and unhealthy.

- Any 2 points of contrast/ comparison with evidence – 2 marks

For instance:
Healthy processing helps one learn from and let go the emotions inside. On the contrary, inability to process leads to a block, self-criticism and self-doubt.
Or
An optimistic way of seeing a setback processes the ability to feel, reflect, learn and align. On the other hand, negative perspective of a failure can lead to listlessness, diverted attention, excessive rumination and unacceptance of failures.

- Concluding sentence, tied to the content of the topic sentence, showcasing a perspective/ rationalising the importance of healthy processing of setbacks encountered. – ½ mark

For instance, one might want to point to the fact that the responding to setbacks negatively leads to a vicious cycle of undesirable feelings):
It is evident that experiencing a setback leads to feelings of inadequacy and incompetency along with an unwillingness to accept situations. Responding to setbacks the positive way is empowering as it leads to success.

Note- Just listing concept map matter without evidence of analysis carries no credit.

Award 2 marks for organisation & expression –
- ½ mark—
  - ✓ Inclusion of a single paragraph organisation with a suitable topic sentence supporting sentences and a suitable concluding sentence.
No requirement of a title (because the purpose is analysis, not publication). No penalty if title is written.

- 1 mark—
  - ✓ use of appropriate functional language to show comparison/contrast & emphasis:

Comparison/ Contrast: *in contrast with, in comparison to, on the contrary, however, whereas, as opposed to, while, a striking difference, a noticeable difference, despite etc.*

Emphasis: *in other words, /especially/ specifically/ to emphasise/ to demonstrate/such as/in particular etc.*

✓ full credit 1 mark to be allotted if the functional language has been used consistently

✓ partial credit ½ mark to be allotted if the functional language has been used occasionally/sparingly

✓ No credit of marks if functional language is missing (not used at all)

FOR THE VISUALLY IMPAIRED CANDIDATES

The by-laws of some residential associations and management that ban owners and tenants from keeping pets in their apartments, are justified.

Write a paragraph to analyse the given argument.
You could think about what alternative explanations might weaken the given conclusion and include rationale / evidence that would strengthen / counter the given argument.

✓ use of appropriate functional language to agree or disagree with the premise

Agree: completely agree as it clearly points…. / Offers credible arguments to support…/ …is difficult to contradict/undeniably/ hard to disagree etc.

Disagree: Unlike…what matters is…/even though …claims that…, it stands to reason that…/fails to convince/ is overstated/ this opinion is contentious etc.

Justify: *Answer the 'why'? and use words like – because, since, due to, as a consequence of, based on and etc.*

✓ full credit 1 mark to be allotted if the functional language has been used consistently

✓ partial credit ½ mark to be allotted if the functional language has been used occasionally/sparingly

✓ No credit of marks if functional language is missing (not used at all)

▪ ½ mark—

✓ Unity of ideas in the complete paragraph with ideas arranged logically –sentences within paragraph follow expected organizational frameworks*

*[**Categorical** – in order of importance; Evaluative - a problem is introduced, and the pros and cons are weighed; **Comparative** – similarities and differences; Cause and Effect; Descriptions-from general to specific attributes]

Accuracy-

Deduct from the overall score if the error density is high as this impacts the communicative function.

✓ ½ mark for a total of 2-3 spelling and grammatical errors

✓ 1 mark for a total of more than 3 spelling and grammatical errors

ii. Letter of Enquiry	**5*1**

You are Samina Zaveri, Class X, Vadodara, Gujarat. You come across the following information on a local library's notice board.

Create Your Own Board Game Competition!

Create an educational board game, and send it to us at Teen-Toggle Games Pvt. Ltd, 307, Satija building, Colaba, Mumbai by July 2022. The top 10 winning board games will be featured on our international portal. Attractive scholarships for the winners!

You wish to participate but require more information. Write a letter to Teen-Toggle Games Pvt.Ltd in about 120 words, enquiring about rules, scholarship details and deadlines. Also enquire about specifications for solo or group entries.

Content -2   Expression-2   Accuracy -1

Value points- Content

- Reference to the source of information
- Conveying interest
- Seeking information about rules
- Enquiring about scholarship details
- Asking about defined articles
- Confirm type of entries allowed

(Any other **relevant** information)

Descriptors for Content

NOTE-Dedicated marks at a level are to be awarded only if **ALL** descriptors match. If one or more descriptors do not match, the marks are awarded at **a level lower**.

2 marks
  - ✓ All points included
  - ✓ Well-developed with sustained clarity

1½ marks
  - ✓ Almost all points incorporated
  - ✓ Reasonably well-developed

1 mark
  - ✓ Some points incorporated
  - ✓ Fair attempt at developing ideas with some impact on clarity of response

½ mark
  - ✓ Most of the points of the given task not incorporated
  - ✓ Limited awareness of task development

Expression -2 marks

Marks	Descriptors for Expression
NOTE-Dedicated marks at a level are to be awarded only if ALL descriptors match. If one or more descriptors do not match, the marks are awarded at a level lower.	

2	• Highly effective style capable of conveying the ideas convincingly with appropriate layout of a formal letter viz. addresses, salutation, subscription, and ending.
	• Carefully structured content with organised paragraphing presented cohesively.
	• Highly effective register (formal tone and vocabulary), relevant and appropriate sentences for conveying the ideas precisely and effectively.
1 ½	• Frequent clarity of expression most of the times, layout of a formal letter largely accurate.
	• Ideas generally well sequenced and related to the given topic maintaining overall cohesion of ideas.
	• Range of vocabulary is mostly relevant and conveys the overall meaning and the purpose of the writing.
1	• Inconsistent style, expression sometimes awkward, layout of a formal letter basically accurate.
	• Sequencing of ideas is somewhat clear and related to the given topic attempting to maintain a general overall cohesion.
	• Range of vocabulary is limited but manages to convey the overall meaning and the purpose of the writing.
½	• Expression unclear, layout partially followed affecting the format of the letter.
	• Poor sequencing of ideas but ideas are related to the given topic in a disjointed manner exhibiting a lack of coherence of ideas.
	• Very limited vocabulary or copying from the question.

Accuracy -1 mark

Descriptors for Accuracy

1 mark

✓ Spelling, punctuation and grammar consistently/largely accurate, with occasional minor errors, that do not impede communication.

½ mark

✓ Spelling, punctuation and grammar display some errors spread across, causing minor impediments to the message communicated.

No credit

✓ Frequent errors in spelling, punctuation and grammar, impeding communication.

3. EDITING   1*3 = 3

Q. The following paragraph has not been edited. There is one error in each line. Identify the error and write its correction against the correct blank number. Remember to underline the correction. The first one has been done for you.

	Error	Correction
Have you ever learn from a mistake you have made?	E.g. learn	<u>learnt</u>
Many shouldn't admit doing so. For those who do,	a)	
there was no need for guilt. We often make mistakes	b)	
while taking risks, but all brush them aside and learn.	c)	
With that, they may not make mistakes the next time.		

<table>
<tr><td colspan="3" align="center">ANSWERS</td></tr>
</table>

	Error	Correction
Have you ever learn from a mistake you have made?	E.g. learn	<u>learnt</u>
Many shouldn't admit doing so. For those who do,	a) shouldn't	<u>won't/don't</u>
there was no need for guilt. We often make mistakes	b) was	<u>is</u>
while taking risks, but all brush them aside and learn.	c) all	<u>some/many</u>
With that, they usually don't make mistakes the next time.		

<table>
<tr><td colspan="3" align="center">GUIDANCE</td></tr>
</table>

Award 1 mark for each correct answer

- ½ mark for identification of the error
- ½ mark for the writing of the correction

Editing is incomplete if either aspect (identification or rectification) is missing.

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4. PASSAGE COMPLETION - REPORTED SPEECH 1*2

Read the conversation between a teacher and student and complete the passage that follows.

> **Biology Teacher**: I instructed you to draw the diagram of bacteria. Why did you submit a blank sheet?
>
> **Sameer**: Sir, I had drawn the diagram of bacteria, but you can't see it because it is not visible to the naked eye.

The biology teacher had instructed Sameer to draw the diagram of bacteria and asked him (a) ……………………………………………. a blank sheet. Sameer respectfully answered (b) that he had drawn the diagram but …………………………………………………………to the naked eye.

ANSWER	GUIDANCE
(a) why he had submitted	Award 1 + 1 mark for each correct answer. **NO partial credit.**

(b) he/ the teacher couldn't see it because it is not visible	**Direct speech** **Indirect speech** (a) simple past tense → Past perfect tense (b) Past perfect tense → No change (c) fact/ universal truth → No change

SECTION C -LITERATURE (20 MARKS)

5. SHORT QUESTIONS   2*6 = 12
(ANY 6 OF 7)

Objective: This section evaluates the questions based on texts to assess interpretation, inference, extrapolation beyond the text and across the texts.

- ➢ Content -1 mark
- • Value points based on Q asked.

- ➢ Expression- 1 mark
- • Answer organised effectively/ logically (instead of a careless group of sentences strung loosely together)
- • Use of required functional language/ expressions

- ➢ No marks deducted for exceeding word limit

i. What is the significance of the Buddha's request for a handful of mustard seeds and the addition of a condition to it?   (2 marks)

VALUE POINTS	GUIDANCE
▪ mustard seeds easy to procure/ available in every household she knocked at ▪ added condition – must be procured form a house where no one had lost a child, husband, parent or friend ▪ made Kisa Gotami realize the universal nature of death	The question indicates that the examiner is familiar with the Buddha's request and hence that requires no elaboration. The question requires an answer to: Why - mustard seeds with an added condition? What did the Buddha want Kisa Gotami to realize? **Content -** Award **1 mark** for full explanation of the two strands. Award **½ mark** for partial explanation. **Expression –** **1 mark when both aspects included** ✓ Answer organised effectively ✓ usage of words supporting the reasoning/ expression of significance - since, because, therefore, so that etc. **½ mark when either aspect is missing**

	Deduct ½ mark from the overall score if the error density is high (more than a total of 2 spellings and grammatical errors).

ii. Justify how 'Animals' by Walt Whitman is a criticism of mankind and its ways.

(2 marks)

VALUE POINTS	GUIDANCE
▪ human beings seem to have dropped/ shed their values/virtues/attributes ▪ human society blemished by ego, hypocrisy, hatred, materialism, fake display ▪ profusion of complaints, race for greed and lack of contentment ▪ the poet wishes to leave the human world and join animals as he finds them better than humans (a testimony)	The question indicates that the examiner knows that the poet appreciates the animals for the display of virtues and hence that requires no elaboration. The question requires an explanation of criticism of mankind and evidence to justify the same. **Content -** Award **1 mark** for full explanation of the two strands-criticism & evidence Award **½ mark** for partial explanation. **Expression –** **1 mark when both aspects included** ✓ Answer organised effectively ✓ usage of words supporting explanation & justification (that's why, because, therefore etc.) **½ mark when either aspect is missing** Deduct ½ mark from the overall score if the error density is high (more than a total of 2 spellings and grammatical errors).

iii. Comment on the tone of the speaker when she says 'Will you please look at me when I'm speaking to you, Amanda!'. (2 marks)

VALUE POINTS	GUIDANCE

Tone
    ▪ exasperated
    ▪ irritated
    ▪ frustrated
    ▪ annoyed
Or words with similar meanings
 	
Illustration- Exclamation mark, suggestive of the inherent emotion
	The question indicates that the examiner knows that Amanda is being questioned and she chooses not to respond and hence that requires no elaboration.
	The question needs an answer to the tone of the speaker for the line mentioned in the question.
	
	Content -
	Award **1 mark** for full explanation of the identification of the tone, supported by reference to the supporting evidence.
	Award **½ mark** for partial explanation.
	
	Expression –

	1 mark when both aspects included
	✓ Answer organised effectively
	✓ usage of words supporting illustration (as supported by, as illustrated by, as can be seen from etc.)
	½ mark when either aspect is missing
	Deduct ½ mark from the overall score if the error density is high (more than a total of 2 spellings and grammatical errors).

iv. A ballad includes the telling of a tale as well as a surprise ending. Using evidence from the poem, explain how these features are included in 'The Tale of Custard the Dragon'. (2 marks)

VALUE POINTS	GUIDANCE
▪ Tale: The poem tells the story of Custard, the dragon (setting, characters, rising action, climax, resolution). ▪ portrays his life with Belinda and the other pets where he is considered a coward ▪ Surprise ending: The end of the poem shows how Custard rose to the occasion; gobbled the pirate and proved his bravery.	The question indicates that the examiner knows the elements of a ballad and that the poem has a few and hence that requires no elaboration. The question needs an answer identifying the features that match to the listed aspects of a ballad **Content -** Award **1 mark** for full explanation of the two strands (Tale and Surprise ending). Award **½ mark** for partial explanation. **Expression –** **1 mark when both aspects included** ✓ Answer organised effectively ✓ usage of words linking ballad to evidence from the poem (similarly, just as etc.) **½ mark when either aspect is missing** Deduct ½ mark from the overall score if the error density is high (more than a total of 2 spellings and grammatical errors).

v. Which two issues about himself convinced Lomov of his decision to get married? (2 marks)

VALUE POINTS	GUIDANCE
▪ He is expected to marry and cannot stay unmarried ▪ He ought to lead a quiet, settled and regular life at his age('critical age'/ thirty-five). ▪ He needs a partner as he suffers from palpitations and is always getting upset.	The question needs an answer to the points he thought about himself. Those favouring Natalaya are not relevant here. **Content -** Award **1 mark** for any 2 relevant points Award **½ mark** for any one point **Expression –** **1 mark when both aspects included** ✓ Answer organised effectively

	✓ usage of words for listing/ order (primarily/ To begin with/ apart from this/ In addition to this/ Also/ secondly etc.) **½ mark when either aspect is missing** Deduct ½ mark from the overall score if the error density is high (more than a total of 2 spellings and grammatical errors).

vi. Briefly state how Matilda invited 'a dreadful life of necessity' into her family. (2 marks)

VALUE POINTS	GUIDANCE
▪ Matilda's extreme self-indulgence--dreams of a luxurious life, riches and jewellery ▪ Doesn't pay heed to the advice of wearing natural flowers-- borrows the necklace-- loses it ▪ In paying for the necklace invited a horrible life of necessity and deprivation/ a life that resulted in a hand-to-mouth existence OR any other **relevant** point	The question does not require the summary of the story but needs an answer only with relevant reference to Matilda's extreme self-indulgence and loss of the necklace. **Content -** Award **1 mark** for full explanation of the two strands Award **½ mark** for partial explanation. **Expression –** **1 mark when both aspects included** ✓ Answer organised effectively ✓ usage of words for elaboration and cause-effect ✓ **½ mark when either aspect is missing** Deduct ½ mark from the overall score if the error density is high (more than a total of 2 spellings and grammatical errors).

vii. The hack driver successfully trapped the narrator in his web of words. Comment.
(2 marks)

VALUE POINTS	GUIDANCE
▪ Hack driver – a conversationalist, cheerful, friendly, open ▪ befriends the narrator who trusts him for everything he says and does ▪ asks the narrator to stay behind, himself makes inquiries, offers home-made lunch, mints money ▪ befools and outwits the narrator in the guise of help	The answer needs to showcase the hack driver's clever and crafty words with evidence of the narrator being conned/tricked **Content -** Award **1 mark** for full explanation of the two strands Award **½ mark** for partial explanation. **Expression –** **1 mark when both aspects included** ✓ Answer organised effectively ✓ usage of words for description and substantiation ✓ **½ mark when either aspect is missing**

	Deduct ½ mark from the overall score if the error density is high (more than a total of 2 spellings and grammatical errors).

7. LONG QUESTIONS 4*2
ANY 2 OF 3
GUIDANCE – Content 2 marks; Expression & Accuracy 2 marks

Note-
- ✓ Use the given descriptors to mark the LQs for CONTENT (refer to value points) and EXPRESSION
- ✓ If the response does not justify **all** points of a level, the response is marked down.

DESCRIPTORS FOR CONTENT	MARK
• Sustained, clear, well-developed personal response to the task • Well-developed and justified arguments/evidence for the characters	**2**
• Largely, a reasonably well-developed personal response to the task • Clear justification with arguments/evidence for the characters	**1 ½**
• Fairly competent personal response to the task • Clear justification with restricted arguments/evidence for the characters	**1**
• Limited awareness of the task • Limited justification or relevant arguments/evidence for the characters	**½**
DESCRIPTORS FOR EXPRESSION (Coherence & Cohesion)	**MARKS**
• Carefully structured content with a beginning, middle and end with highly relevant ideas presented cohesively. • Highly effective vocabulary usage, relevant and appropriate sentences for conveying the ideas precisely and effectively. • Spelling, punctuation and grammar are almost always accurate	**2**
• Ideas generally well sequenced and related to the given topic maintaining overall cohesion of ideas. • Range of vocabulary suffices in large parts to convey the overall idea and meaning • Spelling, punctuation and grammar mostly accurate, with occasional minor errors but does not impede communication	**1 ½**
• Ideas sequenced fairly well and related to the given topic, sometimes maintaining cohesion of ideas. • Range of vocabulary is limited and conveys a basic idea of the overall meaning • Spelling, punctuation and grammar fairly accurate, with occasional minor errors but does not impede communication	**1**

	• Poor sequencing of ideas; though related to the given topic, expressed in a disjointed manner exhibiting a lack of coherence of ideas. • Very limited expected/ topical vocabulary as per question asked • A lot of errors in spelling, punctuation and grammar that impede communication.	½

i. Parents play a crucial role in the upbringing of their children. Critically examine the parents of Bholi and Ebright, highlighting their impact on their children's lives. (4 marks)

VALUE POINTS

Students may draw upon the following:

▪ **Introductory sentence:**
✓ crucial and indelible role played by parents
✓ parents influence their children both implicitly (indirectly) and explicitly (directly)
✓ are role models, first teachers, friends, companions, guides

▪ **Critical examination (any 3-4)**
✓ Richard H. Ebright's mother- loving, caring, understanding, a friend, a companion
✓ filled the vacuum in Ebright's life in his father's absence
✓ invested time and energy in his upbringing which made him see heights of success
✓ Bholi's parents – uncaring, indifferent, biased, insensitive, had a patriarchal mindset
✓ traditional outlook- did not believe in the education of girls, totally indifferent to Bholi and her needs, neglected her
✓ did not bother to groom her (oil her hair, give her good clothes to wear)
✓ sent her to school not to educate her but to save their own face
✓ despite their prosperity, they left Bholi to her own misery, worst was when they decided to marry her off to Bishamber
(Accept any other **relevant** content point that lends itself to critical examination)

▪ **Concluding thought:**
✓ The contribution and companionship of parents cannot be denied. Love, care, and guidance from parents makes a difference, sculpts children and shapes their future.

ii. Pranjol and Rajvir discuss their next vacation destination. They shortlist Coorg and Goa. Rajvir is keen on Coorg and tries to convince Pranjol. Develop a conversation between the two, based on your understanding of *Glimpses of India*. (4 marks)

Specimen answer to assist content points

Rajvir: Hey Pranjol! I think we should be visiting Coorg. It is a beautiful place with coffee plantations. I can smell the aroma already!

Pranjol: I gave you the opportunity to explore a tea plantation last year, in Assam; I want to…

Rajvir: There is a lot more to do in Coorg than smelling the coffee! The place has rainforests, so the megafauna will be worth watching. Not just this, Coorg provides opportunities to indulge in adventure sports like river rafting, rappelling, mountain biking, to name a few.

Pranjol: That sounds interesting, but I would prefer some serene moments too, away from this post-pandemic hustle-bustle.

Rajvir: Oh! The answer is Coorg again!

Pranjol: Oh, come on! You can't be serious…

Rajvir: Believe me, I am. Coorg is the place. It has beautiful natural walking trails and the Brahmagiri hills offer a panoramic view. I read that the place has the largest Tibetan settlement, so the environment will reflect peace and spirituality, I'm sure.

Pranjol: Have to say, you've presented a fine case in favour of Coorg and convinced me. Let's plan to leave for Coorg next Wednesday!

- The dialogues should be based on understanding of the chapter. There should be arguments from Pranjol showing he requires more to get convinced. Rajvir, being an explorer must be able to give an interesting account about Coorg to convince Pranjol. The persuasive element using examples from text descriptions need to be showcased.

Apart from the above the following could be added:
- Coorg is culturally rich, the people there are brave and their hospitality is great.
- Some people in Coorg are the only ones allowed to keep firearms without license. It will be fun meeting such bravehearts.
- Rainforests can be visited for flora and fauna.
- There flows the river Kaveri and sitting by the river could be peaceful.

---

iii. Farce is a kind of comedy in which the situations and dialogues are ridiculous, exaggerated and even absurd. Evaluate the play 'The Proposal' as a farce.   (4 marks)

VALUE POINTS

➢ **Introductory sentence:**
- farcical characters, their ridiculous and odd behaviour, unlikely and exaggerated situations (profuse in the play)

➢ **Evaluation: (any 3-4)**
- humor in the play, improbable situations, childish behavior of the characters (making a mountain out of a molehill), arguments and quarrels
- hurling of accusations and insults without a second thought
- resolving the differences and fighting again over another topic
- Lomov's nerve problems and other ailments
- Chubukov's theatrical statements
- Natalaya's impulsive and belligerent remarks

(Any other **relevant** evidence)

➢ **Concluding Statement:**
- the manner in which the final proposal is made amidst all the chaos, makes the play a farce

निर्धारित समय- 2 घंटे   **पूर्णांक-40**

सामान्य निर्देश:

(1) इस प्रश्नपत्र में दो खंड हैं- खंड 'क' और ख'।

(2) सभी प्रश्न अनिवार्य हैं, यथासंभव सभी प्रश्नों के उत्तर क्रमानुसार ही लिखिए।

(3) लेखन कार्य में स्वच्छता का विशेष ध्यान रखिए।

(4) खंड 'क' में कुल 3 प्रश्न हैं। दिए गए निर्देशों का पालन करते हुए इनके उपप्रश्नों के उत्तर दीजिए।

(5) खंड 'ख' में कुल 4 प्रश्न हैं, सभी प्रश्नों के साथ विकल्प भी दिए गए हैं। निर्देशानुसार विकल्प का ध्यान रखते हुए चारों प्रश्नों के उत्तर दीजिए।

<div align="center">खंड 'क' (पाठ्य पुस्तक व पूरक पाठ्य पुस्तक)   20 अंक</div>

प्रश्न 1. निम्नलिखित प्रश्नों के उत्तर 25-30 शब्दों में लिखिए-   2×4=8

(क) 'फ़ादर कामिल बुल्के संकल्प से संन्यासी थे, मन से नहीं।' लेखक के इस कथन के आधार पर सिद्ध कीजिए कि फ़ादर का जीवन परंपरागत संन्यासियों से किस प्रकार अलग था?

(ख) फ़ादर की उपस्थिति लेखक को देवदार की छाया के समान क्यों लगती थी? पाठ के आधार पर सिद्ध कीजिए।

(ग) क्या सनक सकारात्मक भी हो सकती है? सकारात्मक सनक की जीवन में क्या भूमिका हो सकती है? सटीक उदाहरणों द्वारा अपने विचार प्रकट कीजिए।

(घ) 'लखनवी अंदाज़' शीर्षक की सार्थकता तर्क सहित सिद्ध कीजिए।

प्रश्न 2. निम्नलिखित प्रश्नों में से किन्हीं <u>तीन</u> प्रश्नों के उत्तर 25-30 शब्दों में लिखिए-   2×3=6

(क) 'उत्साह' कविता के शीर्षक की सार्थकता तर्क सहित स्पष्ट कीजिए।

(ख) इस सत्र में पढ़ी गई किस कविता में फागुन के प्राकृतिक सौंदर्य का वर्णन किया गया है? उसे अपने शब्दों में व्यक्त कीजिए।

(ग) इस सत्र में पढ़ी गई किस कविता में कोरी भावुकता न होकर जीवन में संचित किए अनुभवों की अनिवार्य सीख है? कविता के नाम के साथ कथन की पुष्टि के लिए उपयुक्त तर्क भी प्रस्तुत कीजिए।

(घ) इस सत्र में पढ़ी गई किस कविता की अंतिम पंक्तियाँ आपको प्रभावित करती हैं और क्यों? तर्क सहित स्पष्ट कीजिए।

प्रश्न 3. निम्नलिखित प्रश्नों में से किन्हीं दो प्रश्नों के उत्तर लगभग 60 शब्दों में लिखिए-   3×2=6

(क) 'माता का अंचल' पाठ में वर्णित बचपन और आज के बचपन में क्या अंतर है? क्या इस अंतर का प्रभाव दोनों बचपनों के जीवन मूल्यों पर पड़ा है? तर्क सहित स्पष्ट कीजिए।

(ख) 'जॉर्ज पंचम की नाक' पाठ में निहित व्यंग्य को स्पष्ट करते हुए बताइए कि मानसिक पराधीनता से मुक्ति पाना क्यों आवश्यक है?

(ग) नदी, फूलों, वादियों और झरनों के स्वर्गिक सौंदर्य के बीच किन दृश्यों ने लेखिका के हृदय को झकझोर दिया? 'साना-साना हाथ जोड़ि' पाठ के आधार पर उत्तर दीजिए।

<div align="center">

खंड 'ख' (रचनात्मक लेखन खंड)   **(20 अंक)**

</div>

4. निम्नलिखित अनुच्छेदों में से किसी एक विषय पर संकेत-बिंदुओं के आधार पर लगभग 150 शब्दों में अनुच्छेद लिखिए-   (5)

(क) कोरोना काल और ऑनलाइन पढ़ाई
संकेत-बिंदु- भूमिका, लॉकडाउन की घोषणा, ऑनलाइन कक्षाओं का आरंभ, इसके लाभ, ऑफ़लाइन कक्षाओं से तुलना, तकनीकी से जुड़ी बाधाएँ, निष्कर्ष

(ख) मानव और प्राकृतिक आपदाएँ
संकेत-बिंदु- भूमिका, प्रकृति और मानव का नाता, मानव द्वारा बिना सोचे-विचारे प्रकृति का दोहन, कारण एवं प्रभाव, प्रकृति के रौद्र रूप के लिए दोषी कौन, निष्कर्ष

(ग) सड़क सुरक्षा : जीवन रक्षा

संकेत-बिंदु- भूमिका, सड़क सुरक्षा से जुड़े कुछ प्रमुख नियम, सड़क सुरक्षा के नियमों की अनदेखी से होने वाली हानियाँ, इन्हें अपनाने के लाभ, निष्कर्ष

5. आपकी चचेरी दीदी कॉलेज में दाख़िला लेना चाहती हैं, किंतु आपके चाचा जी आगे की पढ़ाई न करवाकर उनकी शादी करवाना चाहते हैं। इस बारे में अपने चाचा जी को समझाते हुए लगभग 120 शब्दों में एक पत्र लिखिए। (5)

अथवा

आपके क्षेत्र में सरकारी राशन की दुकान का संचालक ग़रीबों के लिए आए अनाज की कालाबाज़ारी करता है और कुछ कहने पर उन्हें धमकाता है। उसकी शिकायत करने हेतु लगभग 120 शब्दों में ज़िलाधिकारी को पत्र लिखिए।

6. (क) आपको अपना फ़्लैट किराए पर देना है। इसके लिए लगभग 50 शब्दों में एक आकर्षक विज्ञापन तैयार कीजिए। (2.5)

अथवा

आपकी दीदी ने संगीत कला केंद्र खोला है। इसके प्रचार-प्रसार के लिए लगभग 50 शब्दों में एक आकर्षक विज्ञापन तैयार कीजिए।

(ख) सामाजिक संस्था 'सवेरा' के नशा-मुक्ति जागरूकता अभियान के लिए लगभग 50 शब्दों में एक आकर्षक विज्ञापन तैयार कीजिए। (2.5)

अथवा

बहुत कम क़ीमत में स्मार्ट फ़ोन बनाने वाली कंपनी के लिए लगभग 50 शब्दों में एक आकर्षक विज्ञापन तैयार कीजिए।

7. (क) राष्ट्रीय प्रतिभा खोज परीक्षा (एनटीएसई) में पहला स्थान प्राप्त करने पर अपने मित्र को लगभग 40 शब्दों में शुभकामना संदेश लिखिए। (2.5)

अथवा

साहसिक कार्य के लिए बाल वीरता पुरस्कार से सम्मानित होने वाले अपने मित्र को लगभग 40 शब्दों में बधाई संदेश लिखिए।

(ख) केरल के निवासी अपने मित्र को ओणम के अवसर पर लगभग 40 शब्दों में एक बधाई संदेश लिखिए। (2.5)

अथवा

भैया-भाभी की पहली वैवाहिक वर्षगाँठ पर लगभग 40 शब्दों में एक शुभकामना संदेश लिखिए।

निर्धारित समय- 2 घंटे   **पूर्णांक – 40**

सामान्य निर्देश :

(1) अंक योजना का उद्देश्य मूल्यांकन को अधिकाधिक वस्तुनिष्ठ बनाना है। इस प्रश्नपत्र में वर्णनात्मक प्रश्न

हैं। अत: अंक योजना में दिए गए उत्तर-बिंदु अंतिम नहीं हैं। ये सुझावात्मक एवं सांकेतिक हैं।

(2) यदि परीक्षार्थी इन सांकेतिक बिंदुओं से भिन्न, किंतु उपयुक्त उत्तर दे, तो उसे अंक दिए जाएँ।

(3) समान त्रुटियों के लिए स्थान-स्थान पर अंक न काटे जाएँ।

(4) गुणवत्तापूर्ण, सटीक उत्तर पर शत प्रतिशत अंक देने में किसी प्रकार का संकोच न किया जाए।

(5) मूल्यांकन में 0 से 100 प्रतिशत अंकों का पैमाना स्वीकार्य है।

(6) मूल्यांकन कार्य निजी व्याख्या के अनुसार नहीं, बल्कि अंक योजना में निर्दिष्ट निर्देशानुसार ही किया जाए।

प्र.क्रम. सं.	खंड-क (वर्णनात्मक प्रश्नों के संभावित संकेत)		अंक विभाजन
	उत्तर		
प्रश्न 1.	**प्रश्नों के उत्तरों की शब्द-सीमा 25-30 शब्द** (शब्द-सीमा का ध्यान रखते हुए उत्तरों में किन्हीं दो बिंदुओं का उल्लेख अपेक्षित)		2×4=8
(क)	• संन्यासी के परंपरागत स्वरूप में मोह त्यागकर सामान्यतः समाज से पलायन कर जाने की प्रवृत्ति • फ़ादर कामिल बुल्के द्वारा परंपरागत संन्यासी प्रवृति से अलग नई परंपरा की स्थापना • कॉलेज में अध्ययन एवं अध्यापन...प्रियजनों के प्रति मोह, प्रेम व अपनत्व • प्रियजनों के घर समय-समय पर आना-जाना, संकट के समय सहानुभूति रख उन्हें धैर्य बँधाना आदि		2 अंक
(ख)	• मानवीय गुणों से परिपूर्ण व्यक्तित्व व सबके लिए कल्याण की कामना • परम हितैषी के समान लोगों को आशीर्वचनों से सराबोर कर देना • भरपूर वात्सल्य से भरी नीली आँखों में तैरता अपनापन • उपर्युक्त कारणों से फ़ादर की उपस्थिति देवदार की छाया जैसी लगना		2 अंक

(ग)	• सनक अर्थात् धुन का पक्का होना, लगन, मेहनत तथा ईमानदारी से काम करने की सनक सकारात्मक सनक • वैज्ञानिकों, महापुरुषों तथा समाज सेवियों के उदाहरण • आज़ादी के मतवाले क्रांतिकारी, सामाजिक बुराइयों को समूल नष्ट करने की ठानने वाले समाज सुधारक • पहाड़ काटकर रास्ता बनाने वाले दशरथ माँझी जैसे सकारात्मक सनक वाले व्यक्तियों के उदाहरण...	2 अंक
(घ)	• विषयवस्तु से शीर्षक के पूरी तरह मेल खाने में ही शीर्षक की सार्थकता • 'लखनवी अंदाज़' शीर्षक की कथानक से पूर्णत: संबद्धता • झूठी नवाबी शान, दिखावा, सनक, नज़ाकत आदि का वर्णन • लेखक को दिखाने के लिए खीरे की फाँके सूँघकर खिड़की से बाहर फेंकने वाली घटना का उल्लेख आदि	2 अंक
प्रश्न 2.	**दिए गए चार प्रश्नों में से किन्हीं <u>तीन</u> प्रश्नों की शब्द-सीमा 25-30 शब्द** (शब्द-सीमा का ध्यान रखते हुए उत्तरों में किन्हीं दो बिंदुओं का उल्लेख अपेक्षित)	**2×3=6**
(क)	• 'उत्साह' कविता एक आह्वान गीत • कविता समाज में क्रांति और उत्साह की भावना का संचार करने के उद्देश्यपरक सृजन से प्रेरित • बादल की गर्जना व क्रांति के माध्यम से लोगों के जीवन में उत्साह का संचार, प्रकृति में नव-जीवन का समावेश, क्रांति-चेतना का शंखनाद आदि शीर्षक की सार्थकता के आधार	2 अंक
(ख)	• निराला कृत 'अट नहीं रही है' कविता में चित्रित फागुन के अप्रतिम सौंदर्य की अपने शब्दों में कलात्मक अभिव्यक्ति • फागुन की सर्वव्यापक आभा एवं उसके अद्भुत सौंदर्य की व्यापकता का उल्लेख • प्रकृति में सौंदर्य व उल्लास का समावेश, कण-कण का फागुन के रंग में रँग जाना आदि	2 अंक

(ग)	• ऋतुराज कृत 'कन्यादान' कविता...विदाई के समय माँ की केवल भावुकता का प्रदर्शन नहीं • जीवन में संचित अनुभव पर आधारित उपदेश- सौंदर्य व वस्त्राभूषणों पर न रीझना, मानसिक रूप से दृढ़ बनना आदि • स्वयं को किसी के सामने लड़की जैसा न दिखाने आदि की व्यावहारिक सीख	2 अंक
(घ)	**कन्यादान**- 'आग रोटियाँ.............जीवन के।।' **उत्साह**- 'विकल-विकल......................गरजो।।' **अट नहीं रही है**- 'कहीं पड़ी है...........पट नहीं रही है।।' इनमें से किसी एक कविता की उल्लिखित अंतिम काव्य-पंक्तियों के प्रभावित करने व प्रिय होने के कारणों का तर्क सहित उल्लेख	2 अंक
प्रश्न 3.	दिए गए तीन प्रश्नों में से किन्हीं <u>दो</u> प्रश्नों की शब्द-सीमा लगभग 60 शब्द (शब्द-सीमा का ध्यान रखते हुए उत्तरों में दो-तीन बिंदुओं का उल्लेख अपेक्षित)	3×2=6
(क)	• खेल-खिलौनों व खेलने के स्थान में अंतर, पहले खेत-खलिहानों व खुले में खेलने की जगह बचपन का अब घर या अपने कमरे तक सीमित हो जाना • पहले बचपन को संयुक्त परिवार का प्रेम व समय मिलना, अब एकल परिवार में कामकाजी माँ-बाप के जाने के बाद एकाकीपन • पहले बड़ों के प्रेम के साथ-साथ संस्कार मिलना, अब माता-पिता की व्यस्तता से संस्कारों में गिरावट आना	3 अंक
(ख)	• सत्ता से जुड़े लोगों का मानसिक पराधीनता का शिकार होना • सरकारी तंत्र में नीचे से ऊपर तक भ्रष्टाचार व्याप्त होना • देश के सच्चे विकास व आम जनता के सच्चे सम्मान व स्वाभिमान की रक्षा के लिए मानसिक पराधीनता से मुक्ति पाना आवश्यक	3 अंक

(ग)	• आजीविका के लिए स्थानीय महिलाओं का अपनी पीठ पर बच्चे लादकर मार्ग बनाने के लिए पत्थर तोड़ने की विवशता • उस प्राकृतिक सौंदर्य के बीच भूख, दैन्य और जीवित रहने के लिए लड़ी जाने वाली जीवन की जंग • संवेदनाओं को झकझोर देने वाली अनुभूति	3 अंक
	खंड-ख (रचनात्मक लेखन पर आधारित प्रश्नों के मूल्यांकन बिंदु)	

प्रश्न 4.	दिए गए तीन अनुच्छेदों में से किसी एक विषय पर दिए गए संकेत-बिंदुओं के आधार पर लगभग 150 शब्दों में अनुच्छेद लेखन-
	    भूमिका- 1 अंक
	    विषयवस्तु- 3 अंक
	    भाषा- 1 अंक
		5×1=5

प्रश्न 5.	दिए गए दो पत्रों में से किसी एक विषय पर 120 शब्दों में पत्र लेखन-
	    आरंभ तथा अंत की औपचरिकताएँ- 1 अंक
	    विषयवस्तु- 3 अंक
	    भाषा- 1 अंक
		5×1=5

प्रश्न 6.	6 क और ख प्रश्नों में दिए गए दो-दो विषयों में से एक-एक विज्ञापन लगभग 50 शब्दों में (2.5 अंक के विज्ञापन की जाँच के लिए अंक विभाजन)
	    विषयवस्तु- 1 अंक
	    प्रस्तुति- 1 अंक
	    भाषा- 1/2 अंक
		2.5×2=5

प्रश्न 7.	7 क और ख प्रश्नों में दिए गए दो-दो विषयों में से एक-एक संदेश लगभग 40 शब्दों में (2.5 अंक के संदेश लेखन की जाँच के लिए अंक विभाजन)
	    रचनात्मक प्रस्तुति- 1 अंक
	    विषयवस्तु- 1 अंक
	    भाषा- 1/2 अंक
		2.5×2=5

Sample Question Paper
Mathematics- Basic (241)
Class- X, Session: 2021-22
TERM II

Time Allowed: 2 hours   **Maximum Marks: 40**

General Instructions:

1. The question paper consists of 14 questions divided into 3 sections A, B, C.
2. Section A comprises of 6 questions of 2 marks each. Internal choice has been provided in two questions.
3. Section B comprises of 4 questions of 3 marks each. Internal choice has been provided in one question.
4. Section C comprises of 4 questions of 4 marks each. An internal choice has been provided in one question. It contains two case study based questions.

Q.No.	SECTION A	MARKS
1	Find the roots of the quadratic equation $3x^2 - 7x - 6 = 0$. **OR** Find the values of k for which the quadratic equation $3x^2 + kx + 3 = 0$ has real and equal roots.	2
2	Three cubes each of volume 64cm^3 are joined end to end to form a cuboid. Find the total surface area of the cuboid so formed?	2
3	An inter house cricket match was organized by a school. Distribution of runs made by the students is given below. Find the median runs scored.	2

Runs scored	0-20	20-40	40-60	60-80	80-100
Number of students	4	6	5	3	4

Q.No.		MARKS
4	Find the common difference of the AP 4,9,14,… If the first term changes to 6 and the common difference remains the same then write the new AP.	2
5	The mode of the following frequency distribution is 38. Find the value of x.	2

Class Interval	0-10	10-20	20-30	30-40	40-50	50-60	60-70
Frequency	7	9	12	16	x	6	11

Q.No.		MARKS
6	XY and MN are the tangents drawn at the end points of the diameter DE of the circle with centre O. Prove that XY ‖ MN.	2

<p style="text-align:center"><u>OR</u></p>

In the given figure, a circle is inscribed in the quadrilateral ABCD. Given AB=6cm, BC=7cm and CD=4cm. Find AD.
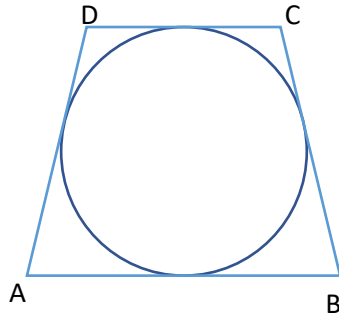
Section-B

7	An AP 5, 8, 11…has 40 terms. Find the last term. Also find the sum of the last 10 terms.	3
8	A tree is broken due to the storm in such a way that the top of the tree touches the ground and makes an angle of 30^0 with the ground. Length of the broken upper part of the tree is 8 meters. Find the height of the tree before it was broken. **OR** Two poles of equal height are standing opposite each other on either side of the road 80m wide. From a point between them on the road the angles of elevation of the top of the two poles are respectively 60^0 and 30^0. Find the distance of the point from the two poles.	3
9	PA and PB are the tangents drawn to a circle with centre O. If PA= 6 cm and $\angle$ APB=60^0, then find the length of the chord AB. 	3
10	The sum of the squares of three positive numbers that are consecutive multiples of 5 is 725. Find the three numbers.	3
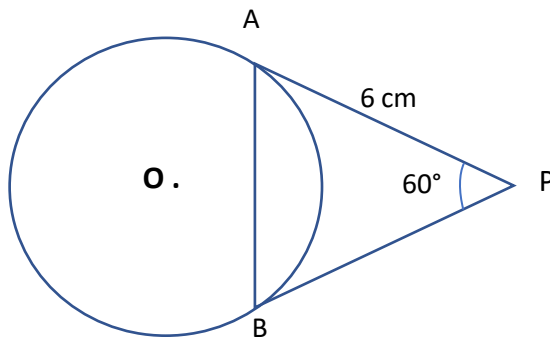
Section-C

| 11 | Construct two concentric circles of radii 3cm and 7cm. Draw two tangents to the smaller circle from a point P which lies on the bigger circle.<p style="text-align:center">**OR**</p>Draw a pair of tangents to a circle of radius 6cm which are inclined to each other at an angle of 60^0. Also find the length of the tangent. | 4 |

12	The following age wise chart of 300 passengers flying from Delhi to Pune is prepared by the Airlines staff.	4

Age	Less than 10	Less than 20	Less than 30	Less than 40	Less than 50	Less than 60	Less than 70	Less than 80
Number of passengers	14	44	82	134	184	245	287	300

Find the mean age of the passengers.

13	A lighthouse is a tall tower with light near the top. These are often built on islands, coasts or on cliffs. Lighthouses on water surface act as a navigational aid to the mariners and send warning to boats and ships for dangers. Initially wood, coal would be used as illuminators. Gradually it was replaced by candles, lanterns, electric lights. Nowadays they are run by machines and remote monitoring.	

Prongs Reef lighthouse of Mumbai was constructed in 1874-75. It is approximately 40 meters high and its beam can be seen at a distance of 30 kilometres. A ship and a boat are coming towards the lighthouse from opposite directions. Angles of depression of flash light from the lighthouse to the boat and the ship are 30^0 and 60^0 respectively.

i) Which of the two, boat or the ship is nearer to the light house. Find its distance from the lighthouse? — 2

ii) Find the time taken by the boat to reach the light house if it is moving at the rate of 20 km per hour. — 2

14	Krishnanagar is a small town in Nadia District of West Bengal. Krishnanagar clay dolls are unique in their realism and quality of their finish. They are created by modelling coils of clay over a metal frame. The figures are painted in natural colours and their hair is made either by sheep's wool or jute. Artisans make models starting from fruits, animals, God, goddess, farmer, fisherman, weavers to Donald Duck and present comic characters. These creations are displayed in different national and international museums.	

Here are a few images (not to scale) of some clay dolls of Krishnanagar.

Doll-1   Doll-2   Doll-3   Doll-4

The ratio of diameters of red spherical apples in Doll-1 to that of spherical oranges in Doll-2 is 2:3. In Doll-3, male doll of blue colour has cylindrical body and a spherical head. The spherical head touches the cylindrical body. The radius of both the spherical head and the cylindrical body is 3cm and the height of the cylindrical body is 8cm. Based on the above information answer the following questions:

i)   What is the ratio of the surface areas of red spherical apples in Doll-1 to that of spherical oranges in Doll-2.?

2

ii)   The blue doll of Doll-3 is melted and its clay is used to make the cylindrical drum of Doll-4. If the radius of the drum is also 3cm, find the height of the drum.

2

Marking Scheme
Mathematics –Basic(241)
Class- X Session- 2021-22
TERM II

Q.N.	HINTS/SOLUTION	Marks
1	$3x^2 - 7x - 6 = 0$ $\Rightarrow 3x^2 - 9x + 2x - 6 = 0$ $\Rightarrow 3x(x - 3) + 2(x - 3) = 0$ $\Rightarrow (x - 3)(3x + 2) = 0$ $\therefore x = 3, -\dfrac{2}{3}$ **OR** Since the roots are real and equal, $\therefore D = b^2 - 4ac = 0$ $\Rightarrow k^2 - 4 \times 3 \times 3 = 0$ $(\because a = 3, b = k, c = 3)$ $\Rightarrow k^2 = 36$ $\Rightarrow k = 6 \; or \; -6$	1/2 1/2 1 1 1/2 +1/2
2	Let l be the side of the cube and L, B, H be the dimensions of the cuboid Since $l^3 = 64 \; cm^3 \therefore l = 4 \; cm$ Total surface area of cuboid is $2[LB + BH + HL]$, Where L=12, B=4 and H=4 $= 2(12 \times 4 + 4 \times 4 + 4 \times 12) \; cm^2 = 224 cm^2$	1/2 1/2 1
3	<table><tr><td>Runs scored</td><td>Frequency</td><td>Cumulative Frequency</td></tr><tr><td>0-20</td><td>4</td><td>4</td></tr><tr><td>20-40</td><td>6</td><td>10</td></tr><tr><td>40-60</td><td>5</td><td>15</td></tr><tr><td>60-80</td><td>3</td><td>18</td></tr><tr><td>80-100</td><td>4</td><td>22</td></tr></table> Total frequency (N) = 22 $\dfrac{N}{2}$ = 11; So 40-60 is the median class. Median = $l + \dfrac{\left(\frac{N}{2}\right) - cf}{f} \times h$ $= 40 + \dfrac{11-10}{5}$ x 20 $= 44$ runs	1/2 1/2 1/2 1/2
4	The common difference is 9 - 4=5 If the first term is 6 and common difference is 5, then new AP is, 6, 6+5, 6+10… =6,11,16….	1 1
5	$\because$ Mode = 38. $\therefore$ The modal class is 30-40. Mode = $l + \dfrac{f_1 - f_0}{2f_1 - f_0 - f_2} \times h$	1/2 1/2

$$=30 + \frac{16-12}{32-12-x} \times 10 = 38$$

$$\frac{4}{20-x} \times 10 = 8$$

8(20-x) = 40

20-x= 5

X= 15

6
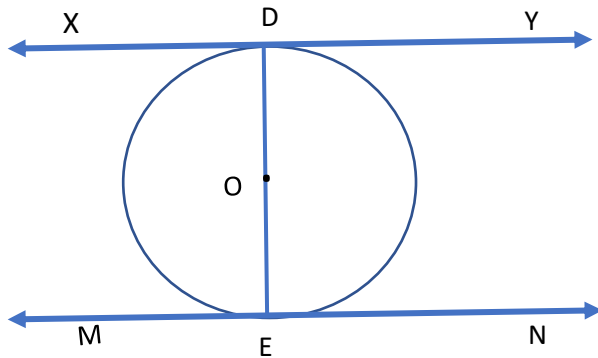
∵XY is the tangent to the circle at the point D

∴ OD ⊥ XY ⇒ ∠ODX = 90⁰ ⇒ ∠EDX = 90⁰

Also, MN is the tangent to the circle at E

∴ OE ⊥ MN⇒ ∠OEN = 90⁰ ⇒ ∠DEN = 90⁰

⇒ ∠EDX = ∠DEN (*each* 90⁰).

which are alternate interior angles.

∴ XY ∥ MN

OR

∵Tangent segments drawn from
an external point to a circle are equal

∴ BP=BQ
  CR=CQ
  DR=DS
  AP=AS

⇒BP+CR+DR+AP = BQ+CQ+DS+AS

⇒ AB+DC = BC+AD

∴ AD= 10-7= 3 cm
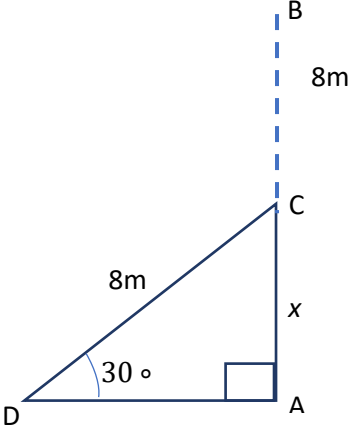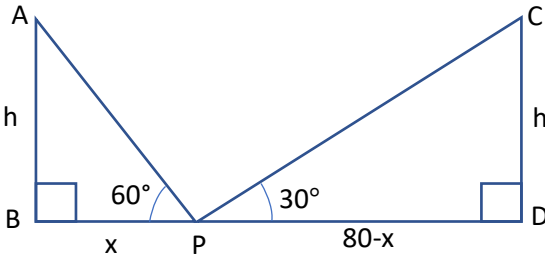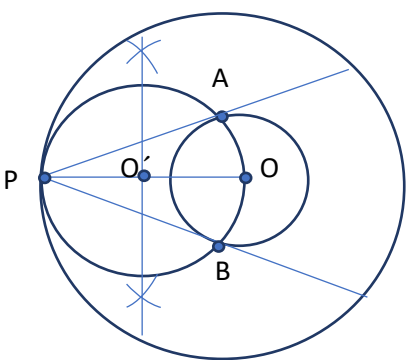
		Section-B

7	First Term of the AP(a) = 5 Common difference (d) = 8-5=3 Last term = a_{40} = a+(40-1) d $\quad\quad = 5 + 39 \times 3 = 122$ Also $a_{31} = a + 30d = 5 + 30 \times 3 = 95$ Sum of last 10 terms = $\frac{n}{2}(a_{31} + a_{40})$ $\quad\quad = \frac{10}{2}(95 + 122)$ $\quad\quad = 5 \times 217 = 1085$	 1 1 1

8	Let, AB be the tree broken at C, Also let $AC = x$ In Δ CAD, $\sin 30^0 = \frac{AC}{DC}$ $\Rightarrow \frac{1}{2} = \frac{x}{8}$ $\Rightarrow x = 4\ m$ $\Rightarrow$ the length of the tree is = 8+4 =12m	1 1/2 1/2 1(correct Fig.)

OR

Let AB and CD be two poles of height h meters also let P be a point between them on the road which is *x* meters away from foot of first pole AB, PD= (80-x) meters.

In ΔABP, $\tan 60^o = \frac{h}{x} \Rightarrow h = x\sqrt{3}$ .....(1)   1

In ΔCDP, $\tan 30^o = \frac{h}{80-x} \Rightarrow h = \frac{80-x}{\sqrt{3}}$ .....(2)   1/2

$x\sqrt{3} = \frac{80-x}{\sqrt{3}}$ [∵ $LHS(1) = LHS(2)$, so equating RHS]

$\Rightarrow 3x = 80 - x \Rightarrow 4x = 80 \Rightarrow x = 20m$

So, $80 - x = 80 - 20 = 60m$ 1/2

Hence the point is 20m from one pole and 60 meters from the other pole.

1(correct Fig.)

9	PA = PB (Tangent segments drawn to a circle from an external point are equal)	
	$\therefore$ In $\Delta APB,$ $\angle$ PAB = $\angle$ PBA Also, $\angle$ APB = 60^0 In $\Delta APB,$ sum of three angles is 180^0.	1
	Therefore, $\angle$ PAB + $\angle$ PBA = 180^0 - $\angle$ APB= $180^0 – 60^0 = 120^0$. $\therefore \angle$ PAB = $\angle$ PBA = 60^0 ($\because \angle$ PAB = $\angle$ PBA) $\because \Delta APB$ is an equilateral triangle. So, $AB = 6cm$	1 1
10	Let the three consecutive multiples of 5 be 5x, 5x+5, 5x+10. Their squares are $(5x)^2, (5x + 5)^2$ and $(5x + 10)^2$. $$(5x)^2 + (5x + 5)^2 + (5x + 10)^2 = 725$$ $\Rightarrow 25x^2 + 25x^2 + 50x + 25 + 25x^2 + 100x + 100 = 725$ $\Rightarrow 75x^2 + 150x - 600 = 0$ $\Rightarrow x^2 + 2x - 8 = 0$ $\Rightarrow (x + 4)(x - 2) = 0$ $\Rightarrow x = -4, 2$ $\Rightarrow x = 2$ (ignoring –ve value) So the numbers are 10, 15 and 20	1 1 1
	Section-C	

11		
	Draw two concentric circles with center O and radii 3cm and 7cm respectively. Join OP and bisect it at O', so $PO' = O'O$ Construct circle with center O' and radius $O'O$ Join PA and PB	1 1 1 1
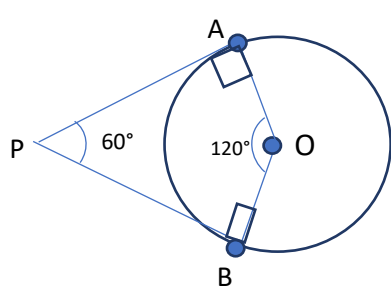
OR

Draw a circle of radius 6cm

Draw OA and Construct $\angle AOB = 120^0$

Draw $\angle OAP = \angle OBP = 90^0$

PA and PB are required tangents

Join OP and apply $\tan\angle APO = \tan 30° = \dfrac{6}{PA}$

$\Rightarrow$ Length of tangent = $6\sqrt{3}$ cm

1
1
1

1

12

Converting the cumulative frequency table into exclusive classes, we get:

Age	No of passengers(f_i)	x_i	$f_i x_i$
0-10	14	5	70
10-20	30	15	450
20-30	38	25	950
30-40	52	35	1820
40-50	50	45	2250
50-60	61	55	3355
60-70	42	65	2730
70-80	13	75	975
	$\sum f_i = 300$		$\sum f_i x_i = 12600$

2
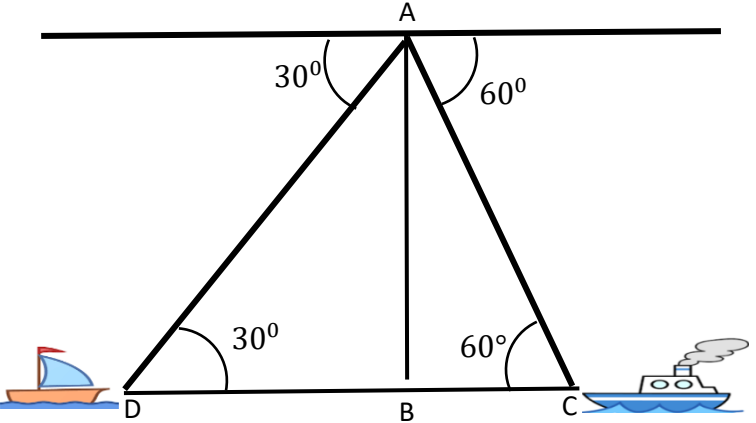
Mean age = $\bar{x} = \dfrac{\sum f_i x_i}{\sum f_i} = \dfrac{12600}{300}$

1

$\bar{x} = 42$

1

13 (i)	The ship is nearer to the lighthouse as its angle of depression is greater.	
	In $\triangle$ ACB, tan 60^0 = $\frac{AB}{BC}$	1
	$\Rightarrow \sqrt{3} = \frac{40}{BC}$	
	$\therefore$ BC = $\frac{40}{\sqrt{3}} = \frac{40\sqrt{3}}{3}m$	1

(ii)	In $\triangle$ ADB, tan 30^0 = $\frac{AB}{BD}$	
	$\Rightarrow \frac{1}{\sqrt{3}} = \frac{40}{DB}$	
	$\therefore$ DB = $40\sqrt{3}m$	1
	Time taken to cover this distance = $(\frac{60}{2000} \times 40\sqrt{3})$ minutes	
	$= \frac{60\sqrt{3}}{100}$ = 2.076 minutes	1

14 (i)	Let r_1 and r_2 be respectively the radii of apples and oranges	
	$\because 2r_1 : 2r_2 = 2:3 \Rightarrow r_1 : r_2 = 2:3$	1/2
	$4\pi r_1^2 : 4\pi r_2^2 = \left(\frac{r_1}{r_2}\right)^2 = \left(\frac{2}{3}\right)^2 = 4:9$	$1\frac{1}{2}$
(ii)	Let the height of the drum be h.	
	Volume of the drum = volume of the cylinder + volume of the sphere	
	$\pi 3^2 h = (\pi 3^2 \times 8 + \frac{4}{3}\pi 3^3)\ cm^3$	1
	$\Rightarrow h = (8+4)cm$	
	$\Rightarrow h = 12cm$	1
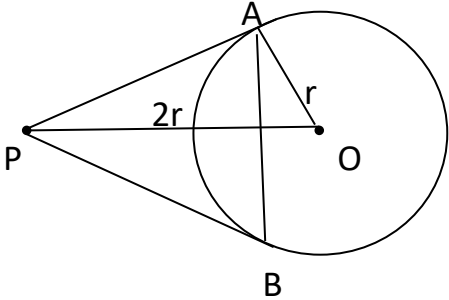
Time Allowed: 2 hours   **Maximum Marks: 40**
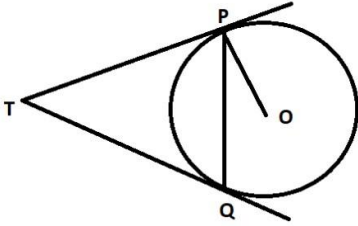
General Instructions:
1. The question paper consists of 14 questions divided into 3 sections A, B, C.
2. All questions are compulsory.
3. Section A comprises of 6 questions of 2 marks each. Internal choice has been provided in two questions.
4. Section B comprises of 4questions of 3 marks each. Internal choice has been provided in one question.
5. Section C comprises of 4 questions of 4 marks each. An internal choice has been provided in one question. It contains two case study based questions.
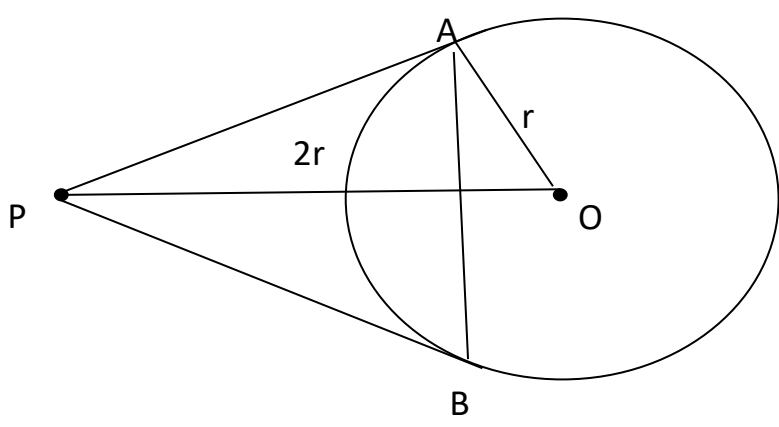
	Section A	
Q No		**Marks**
1	Find the value of a_{25} - a_{15} for the AP: 6, 9, 12, 15, ……….. OR If 7 times the seventh term of the AP is equal to 5 times the fifth term, then find the value of its 12th term.	**2**
2	Find the value of m so that the quadratic equation $mx(5x - 6) = 0$ has two equal roots.	**2**
3	From a point P, two tangents PA and PB are drawn to a circle C(0, r). If OP = 2r, then find $\angle APB$. What type of triangle is APB? 	**2**
4	The curved surface area of a right circular cone is 12320 cm². If the radius of its base is 56cm, then find its height.	**2**
5	Mrs. Garg recorded the marks obtained by her students in the following table. She calculated the modal marks of the students of the class as 45. While printing the data, a blank was left. Find the missing frequency in the table given below . 	Marks Obtained	0 - 20	20 - 40	40 - 60	60 - 80	80 - 100		**2**

	Number of Students	5	10	---	6	3	

6	If Ritu were younger by 5 years than what she really is, then the square of her age would have been 11 more than five times her present age. What is her present age? **OR** Solve for x: 9x² - 6px + (p² - q²) = 0	**2**

<table>
<tr><td colspan="3" align="center">Section-B</td></tr>
</table>

7	Following is the distribution of the long jump competition in which 250 students participated. Find the median distance jumped by the students. Interpret the median	**3**

Distance (in m)	0 - 1	1 - 2	2 - 3	3 - 4	4 - 5
Number of Students	40	80	62	38	30

8	Construct a pair of tangents to a circle of radius 4cm, which are inclined to each other at an angle of 60°.	**3**

9	The distribution given below shows the runs scored by batsmen in one-day cricket matches. Find the mean number of runs.	**3**

Runs scored	0 - 40	40 - 80	80 - 120	120 - 160	160 - 200
Number of batsmen	12	20	35	30	23

10	Two vertical poles of different heights are standing 20m away from each other on the level ground. The angle of elevation of the top of the first pole from the foot of the second pole is 60° and angle of elevation of the top of the second pole from the foot of the first pole is 30°. Find the difference between the heights of two poles. (Take √3 = 1.73) **OR** A boy 1.7 m tall is standing on a horizontal ground, 50 m away from a building. The angle of elevation of the top of the building from his eye is 60°. Calculate the height of the building. (Take √3 = 1.73)	**3**

<table>
<tr><td colspan="3" align="center">Section-C</td></tr>
</table>

11	The internal and external radii of a spherical shell are 3cm and 5cm respectively. It is melted and recast into a solid cylinder of diameter 14cm, find the height of the cylinder. Also find the total surface area of the cylinder. (Take $\pi = \frac{22}{7}$)	**4**

12	Prove that the angle between the two tangents drawn from an external point to a circle is supplementary to the angle subtended by the line segment joining the points of contact to the centre. **OR** Two tangents TP and TQ are drawn to a circle with centre O from an external point T. Prove that $\angle PTQ = 2\angle OPQ$ 	4
13	**Case Study-1** Trigonometry in the form of triangulation forms the basis of navigation, whether it is by land, sea or air. GPS a radio navigation system helps to locate our position on earth with the help of satellites. A guard, stationed at the top of a 240m tower, observed an unidentified boat coming towards it. A clinometer or inclinometer is an instrument used for measuring angles or slopes(tilt). The guard used the clinometer to measure the angle of depression of the boat coming towards the lighthouse and found it to be 30°. (Lighthouse of Mumbai Harbour. Picture credits - Times of India Travel) i) Make a labelled figure on the basis of the given information and calculate the distance of the boat from the foot of the observation tower. ii) After 10 minutes, the guard observed that the boat was approaching the tower and its distance from tower is reduced by 240($\sqrt{3}$ - 1) m. He immediately raised the alarm. What was the new angle of depression of the boat from the top of the observation tower?	 2 2
14	**Case Study-2** Push-ups are a fast and effective exercise for building strength. These are helpful in almost all sports including athletics. While the push-up primarily targets the muscles of the chest, arms, and shoulders, support required from other muscles helps in toning up the whole body. 	

Nitesh wants to participate in the push-up challenge. He can currently make 3000 push-ups in one hour. But he wants to achieve a target of 3900 push-ups in 1 hour for which he practices regularly. With each day of practice, he is able to make 5 more push-ups in one hour as compared to the previous day. If on first day of practice he makes 3000 push-ups and continues to practice regularly till his target is achieved. Keeping the above situation in mind answer the following questions:

i)   Form an A.P representing the number of push-ups per day and hence find the minimum number of days he needs to practice before the day his goal is accomplished?

ii) Find the total number of push-ups performed by Nitesh up to the day his goal is achieved.

2

2

SECTION A		
Q.No.	**HINTS/SOLUTION**	**MARKS**
1	a = 6, d = 3 ; a_{25} = 6 + 24(3) = 78 a_{15} = 6 + 14(3) = 48 ; a_{25} - a_{15} = 78 - 48 = 30 **OR** $7(a + 6d) = 5(a + 4d)$ $\Rightarrow 2a + 22d = 0 \Rightarrow a + 11d = 0 \Rightarrow t_{12} = 0$	**1** **1** **1** **1**
2	5mx² - 6mx + 9 = 0 b² - 4ac = 0 $\Rightarrow$ (-6m)² - 4(5m)(9) = 0 $\Rightarrow$ 36m(m - 5) = 0 $\Rightarrow$ m = 0, 5 ; rejecting m=0, we get m = 5	 **1** **1**
3	 let $\angle APO = \theta$ $Sin\theta = \dfrac{OA}{OP} = \dfrac{1}{2} \Rightarrow \theta = 30^0$ $\Rightarrow \angle APB = 2\theta = 60^0$ Also $\angle PAB = \angle PBA = 60^0 \ (\because PA = PB)$ $\Rightarrow \triangle APB$ is equilateral	 **1/2** **1/2** **1/2** **1/2**
4	CSA (cone) = $\pi r l = 12320$ $\dfrac{22}{7} \times 56 \times l = 12320$ $l = 70 \ cm$ $h = \sqrt{70^2 - 56^2} = 42$ cm	**1/2** **1** **1/2**

5	Modal class is $40-60, l=40, h=20, f_1=?, f_0=10, f_2=6$	1/2
	$45 = 40 + 20 \times \left[\dfrac{f_1 - 10}{2f_1 - 10 - 6}\right]$	1/2
	$\Rightarrow \dfrac{1}{4} = \dfrac{f_1 - 10}{2f_1 - 16}$	
	$\Rightarrow 2f_1 - 16 = 4f_1 - 40 \Rightarrow f_1 = 12$	1
6	Let the present age of Ritu be x years	
	$(x-5)^2 = 5x + 11$	1
	$x^2 - 15x + 14 = 0$½	
	$(x-14)(x-1) = 0 \Rightarrow x = 1 \ or \ 14$	1/2
	x = 14 years (rejecting $x=1$ as in that case Ritu's age 5 years ago will be –ve)	1/2
	OR	
	$9x^2 - 6px + (p^2 - q^2) = 0$	
	$a = 9, \quad b = -6p, \quad c = p^2 - q^2$	
	$D = b^2 - 4ac = (-6p)^2 - 4(9)(p^2 - q^2) = 36q^2$	1/2
	$x = \dfrac{-b \pm \sqrt{D}}{2a} = \dfrac{6p \pm 6q}{18} = \dfrac{p+q}{3} \ or \ \dfrac{p-q}{3}$	1/2
		1

<div align="center">**SECTION B**</div>

7						
	Distance (in m)	0 - 1	1 – 2	2 - 3	3 - 4	4 - 5
	Number of Students	40	80	62	38	30
	cf	40	120	182	220	250

$\dfrac{n}{2} = \dfrac{250}{2} = 125 \Rightarrow median \ class \ is \ 2-3, l=2, h=1, cf=120, f=62$ **1**

$median = l + \dfrac{\dfrac{n}{2} - cf}{f} \times i$ **1/2**

$= 2 + \dfrac{5}{62}$

$= \dfrac{129}{62} = 2\dfrac{5}{62} m \ or \ 2.08m$ **1**

50% of students jumped below $2\dfrac{5}{62}$ m and 50% above it.   **1/2**

8	Draw a circle of radius 4cm	1
	Draw OA and construct $\angle AOB = 120^0$	1
	Draw $\angle OAP = \angle OBP = 90^0$	
	PA and PB are required tangents	1

9							
	Runs Scored	0 - 40	40 - 80	80 - 120	120 - 160	160 - 200	TOTAL
	Number of Batsmen (f_i)	12	20	35	30	23	120

x_i	20	60	100	140	180	
$f_i x_i$	240	1200	3500	4200	4140	13280

$$mean \; (\bar{x}) = \frac{\sum f_i \, x_i}{\sum f_i} = \frac{13280}{120} = 110.67 \; runs$$

10

P, R, y, x, 30°, 60°, Q, S, 20m

In ΔPQS, $tan 60^0 = \frac{y}{20} \Rightarrow y = 20\sqrt{3}$m
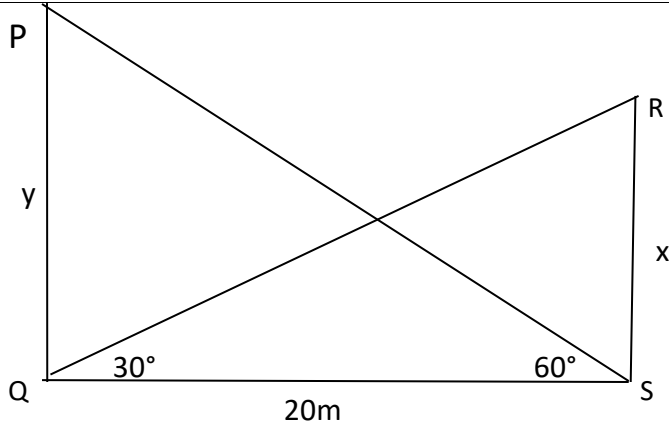
In ΔRSQ, $tan 30^0 = \frac{x}{20} \Rightarrow x = \frac{20}{\sqrt{3}}$ m

$y - x = 20\sqrt{3} - \frac{20}{\sqrt{3}} = \frac{40}{\sqrt{3}} = \frac{40\sqrt{3}}{3} = 23.06m$

OR

P, 60°, A, Q, 1.7 m, 50m, B, R
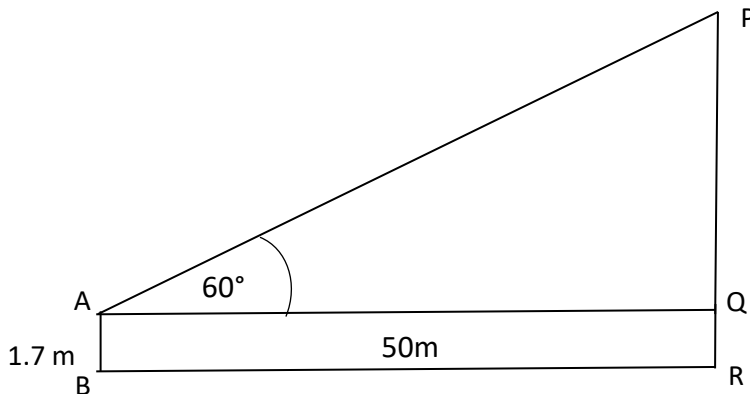
Let PR be the building and AB be the boy

In $\Delta PQR, tan 60^0 = \frac{PQ}{50} \Rightarrow PQ = 50\sqrt{3}$m

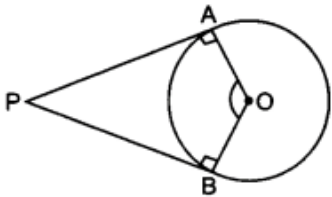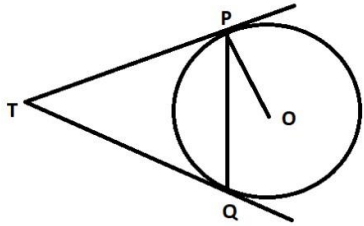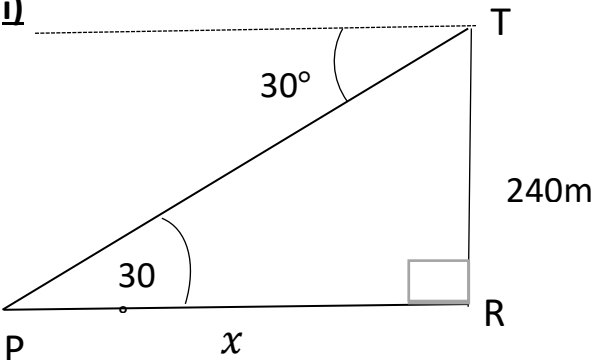Height of the building = $PR = \left(50\sqrt{3} + 1.7\right)m = 88.2m$

SECTION C

11

Volume of shell = Volume of cylinder

$\Rightarrow \frac{4\pi}{3}[\, 5^3 \, - 3^3] = \pi(7)^2 h$

$\Rightarrow h = \frac{8}{3} = 2\frac{2}{3} cm$

	TSA of cylinder is = $2\pi r(r + h) = 2 \times \frac{22}{7} \times 7 \times \left(7 + \frac{8}{3}\right) = 44 \times \frac{29}{3} = \frac{1276}{3} cm^2 \ or \ 425.33 cm^2$	$1\frac{1}{2}$
12		1
	$\angle OAP + \angle OBP + \angle APB + \angle AOB = 360^o$ $\Rightarrow 90^0 + 90^0 + \angle APB + \angle AOB = 360^o \ (\because Tangent \perp radius)$ $\Rightarrow \angle APB + \angle AOB = 180^0$	$1\frac{1}{2}$ $1\frac{1}{2}$
	OR Let $\angle PTQ = \theta$ TPQ is an isosceles triangle. $\angle TPQ = \angle TQP = \frac{1}{2}(180^o - \theta) = 90° - \frac{\theta}{2}$ $\angle OPT = 90^o$ $\angle OPQ = \angle OPT - \angle TPQ = 90^o - \left(90^o - \frac{\theta}{2}\right) = \frac{\theta}{2}$ $\angle OPQ = \frac{1}{2}\angle PTQ$ $2\angle OPQ = \angle PTQ$	$1\frac{1}{2}$ $1\frac{1}{2}$ 1
13	**<u>Case Study-1</u>** <u>i)</u> In $\Delta PTR, \tan 30^o = \frac{240}{x} \Rightarrow x = 240\sqrt{3} \ m$	 1 1

	ii) Distance of boat from tower$= 240\sqrt{3} - 240(\sqrt{3} - 1) = 240m$		1
	Let the angle of depression = θ		
	$tan\theta = \dfrac{240}{240} = 1 \Rightarrow \theta = 45^o$		1
14	i)　　　3000, 3005, 3010, …,3900.		1
	$a_n = a + (n - 1)d$		
	3900 = 3000 + (n - 1)5		
	$\Rightarrow 900 = 5n - 5 \Rightarrow 5n = 905 \Rightarrow n = 181$		
	Minimum number of days of practice = $n - 1 = 180\ days$		1
	ii)　　　$S_n = \dfrac{n}{2}(a + l)$		1
	$= \dfrac{181}{2} \times (3000 + 3900) = 624450$ pushups		1

SAMPLE QUESTION PAPER
CLASS X
Science (086)
Term 2 (2021-22)

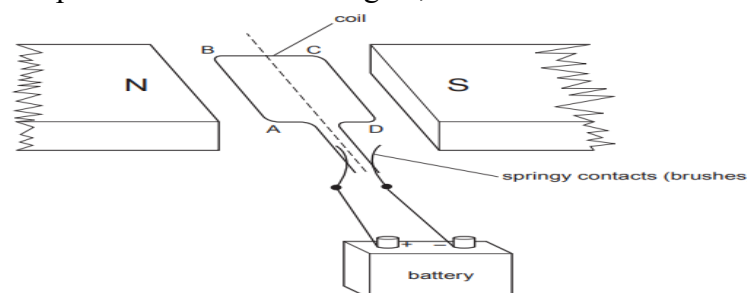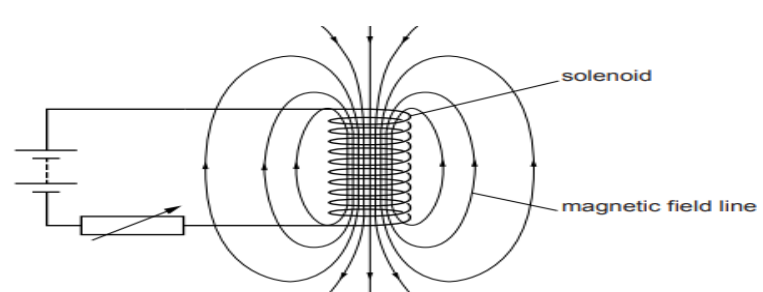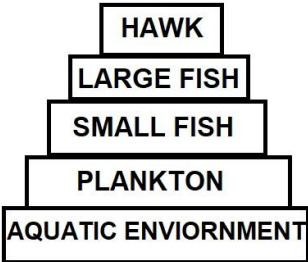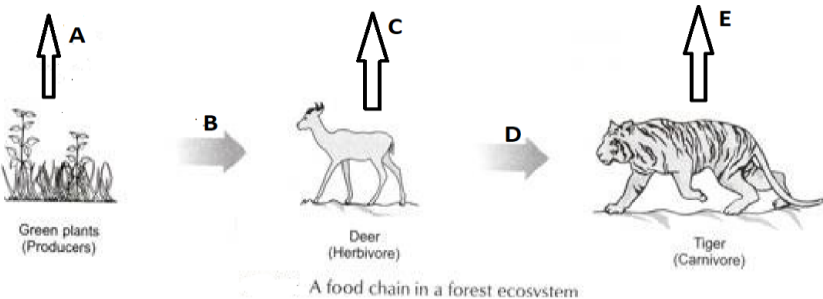**Max. Marks:40**   **Time allowed: 2 hours**

General Instructions:
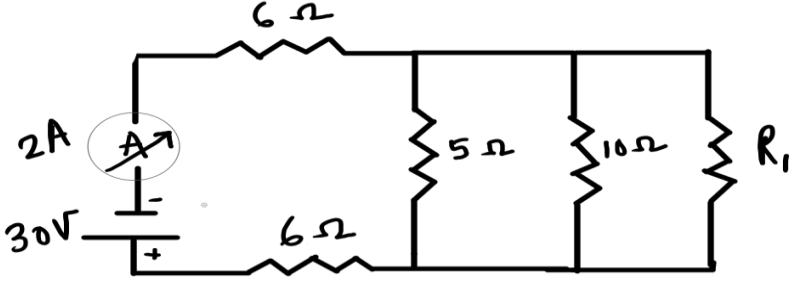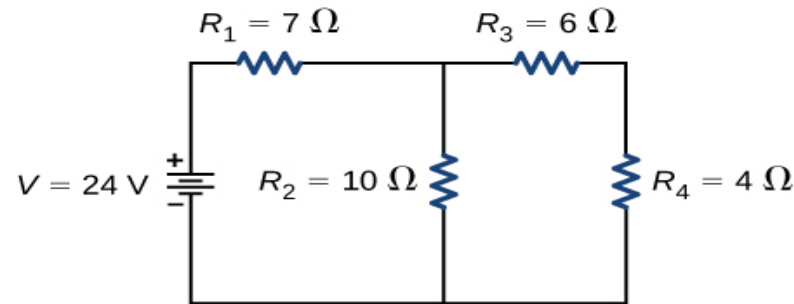
i)   All questions are compulsory.

ii) The question paper has **three sections** and **15 questions**. All questions are compulsory.

iii) Section–A has 7 questions of 2 marks each; Section–B has 6 questions of 3 marks each; and Section–C has 2 case based questions of 4 marks each.

iv) Internal choices have been provided in some questions. A student has to attempt only one of the alternatives in such questions.

	SECTION - A	
1	The table shows the electronic structures of four elements. <table><tr><td>Element</td><td>Electronic Structure</td></tr><tr><td>P</td><td>2,6</td></tr><tr><td>Q</td><td>2,8,1</td></tr><tr><td>R</td><td>2,8,7</td></tr><tr><td>S</td><td>2,8,8</td></tr></table> a. Identify which element(s) will form covalent bonds with carbon. b. "Carbon reacts with an element in the above table to form several compounds." Give suitable reason.	2
2	The diagram below shows part of the periodic table. a. Which elements would react together to form covalent compounds? b. Between the two elements W and Z, which will have a bigger atomic radius? Why? 	2
3	a. Trace the path a male gamete takes to fertilise a female gamete after being released from the penis. b. State the number of sets of chromosomes present in a zygote.	2

4	Rajesh observed a patch of greenish black powdery mass on a stale piece of bread. a. Name the organism responsible for this and its specific mode of asexual reproduction. b. Name its vegetative and reproductive parts.	2
5	Mustard was growing in two fields- A and B. While Field A produced brown coloured seeds, field B produced yellow coloured seeds. It was observed that in field A, the offsprings showed only the parental trait for consecutive generations, whereas in field B, majority of the offsprings showed a variation in the progeny. What are the probable reasons for these? **OR** In an asexually reproducing species, if a trait X exists in 5% of a population and trait Y exists in 70% of the same population, which of the two trait is likely to have arisen earlier? Give reason.	2
6	A simple motor is made in a school laboratory. A coil of wire is mounted on an axle between the poles of a horseshoe magnet, as illustrated. In the example above, coil ABCD is horizontal and the battery is connected as shown. a. For this position, state the direction of the force on the arm AB. b. Why does the current in the arm BC not contribute to the turning force on the coil? **OR** A circuit contains a battery, a variable resistor and a solenoid. The figure below shows the magnetic field pattern produced by the current in the solenoid. a. State how the magnetic field pattern indicates regions where the magnetic field is stronger.	2

	b. What happens to the magnetic field when the current in the circuit is reversed?	
7	DDT was sprayed in a lake to regulate breeding of mosquitoes. How would it affect the trophic levels in the following food chain associated with a lake? Justify your answer. HAWK LARGE FISH SMALL FISH PLANKTON AQUATIC ENVIORNMENT **OR** In the following food chain, vertical arrows indicate the energy lost to the environment and horizontal arrows indicate energy transferred to the next trophic level. Which one of the three vertical arrows (A, C and E) and which one of the two horizontal arrows (B and D) will represent more energy transfer? Give reason for your answer. Green plants (Producers) Deer (Herbivore) Tiger (Carnivore) A food chain in a forest ecosystem	2
	SECTION - B	
8	Choose an element from period 3 of modern periodic table that matches the description given below in each instance. Give reason for your choice. a. It has a similar structure to diamond. b. It has same valency as Lithium. c. It has variable valency and is a member of the Oxygen family (group 16).	3
9	a. How many isomers are possible for the compound with the molecular formula C_4H_8? Draw the electron dot structure of branched chain isomer. b. How will you prove that C_4H_8 and C_5H_{10} are homologues? **OR** A carbon compound 'A' having melting point 156K and boiling point 351K, with molecular formula C_2H_6O is soluble in water in all proportions. a. Identify 'A' and draw its electron dot structure. b. Give the molecular formulae of any two homologues of 'A'.	3

10	Two pea plants - one with round yellow seeds (RRYY) and another with wrinkled green (rryy) seeds produce F1 progeny that have round, yellow (RrYy) seeds. When F1 plants are self-pollinated, which new combination of characters is expected in F2 progeny? How many seeds with these new combinations of characters will be produced when a total 160 seeds are produced in F2 generation? Explain with reason.	3
11	a. It would cost a man Rs. 3.50 to buy 1.0 kW h of electrical energy from the Main Electricity Board. His generator has a maximum power of 2.0 kW. The generator produces energy at this maximum power for 3 hours. Calculate how much it would cost to buy the same amount of energy from the Main Electricity Board.(1 Mark) b. A student boils water in an electric kettle for 20 minutes. Using the same mains supply he wants to reduce the boiling time of water. To do so should he increase or decrease the length of the heating element? Justify your answer.(2 Marks)	3
12	 In the above circuit, if the current reading in the ammeter A is 2A, what would be the value of R_1? **OR** Calculate the total resistance of the circuit and find the total current in the circuit.	3
13	Gas A, found in the upper layers of the atmosphere, is a deadly poison but is essential for all living beings. The amount of this gas started declining sharply in the 1980s. a. Identify Gas A. How is it formed at higher levels of the atmosphere? b. Why is it essential for all living beings? State the cause for the depletion of this gas.	3

SECTION – C

This section has 02 case-based questions (14 and 15). Each case is followed by 03 sub-questions (a, b and c). Parts a and b are compulsory. However, an internal choice has been provided in part c.

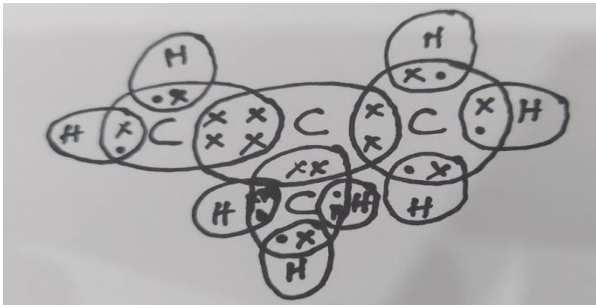| 14	Sahil performed an experiment to study the inheritance pattern of genes. He crossed tall pea plants (TT) with short pea plants (tt) and obtained all tall plants in F1 generation. a. What will be set of genes present in the F1 generation? (1 Mark) b. Give reason why only tall plants are observed in F1 progeny. (1 Mark) c. When F1 plants were self - pollinated, a total of 800 plants were produced. How many of these would be tall, medium height or short plants? Give the genotype of F 2 generation. (2 Marks) **OR** When F1 plants were cross - pollinated with plants having tt genes, a total of 800 plants were produced. How many of these would be tall, medium height or short plants? Give the genotype of F 2 generation.	4
15	Ansari Sir was demonstrating an experiment in his class with the setup as shown in the figure below. A magnet is attached to a spring. The magnet can go in and out of the stationary coil. He lifted the Magnet and released it to make it oscillate through the coil. Based on your understanding of the phenomenon, answer the following questions. a. What is the principle which Ansari Sir is trying to demonstrate? b. What will be observed when the Magnet starts oscillating through the coil. Explain the reason behind this observation. c. Consider the situation where the Magnet goes in and out of the coil. State two changes which could be made to increase the deflection in the galvanometer. **OR** Is there any difference in the observations in the galvanometer when the Magnet swings in and then out of the stationary coil? Justify your answer.	4

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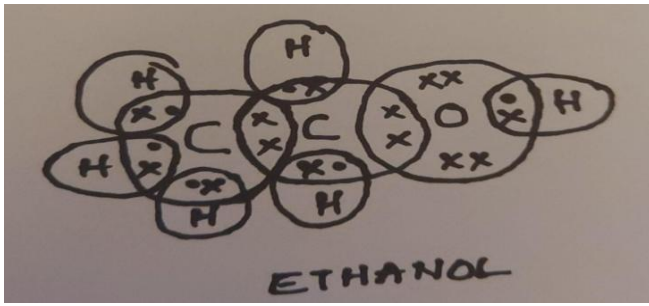
MARKING SCHEME
Of SQP SCIENCE (086)
CLASS X
Term 2 (2021-22)
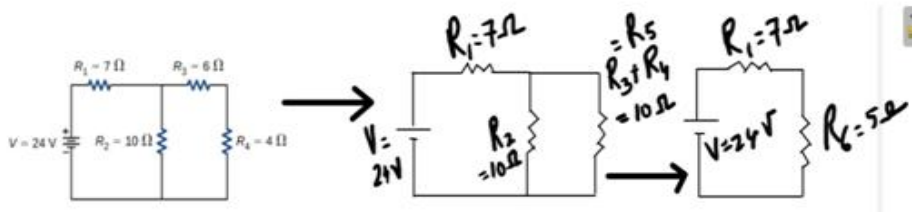
	SECTION - A		
1	a. P and R (½ + ½ Mark) b. Carbon has a valency four or Tetravalency & Catenation (½ + ½ Mark)		2
2	a. Y and Z (½ + ½ Mark) b. W is bigger, (½ Mark) Reason: Down the group number of shells increases (½ Mark)		2
3	a. Male gamete (sperm) travels in the female reproductive tract after being released. The path which it takes to fertilise the female gamete (egg) is vagina (½ Mark), uterus(½ Mark), fallopian tube(½Mark) resulting in a zygote; Alternatively accept the labelled figure of human female reproductive system indicating the passage of sperm from vagina (½ Mark) to uterus (½ Mark) and then to fallopian tube (½ Mark) for fertilisation resulting in a zygote; b. Zygote has 2 sets of chromosomes (½ Mark)/ alternatively accept 2n. No marks to be assigned for n or 3n.		2
4	a. The greenish black powdery mass on a stale piece of bread is due to bread mould *Rhizopus* (½ mark) which reproduces by spore formation (½Mark). b. Hyphae or thread like structures are the vegetative part (½ Mark) and tiny blob like structures or sporangia are the reproductive parts (½ Mark).		2
5	In field A, the reason for parental trait in consecutive generations of the offsprings is self-pollination. (1 mark) In field B, variation is seen to occur because of recombination of genes as cross - pollination is taking place. (1 Mark) **OR** Trait Y which exists in 70% (larger fraction) of the population, is likely to have arisen earlier because in asexual reproduction, identical copies of DNA are produced and variations do not occur. (1 mark) New traits come in the population due to sudden mutation and then are inherited. 70 % of the population with trait Y is likely to have been replicating that trait for a longer period than 5 % of population with trait X. (1 mark)		2
6	a. downwards (1mark)		2

	b. Because BC is in the same direction as the direction of field lines. Force is minimum when the direction of current in the conductor is the same as that of the magnetic field. BC will not contribute as the force on this part of the coil will be cancelled by the force on DA. (1mark) **OR** a. Relative closeness of field lines indicates the strength of magnetic field. Since field lines are crowded around the ends of the solenoid, hence these are the regions of strongest magnetism. (1mark) b. The direction of the field will also be reversed. (1mark)		
7	• DDT being a non- biodegradable pesticide will enter the food chain from the first trophic level i.e Plankton. (½mark) • Non – biodegradable pesticides accumulate progressively at each trophic level. This phenomenon is known as biological magnification. (1mark) • HAWK will have the highest level of pesticide. (½mark) **OR** A will represent more energy transfer as compared to C and E. (½mark) B will represent more energy transfer as compared to D. (½mark) When green plants are eaten by primary consumers, a great deal of energy is lost as heat to the environment, some amount goes into digestion and in doing work and the rest goes towards growth and reproduction. An average of 10% of the food eaten is made available for the next level of consumers. This loss of energy takes place at every trophic level. (1mark) Alternatively accept - In accordance with 10% law of transfer of energy in a food chain only 10% of energy available at one trophic level is transferred to the next trophic level.		2
	SECTION - B		
8	a. Silicon Reason: Tetrahedral structure **OR** Tetravalency or Four valeny and catenation **OR** Covalent bonding like carbon (½ + ½mark) b. Sodium Reason: It has 1 valence electron like Lithium (½ + ½ mark) c. Sulphur Reason: it forms oxides SO_2 and SO_3 (½ +½ mark)		3
			2

9	a. Four (½ + 1 marks)
	
	 b. C_4H_8 and C_5H_{10} are homologues (½ mark)
	 as they differ in
	     ● "- CH_2-"
	     ● differ in 14u molecular mass
	     ● Same functional group
	     ● Same general formula (½ + ½ mark)
	
	    (Any two reasons)
	
	 OR
	   a. Ethanol; C_2H_5OH (1 + 1 marks)
	   b. CH_3OH and C_3H_7OH are homologues of ethanol (1 mark)
	
	    OR
	
	    CH_4O and C_3H_8O
			3

10	Round green (½ mark): 30 (½ mark) Wrinkled yellow (½ mark) : 30 (½ mark) New combinations are produced because of the independent inheritance of seed shape and seed colour trait. (1mark)		3

11	a. E = P X T
	    SO, E = 3X2 = 6 kWh (1 mark)
	    Cost of buying electricity from the main electricity board = 6 x 3.50 =
	    Rs. 21.0
			3

			3

	b. To reduce the boiling time using the same mains supply, the rate of heat production should be large. We know that $P = V^2/R$. Since V is constant, R should be decreased. Since R is directly proportional to l so length should be decreased. (2 marks)	
12	5 ohm, 10 ohm and R_1 are in series $1/R_p = 1/5 + 1/10 + 1/R_1$ $1/R_p = (2+1)/10 + 1/R_1$ $\quad = 3/10 + 1/R_1$ $1/R_p = (3 R_1 + 10)/10 R_1$ $R_p = 10 R_1 / (3 R_1 + 10)$ Now, 6 ohm, 6 ohm and R_p are in series Thus, $R_{eq} = 12 + 10 R_1 / (3 R_1 + 10)$ ------------------ (1)　　　　　　　　　(1 mark) $V = I R_{eq}$ From the circuit $R_{eq} = 30/2 = 15$ A --------------(2)　　　　　　　　　(1 mark) Equating (1) and (2) $12 + 10 R_1 / (3 R_1 + 10) = 15$ $10 R_1 / (3 R_1 + 10) = 3$ $10 R_1 = (9 R_1 + 30)$ Thus, $R_1 = 30$ ohm.　　　　　　　　　(1 mark) **OR** R3 and R4 are in series, hence the equavalent resistance of those two = R5= R3+R4 = 10 ohms. **0.5 marks** R5 and R2 are in parallel. Let R6 be the equivalent resistance for them. Hence R6=(R5*R2)/(R5+R2) = 100/20 = 5 ohms **0.5 marks** Now R1 and R6 are in series and hence the final equaivalent resistance of the entire circuit is R = R1+R6= 12 ohms. **1 mark** By Ohm's Law we know that V=IR, hence I=V/R. Hence the current in the circuit is 24/12 A = 2 A (Final Answer) **1 mark** 　　　　　　　　　　　　　　　　　　　　　　　　　(0.5+0.5+1+1)	3
13	a. Gas A is Ozone. *Alternatively accept the formula of the gas.* 　　(½ mark) 　　Ozone at the higher levels of the atmosphere is a product of UV radiation acting	3
		4

on oxygen (O_2) molecule. The higher energy UV radiations split apart some molecular oxygen (O_2) into free oxygen (O) atoms. These atoms then combine with molecular oxygen to form ozone. (1 mark)

Alternatively accept the following equations with the correct molecular formulae. No mark to be assigned if molecular formulae are not correct, when only the equation is written.

$$O_2 \xrightarrow{\text{UV}} O + O$$

$$O + O_2 \rightarrow O_3$$

  b. Ozone shields the surface of the earth / protects living organisms from ultraviolet (UV) radiation released by the sun. (½ mark)

  Chlorofluorocarbons (CFCs) (½ mark) which are used as refrigerants / in fire extinguishers (½ mark) lead to depletion of ozone layer.

	SECTION - C	
14	a. Tt (1 mark)	4
	b. Traits like 'T' are called dominant traits, while those that behave like 't' are called recessive traits./Alternatively accept the definition of dominant and recessive traits with examples of T and t respectively /Alternatively accept the law of Dominance with examples of T and t. (1mark)	
	c. Out of 800 plants 600 plants will be tall and 200 plants will be small (1 mark), 1 TT: 2Tt: 1tt (1 mark)	
	OR	
	In the cross between Tt X tt, 400 Tall (Tt) and 400 short (tt) plants will be produced. (1 mark) 1Tt:1tt (1 mark)	
15	a. Sir is trying to demonstrate the principle of Electromagnetic induction. (1 mark)	4
	b. There will be induced current in the coil due to relative motion between the magnet and the coil. Changing the magnetic field around the coil generates induced current. (½ + ½ mark)	
	c. Using a stronger magnet, using a coil with more number of turns. (2 marks)	
	OR	
	When the magnet moves into the coil, the ammeter shows a momentary deflection towards one side say left. (½ mark) When the magnet moves out of the coil, the ammeter shows a momentary deflection	

now towards right. (½ mark)

This is due to changing magnetic field /flux associated with the coil as the magnet moves in and out.

Alternatively, the flux increases when the magnet goes in and it decreases when the magnet goes out. (1mark)

Time Allowed: 2 Hours   **Maximum Marks: 40**

General Instructions:

i. *This Question paper is divided into five sections-Section A, B, C, D and E.*

ii. *All questions are compulsory.*

iii. **Section-A***: Question no. 1 to 5 are very short answer type questions of 2 marks each. Answer to each question should not exceed 40 words.*

iv. **Section-B***: Question no. 6 to 8 are short answer type questions, carrying 3 marks each. Answer to each question should not exceed 80 words.*

v. **Section-C***: Question no. 9 and 10 are long answer type questions, carrying 5 marks each. Answer to each question should not exceed 120 words.*

vi. **Section-D***: Question no. 11 and 12 are Case Based questions.*

vii. **Section-E***: Question no. 13 is map based, carrying 3 marks with two parts, 13.1 from History (1 mark) and 13.2 from Geography (2 marks).*

viii. *There is no overall choice in the question paper. However, an internal choice has been provided in a few questions. Only one of the choices in such questions have to be attempted.*

ix. *In addition to this, separate instructions are given with each section and question, wherever necessary.*

SECTION-A Very Short Answer Questions	2X5 =10

1	How did the Non-Cooperation Movement unfold in the cities and towns of India?	**2**
2	Why is tourism considered as a trade?	**2**
3	Differentiate between one party and two party system.	**2**
4	State the role of Reserve Bank of India.	**2**
5	Read the data in the table given below and answer the questions that follow:	**2**

Total production of finished steel in India	
Year	**Production (in million tonnes)**
2015- 2016	106.60
2016-2017	120.14
2017- 2018	126.85
2018-2019	101.29
2019-2020	102.62

Source: Ministry of Steel, Government of India (NCERT)

5.1 Compare the 2015-2016 and 2019-2020 data and give any one reason for the reduction of production of steel in 2019-2020.   (1)

5.2 Why is production and consumption of steel considered as an index of a country's development? (1)

Section-B Short Answer Type Questions	3X3 =9

6. Why do most of the rural households still remain dependent on the informal sources of credit? Explain. **3**

OR

How do Self Help Groups help borrowers to overcome the problem of lack of collateral? Explain. **3**

7. "Tribal peasants interpreted the message of Mahatma Gandhi and the idea of swaraj in another way and participated in the Non-Cooperation Movement differently." Justify the statement. **3**

8. Examine the role of Political Parties in a democratic country. **3**

Section-C Long Answer Type Questions	5x2 =10

9. Democracy's ability to generate its own support is itself an outcome that cannot be ignored.' Support the statement with examples. **5**

OR

'There is an overwhelming support for the idea of democracy in South Asia.' Support the statement with examples.

10. Examine the role of Information Technology in stimulating the process of globalization. **5**

OR

Assess the impact of globalization on India and its people.

Section-D Case Based Questions	4x2 =8

11. **Read the given text and answer the following questions**: **4**

'It is said of "passive resistance" that it is the weapon of the weak, but the power which is the subject of this article can be used only by the strong. This power is not passive resistance; indeed, it calls for intense activity. The movement in South Africa was not passive but active ...

'Satyagraha is not physical force. A satyagrahi does not inflict pain on the adversary; he does not seek his destruction ... In the use of satyagraha, there is no ill-will whatever.

'Satyagraha is pure soul-force. Truth is the very substance of the soul. That is why this force is called satyagraha. The soul is informed with knowledge. In it burns the flame of love. ... Nonviolence is the supreme dharma ...'It is certain that India cannot rival Britain or Europe in force of arms. The British worship the war-god and they can all of them become, as they are becoming, bearers of arms. The hundreds of millions in India can never carry arms. They have made the religion of non-violence their own ...'

11.1. Why did Gandhiji consider nonviolence as supreme dharma? (1)

11.2 How was Gandhian satyagraha taken by the people who believed in his philosophy? (1)

11.3 Why was Gandhian satyagraha considered as a novel way to resist injustice? (2)

12. **Read the given text and answer the following questions:** **4**

Ever since humans appeared on the earth, they have used different means of communication. But, the pace of change, has been rapid in modern times. Long distance communication is far easier without physical movement of the communicator or receiver. Personal communication and mass communication including television, radio, press, films, etc. are the major means of communication in the country. The Indian postal network is the largest in the world. It handles parcels as well as personal written communications. Cards and envelopes are considered first-class mail and are airlifted between stations covering both land and air. The second-class mail includes book packets, registered newspapers and periodicals. They are carried by surface mail, covering land and water transport. To facilitate quick delivery of mails in large towns and cities, six mail channels have been introduced recently. They are called Rajdhani Channel, Metro Channel, Green Channel, Business Channel, Bulk Mail Channel and Periodical Channel.

12.1 Examine the role of the Indian postal network. (1)

12.2 Differentiate between mass communication and personal communication. (1)

12.3 Analyse the significance of communication for a nation. (2)

| **Section-E** | **1x3** |
| **Map Skill Based Question** | **=3** |

13. 13.1 On the given outline Political Map of India, identify the place marked as A **3** with the help of following information and write its correct name on the line marked near it.

(A)The place where Non Cooperation Movement was called off due to violence. (1)

13.2 On the same given map of India, locate the following:
(I) Namrup Thermal Plant (1)
OR
Noida Software Technology Park
(II) Raja Sansi (Sri Guru Ram Dass Jee) International Airport (1)

Note: The following question is for Visually Impaired Candidates only in lieu of Q. No.13.1

13.1 Name the State where the session of Indian National Congress was held in 1927. (1)

Note: The following questions are for Visually Impaired Candidates only in lieu of Q. No.13.2. Attempt ANY TWO questions.

13.2 Name the State where Namrup Thermal Plant is located. (1)

13.3 Name the State where Noida Software Technology Park is located. (1)

13.4 Name the city where Raja Sansi (Sri Guru Ram Dass Jee) International Airport is located. (1)

1 **How did the Non-Cooperation Movement unfold in the cities and towns of India?**   2
   Ans.
   (i)   The movement started with middle-class participation in the cities.
   (ii) Thousands of students left government-controlled schools and college.
   (iii) Many teachers resigned.
   (iv) Lawyers gave up their legal practices.
   (v)   The council elections were boycotted in most provinces except Madras.
   (vi) Foreign goods were boycotted, liquor shops picketed, and foreign cloth burnt in huge bonfires.
   (vii) Any other relevant point
         (Any two points)
   Unit -History, Ch - Nationalism in India – Page 34

2 **Why is tourism considered as a trade?**   2
   Ans.
   (i)   Foreign tourist's arrival in the country contributing to foreign exchange.
   (ii) Many people are directly engaged in the tourism industry.
   (iii) Tourism provides support to local handicrafts.
   (iv) Tourists visit India for medical tourism, eco-tourism, adventure tourism, cultural tourism and business tourism
   (v)   Any other relevant point.
         (Any two points)
   Unit- Geography- Lifelines of National Economy   Pg-88

3 **Differentiate between one party and two party system.**   2
   Ans.
   A. One Party System
   (i)   Countries where only one party is allowed to control and run the government are called one party system.
   (ii) Eg. In China only Communist Party is allowed to rule.
   (iii) Any other relevant point
   B. **Two Party System**
   (i)   Countries where only two main parties contest elections are called Two Party System.
   (ii) The United States of America and United Kingdom are examples of Two Party System.
   (iii) Any other relevant point
   Unit – Political Science, Ch – Political Parties – Page 77

4   **State the role of Reserve Bank of India.**   2

Ans.

(i) In India, the Reserve Bank of India issues currency notes on behalf of the Central Government.

(ii) The RBI supervises the functioning of formal sources of loans.

(iii) The RBI monitors the banks in actually maintaining cash balance.

(iv) The RBI sees that the banks give loans not just to profit-making businesses and traders but also to small cultivators.

(v) Any other relevant point.

(Any two points)

Unit – Economics, Ch – Money and Credit – Page 40 & 48

5   **Read the data in the table given below and answer the questions that follow:**   2

Total production of finished steel in India	
Year	**Production (in million tonnes)**
2015 - 2016	106.60
2016 - 2017	120.14
2017 - 2018	126.85
2018 - 2019	101.29
2019 - 2020	102.62

5.1 Compare the 2015-2016 and 2019-2020 data and give any one reason for the reduction of production of steel in 2019 - 2020.

(1)

Ans.

(i) High costs

(ii) Limited availability of coking coal

(iii) Lower productivity of labour

(iv) Irregular supply of energy

(v) Any other relevant point

(Any one point)

5.2 Why is production and consumption of steel considered as an index of a country's development?   **(1)**

Ans.

(i) The steel products are used as a raw material in different industries.

(ii) It is required for export.

(iii) It provides machinery for ensuring country's growth.

(iv) Any other relevant point.

(Any one point)

Unit Geography, Ch – Manufacturing Industries – Page 69

6 **Why do most of the rural households still remain dependent on the**   3
   informal sources of credit?
   Ans.
   (i) Limited availability of Banks in rural areas.
   (ii) People in the rural areas face problem with regard to documentation.
   (iii) Absence of collateral is one of the major reasons which prevents the poor
        from getting bank loans.
   (iv) Rural people get easy loans from the richer households through informal
        ways.
   (v) Any other relevant point.
        (Any three points)

   Unit – Economics, Ch – Money and Credit – Page 50

   OR

   How do Self Help Groups help borrowers to overcome the problem of lack
   of collateral? Explain.
   (i) People can get timely loans for a variety of purposes and at a reasonable
        interest rate.
   (ii) SHGs are regular in their savings which can be used as monetary help.
   (iii) Members can take small loans without collateral to meet their needs.
   (iv) Due to timely repayment banks also lend loans to SHGs.
   (v) Any other relevant point.
        (Any three points)
        Unit – Economics, Ch – Money and Credit – Page 51

7 **"Tribal peasants interpreted the message of Mahatma Gandhi and the**   3
   idea of swaraj in another way and participated in the Non-Cooperation
   Movement differently." Justify the statement.

   Ans.
   (i) Spread of militant guerrilla movement in the Gudem Hills of Andhra
        Pradesh.
   (ii) They were against colonial policies.
   (iii) Their livelihood was affected and their traditional rights were denied.
   (iv) Their leader Alluri Sitaram Raju was inspired by the Non Cooperation
        Movement and persuaded people to wear khadi and give up drinking.
   (v) He wanted liberation by the use of force.
   (vi) The rebels attacked police stations and carried on guerrilla warfare for
        achieving swaraj.
   (vii)   Any other relevant point
   (To be evaluated as a whole)
   Unit -History, Ch - Nationalism in India – Page 35-36

8   **Examine the role of Political Parties in a democratic country**.   3
     Ans.
    (i)   Parties form and run governments.
    (ii)   Parties play a decisive role in making policies for the country.
    (iii) They recruit leaders and train them.
    (iv) Parties that lose the election form the opposition.
    (v)   Parties shape public opinion.
    (vi) Parties provide the common man access to government machinery and welfare schemes.
    (vii) Any other relevant point
    (Any three points)
    Unit – Political Science, Ch - 6 Political Parties – Page 74

9   **"Democracy's ability to generate its own support is itself an outcome that cannot be ignored". Support the statement with examples.**   5
     Ans.
  (i) Democracy ensures that decision making will be based on norms and procedure.
  (ii) Every citizen has the right and means to examine the process of decision making.
  (iii) Democratic governments are accountable, legitimate and transparent governments.
  (iv) People have the right to choose their rulers.
  (v) Democracy gives its citizens the right to information about the government and its functioning.
  (vi) A democratic government is the people's own government and it is run by the people.
  (vii) Any other relevant point

(Any five points)
Unit – Political Science, Ch- Outcomes of Democracy, Page 92

OR

'There is an overwhelming support for the idea of democracy in South Asia.' Support the statement with examples.
Ans.
    (i)   Democratic government is peoples own government.
    (ii)   Countries from South Asia want democratic rights for people.
    (iii) Countries want to elect their representatives by themselves.
    (iv) Democracy provides dignity and freedom to its citizens.
    (v)   Democracy accommodates social diversity.
    (vi) Democracy is based on the idea of discussion and negotiation.
    (vi) Eg. India, Nepal, Bangladesh, Sri Lanka, Pakistan
    (vii) Any other relevant point
    (Any five points)
Unit – Political Science, Ch- Outcomes of Democracy, Page 92

10 **Examine the role of Information Technology in stimulating the process of globalization.** 5

Ans.

(i) Technology has been changing rapidly.

(ii) Telecommunication facilities (telegraph, telephone including mobile phones, fax) are used to contact and access information

(iii) Helps to communicate from remote areas.

(iv) Development of satellite communication devices.

(v) Computers have now entered almost every field of activity.

(vi) One can obtain and share information through internet.

(vii) Electronic mail (e-mail) and talk (voice-mail) across the world at negligible costs

(viii) Has played a major role in spreading out production of services across countries

(ix) Any other relevant point

(Any five points)

Unit – Economics, Ch- Globalization, Page -63

OR

Assess the impact of globalization on India and its people.

Ans.

(i) Globalization has resulted in more choices for the consumers

(ii) This has improved the standard of living of people

(iii) MNCs have increased their investments in industries such as cell-phones, automobiles, electronics, soft drinks, etc.

(iv) New jobs have been created.

(v) Some local companies that supply raw materials to MNCs have also benefited.

(vi) Some local companies have been able to invest in newer technology and production methods.

(vii) Globalisation has enabled some large companies such as Tata Motors, Infosys to emerge as multi-national companies.

(viii) Companies providing services have also benefited by globalisation.

(ix) Flexibility in labour laws

(x) Expansion of unorganised sector

(xi) Stiff competition to the local producers

(xii) Any other relevant point

(Any five points)

Unit – Economics, Ch- Globalization, Page -66

11 **Read the given text and answer the following questions:** 4

'*It is said of "passive resistance" that it is the weapon of the weak, but the power which is the subject of this article can be used only by the strong. This*

power is not passive resistance; indeed, it calls for intense activity. The movement in South Africa was not passive but active ...

'Satyagraha is not physical force. A satyagrahi does not inflict pain on the adversary; he does not seek his destruction ... In the use of satyagraha, there is no ill-will whatever.

'Satyagraha is pure soul-force. Truth is the very substance of the soul. That is why this force is called satyagraha. The soul is informed with knowledge. In it burns the flame of love. ... Nonviolence is the supreme dharma ...'It is certain that India cannot rival Britain or Europe in force of arms. The British worship the war-god and they can all of them become, as they are becoming, bearers of arms. The hundreds of millions in India can never carry arms. They have made the religion of non-violence their own ...'

11.1. Why did Gandhiji consider nonviolence as supreme dharma? (1)

Gandhiji adopted nonviolence as a philosophy and an ideal way of life. According to him philosophy of nonviolence is not a weapon of the weak; it is a weapon, which can be tried by all.

11.2 How was Gandhian satyagraha taken by the people who believed in his philosophy? (1)

A satyagrahi does not inflict pain on the adversary; he does not seek his destruction. In the use of satyagraha, there is no ill-will.

11.3 Why was Gandhian satyagraha considered as a novel way to resist injustice? (2)

(i) One could win the battle through nonviolence.

(ii) This could be done by appealing to the conscience of the oppressor.

(iii) People – including the oppressors – had to be persuaded to see the truth, instead of being forced to accept truth through the use of violence**.**

(iv) Any other relevant point

(Any two points)

Unit -History, Ch - Nationalism in India – Page 30

12 **Read the given text and answer the following questions**: 4

Ever since humans appeared on the earth, they have used different means of communication. But, the pace of change, has been rapid in modern times. Long distance communication is far easier without physical movement of the communicator or receiver. Personal communication and mass communication including television, radio, press, films, etc. are the major means of

communication in the country. The Indian postal network is the largest in the world. It handles parcels as well as personal written communications. Cards and envelopes are considered first-class mail and are airlifted between stations covering both land and air. The second-class mail includes book packets, registered newspapers and periodicals. They are carried by surface mail, covering land and water transport. To facilitate quick delivery of mails in large towns and cities, six mail channels have been introduced recently. They are called Rajdhani Channel, Metro Channel, Green Channel, Business Channel, Bulk Mail Channel and Periodical Channel.

12.1 Examine the role of the Indian postal network. (1)

(i) It has helped the country to engage in communication and social-economic development.

(ii) It provides various facilities like speed post, business post, registered post, ordinary post.

(iii) Any other relevant point
(Any one)

12.2 Differentiate between mass communication and personal communication.

(1)

(i) Mass Communication is the medium which provides entertainment as well as creates awareness among the masses. It includes radio, television, newspapers, magazines, books, films etc. whereas Personal Communication is between person to person.

(ii) Any other relevant point
(Any one)

12.3 Analyse the significance of communication for a nation.

(2)

(i) This is the age of communication using the telephone, television, films, and the Internet.

(ii) Even books, magazines and newspapers are important means of communication.

(iii) Various means of communication have connected the world closer

(iv) It is the source of entertainment and knowledge.

(v) Any other relevant point

(Any one)

Unit- Geography- Lifelines of National Economy   Pg-86

13.

13.1 On the given outline Political Map of India, identify the place marked as A with the help of following information and write its correct name on the line marked near it.

A- The place where Non Cooperation Movement called off due to violence. Ans. Chauri Chaura (UP)   (1)
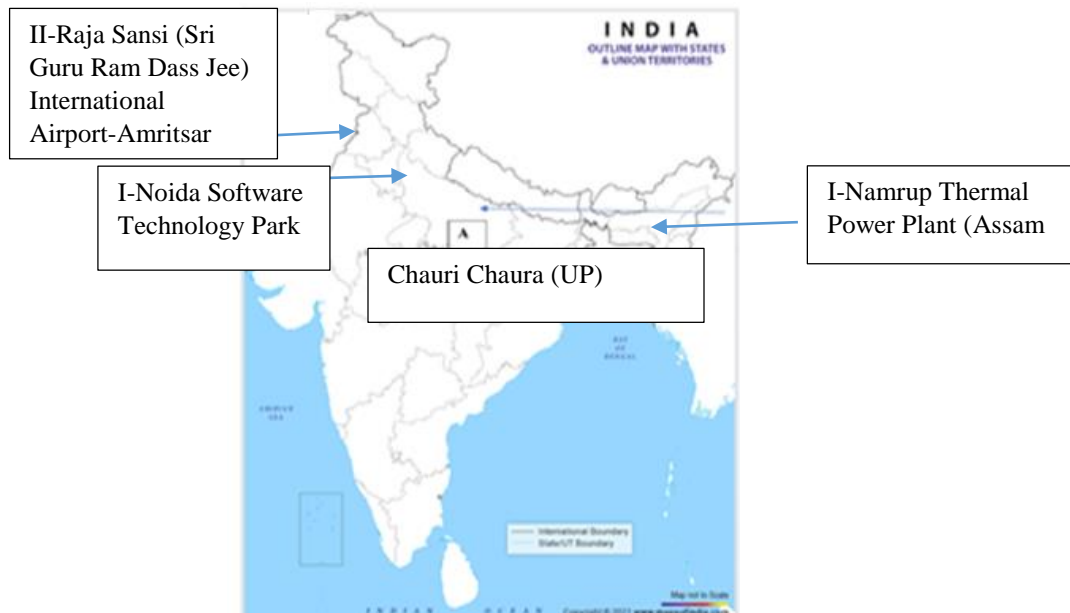
13.2 On the same given map of India, locate the following –

(I) Namrup Thermal Plant

                Or

Noida Software Technology Park   (1)

(II)   Raja Sansi (Sri Guru Ram Dass Jee) International Airport   (1)

Note: The following question is for Visually Impaired Candidates only in lieu of Q. No.13.1.
13.1 **Name the State where the session of Indian National Congress was held in 1927.   (1)**
Ans. Madras

Note: The following questions are for Visually Impaired Candidates only in lieu of Q. No.13.2 Attempt any two questions.
13.2 Name the State where Namrup Thermal Plant is located.   (1)
Ans. Assam
13.3 Name the State where Noida Software Technology Park is located.
                    (1)

Ans. Uttar Pradesh

13.4 Name the city where Raja Sansi (Sri Guru Ram Dass Jee) International Airport is located. (1)

Ans. Amritsar

तत् त्वं पूषन् अपावृणु
केन्द्रीय विद्यालय संगठन

आज़ादी का अमृत महोत्सव