

पूर्व -परिषदीय परीक्षा-2025-26 / PRE-BOARD EXAM-(2025-26)

कक्षा X / CLASS - X

TIME: 2 Hrs

विषय: / SUBJECT: ARTIFICIAL INTELLIGENCE (417)

MM: 50

General Instructions:

1. Please read the instructions carefully.
2. This Question Paper consists of **21 questions** in two sections: Section A & Section B.
3. Section A has Objective type questions whereas Section B contains Subjective type questions.
4. **Out of the given (5 + 16 =) 21 questions, a candidate has to answer (5 + 10 =) 15 questions in the allotted (maximum) time of 2 hours.**
5. All questions of a particular section must be attempted in the correct order.
6. **SECTION A - OBJECTIVE TYPE QUESTIONS (24 MARKS):**
 - i. This section has 05 questions.
 - ii. Marks allotted are mentioned against each question/part.
 - iii. There is no negative marking.
 - iv. Do as per the instructions given.
7. **SECTION B – SUBJECTIVE TYPE QUESTIONS (26 MARKS):**
 - i. This section has 16 questions.
 - ii. A candidate has to do 10 questions.
 - iii. Do as per the instructions given.
 - iv. Marks allotted are mentioned against each question/part.

SECTION A: OBJECTIVE TYPE QUESTIONS

Q. 1	Answer any 4 out of the given 6 questions on Employability Skills (1 x 4 = 4 marks)	
i.	In a professional meeting, the manager presents a new idea to the team. Later, team members share their opinions, ask questions, and give suggestions. This exchange of reactions from the team is called ____. (a) Feedback (b) Encoding (c) Message (d) Channel	1
ii.	Doing meditation and breathing exercises every day mainly improves which self-management skill? (a) Stress Management (b) Decision Making (c) Independence (d) Self-control	1
iii.	A harmful software program that pretends to be a useful application is known as ____ (a) Trojan Horse (b) Firewall (c) Antivirus (d) Operating System	1

iv.	_____ the work is all about identifying and noting how we spent our time, and analysing how to spend our time effectively. (a) Organising (b) Prioritising (c) Controlling (d) Tracking	1
v.	Starting a new business and generating jobs for others is an act of _____. (a) Entrepreneurship (b) Management (c) Communication (d) Employment	1
vi.	Excessive use of polythene bags harms the environment and results in _____. (a) Ecological Imbalance (b) Data Privacy (c) Natural Disaster (d) Organizational Barrier	1

Q. 2	Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)	
i.	Which ethical framework is widely used in healthcare and medicine? (a) Utilitarianism (b) Bioethics (c) Cultural Ethics (d) Duty-based Ethics	1
ii.	_____ the whole corpus is divided into sentences. Each sentence is taken as a different data so now the whole corpus gets reduced to sentences. a. Sentence Normalization b. Sentence Segmentation c. Sentence Tokenization d. All of the above	1
iii.	Face recognition system is based on _____. (a) NLP (b) Computer Vision (c) Data Science (d) Robotics	1
iv.	_____ is the percentage of correct predictions out of all observations. (a) Accuracy (b) Precision (c) Recall (d) F1 Score	1
v.	The sub-field of AI that processes human languages is _____. (a) NLP (b) Machine Learning (c) Data Science (d) Deep Learning	1
vi.	In _____, the machine trains itself with huge amounts of data. (a) Supervised Learning (b) Deep Learning (c) Clustering (d) Rule Based	1

Q. 3	Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)	
i.	Artificial Intelligence (AI) is a rapidly growing field in Computer Science. It enables machines to perform tasks that normally require human intelligence, such as problem-solving, decision-making, and natural language understanding. Which of the following scenarios best demonstrates the application of Artificial Intelligence? (a) A calculator solving arithmetic problems instantly (b) A text editor underlining spelling mistakes automatically (c) A voice assistant like Alexa answering questions and controlling smart devices (d) A barcode scanner reading product codes at a supermarket	1
ii.	Give two methods of data collection. (a) Surveys & Interviews (b) Thoughts & Dreams (c) Myths & Rumours (d) None	1
iii.	_____ device helps to communicate with humans and abilities to make humans lives easier. a. Google Assistant b. Cortana c. Siri d. All of the above	1
iv.	If Prediction = Yes and matches Reality = Yes, it is _____. (a) True Negative (b) True Positive (c) False Negative (d) False Positive	1
v.	Which evaluation method calculates fraction of positives correctly identified? (a) Recall (b) Accuracy (c) F1 Score (d) Precision	1
vi.	Examples of Supervised Learning models are _____. (a) Classification & Regression (b) Clustering & Reduction (c) NLP & CV (d) Tokenisation & Normalisation	1
Q. 4	Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)	
i.	Machine Learning can best be described as _____. (a) The ability of systems to learn patterns from data (b) Writing fixed instructions for a computer (c) Only solving equations (d) A manual process of coding rules	1
ii.	Which of the following best explains the role of Computer Vision in healthcare? (a) Detecting tumours from medical scans (b) Converting speech into text (c) Analysing purchase history for predictions (d) Translating languages	1

iii.	_____ bots work around a script which is programmed in them. a. Script-bot b. Smart-bot c. Both a) and b) d. None of the above	1
iv.	Breaking down a paragraph of text into smaller units like words or phrases is called _____. (a) Tokenisation (b) Stemming (c) Parsing (d) Lemmatization	1
v.	In the AI Project Cycle, Evaluation is done to _____. (a) Check the accuracy and performance of the model (b) Collect more training data (c) Convert text into numerical format (d) Train the algorithm	1
vi.	_____ is the AI field that enables machines to interpret and understand visual information from the real world. (a) Computer Vision (b) Natural Language Processing (c) Data Collection (d) Modelling	1

Q. 5	Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)	
i.	_____ refers to AI models where machines learn by themselves. (a) Rule Based (b) ML (c) Data Science (d) Algorithm	1
ii.	Mapping Prediction vs Reality is done with _____. (a) Confusion Matrix (b) Accuracy (c) Recall (d) Prediction Table	1
iii.	_____ is an application of NLP. (a) Automatic Summarisation (b) Classification (c) Regression (d) Clustering	1
iv.	Last stage of AI project cycle is _____. (a) Problem Scoping (b) Data Acquisition (c) Evaluation (d) Modelling	1

v.	Pixel refers to _____. (a) Smallest unit of image (b) AI Algorithm (c) Text Data (d) Token	1
vi.	Which scenario has high False Positive cost? (a) Spam Filter (b) Weather forecast (c) Game scoring (d) Calculator	1

SECTION B: SUBJECTIVE TYPE QUESTIONS

Answer any 3 out of the given 5 questions on Employability Skills (2 x 3 = 6 marks)

Answer each question in 20 – 30 words.

Q. 6	List two best practices for effective communication.	2
Q. 7	Mention four activities that help in stress management.	2
Q. 8	A fake update notification tricked users into downloading harmful code disguised as useful software. What is this type of malware called in computer terminology?	2
Q. 9	List four qualities of an entrepreneur.	2
Q. 10	Name two human activities leading to environmental degradation.	2

Answer any 4 out of the given 6 questions in 20 – 30 words each (2 x 4 = 8 marks)

Q. 11	“An AI healthcare tool provides better quality reports for patients who can pay more and less accurate reports for poor patients. “ Which principle of bioethics is violated and why?	2
Q. 12	Sentence 1: “Artificial intelligence makes machines think like humans.” Sentence 2: “Machines learn from data using intelligence.” Find the document vectors for both sentences using the Bag-of-Words model.	2
Q. 13	“A self-driving car uses cameras to detect traffic lights and pedestrians.” How does AI use a Neural Network to make driving decisions?	2
Q. 14	“An AI translation app converts Hindi text into English.” Which domain of AI is used in this task? Explain about it.	2
Q. 15	“An AI camera captures a photo that looks blurry when zoomed in. The developer realizes the image has fewer pixels. “ What does pixel mean in an image, and how does resolution affect image clarity?	2

Q. 16	If an AI model is applied to predict rainfall for agriculture, which metric (Accuracy, Precision, Recall, F1 Score) would be most important, and why?	2
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Answer any 3 out of the given 5 questions in 50– 80 words each (4 x 3 = 12 marks)

Q. 17	Case Study: A hospital is using AI to recommend treatments for patients. The doctors want to ensure that the AI system is safe, respects patient privacy, and makes fair decisions. They are considering different ethical frameworks like Bioethics, Rights, Utility, and Virtue to guide their AI practices. Question (i) Which ethical framework will be most suitable for the healthcare setting in this case? Why? (ii) Explain how value-based frameworks (Rights, Utility, Virtue) differ from sector-based frameworks (like Bioethics). (iii) Suggest one example of applying the Utility framework in AI decision-making.	4
Q. 18	Prepare a 4W Project Canvas for implementing an AI-based Online Fraud Detection solution in digital payment systems.	4
Q. 19	In text processing, sometimes words are reduced to their root form. Example 1: playing → play, played → play Example 2: better → good Questions: (i) Which two techniques are shown in the examples? (ii) How is Stemming different from Lemmatization? (iii) Write one example of each (should be different from given examples)	4
Q. 20	A company builds two AI systems: First AI System: One predicts whether an email is spam or not spam. Second AI System: Another predicts the price of a house based on its area and location. Questions: (i) Which sub-category of Supervised Learning is used for spam detection? (ii) Which sub-category is used for predicting house price? (iii) Name the main category under which both these models come. (iv) Write one difference between Classification and Regression.	4
Q. 21	Medical Diagnosis System: A hospital tested an AI system to detect a disease on 300 patients: True Positive (TP) = 90 False Positive (FP) = 20 False Negative (FN) = 10 True Negative (TN) = 180 (i) Construct the Confusion Matrix. (ii) Compute Accuracy, Precision, Recall, and F1 Score. (iii) Comment whether the model is more suitable for screening or final diagnosis.	4

PRE- BOARD EXAMINATION (2025-26)
ENGLISH LANGUAGE AND LITERATURE - Code No. 184
CLASS-X- (2025-26)

Time allowed: 3 Hrs.				Maximum Marks: 80
General Instructions.				
Read the instructions carefully and follow them:				
1.	This question paper comprises 11 questions. All questions are compulsory.			
2.	The question paper contains THREE sections -			
Section – A: Reading Skills Section – B: Grammar and Creative Writing Skills Section – C: Literature Textbook				
3.	Attempt questions based on specific instructions for each Part.			
SECTION-A READING SKILLS (20 Marks)				
1.	Read the following passage. 10			
1.	Held every year on 21 May, UNESCO leads the celebration of World Day for Cultural Diversity for Dialogue and Development highlighting not only the richness of the world’s cultures, but also the essential role of intercultural dialogue for achieving peace and sustainable development.			
2.	A recent international emergency has proved the intrinsic value of the cultural and creative sector at generating social cohesion, educational resource or personal well-being in times of crisis. It has also underscored the sector’s potential to generate economic growth, something which is too often underestimated.			
3.	With the adoption in September 2015 of the 2030 Agenda for Sustainable Development by the United Nations, and the resolution on Culture and Sustainable Development adopted by the UN General Assembly in December 2015, the message of the World Day for Cultural Diversity for Dialogue and Development is more important than ever. The 17 Sustainable Development Goals (SDGs) can best be achieved by drawing upon the creative potential of the world’s diverse cultures and engaging in continuous dialogue to ensure that all members of society benefit from sustainable development.			
4.	Bridging the gap between cultures is urgent and necessary for peace, stability and development. Cultural diversity is a driving force of development, not only with respect to economic growth, but also as a means of leading a more fulfilling intellectual, emotional, moral and spiritual life. This is captured in the culture conventions, which provide a solid basis for the promotion of cultural diversity. Cultural diversity is thus an asset that is indispensable for reducing poverty and the achievement of sustainable development.			

5.	At the same time, acceptance and recognition of cultural diversity in particular through innovative use of media and Information and Communications Technologies (ICTs) are conducive to dialogue among civilizations and cultures, respect and mutual understanding.
6.	In 2001, UNESCO adopted the Universal Declaration on Cultural Diversity. Next, in December 2002, the UN General Assembly, in its resolution 57/249, declared May 21 to be the World Day for Cultural Diversity for Dialogue and Development, and in 2015, the Second Committee of the UN General Assembly unanimously adopted the resolution on Culture and Sustainable Development, affirming culture's contribution to the three dimensions of sustainable development, acknowledging further the natural and cultural diversity of the world, and recognizing that cultures and civilizations can contribute to and are crucial enablers of, sustainable development.
7.	The day provides us with an opportunity to deepen our understanding of the values of cultural diversity and to achieve the goals of the UNESCO Convention on the Protection and Promotion of the Diversity of Cultural Expressions adopted on 20 October, 2005.

Answer the following questions, based on the passage above.

I.	Why is May 21 celebrated every year as the World Day for Cultural Diversity for Dialogue and Development? (Paragraph 1)	1
II.	According to paragraph 2, the cultural and creative sector contributes in all of the following ways EXCEPT:	1
A. B. C. D.	Generating social cohesion Serving as an educational resource Promoting personal well-being Reducing the number of UN resolutions	
III.	Complete the sentence by selecting the correct option (traditional / economic / spiritual): Cultural diversity is not only a driver of _____ development but also enriches people's intellectual and emotional lives. (Paragraph 4)	1
IV.	What does the phrase "bridging the gap between cultures" (paragraph 4) suggest?	1
A. B. C.	Promoting peace, stability and development Erasing cultural differences completely Replacing one culture with another	
V	Complete the analogy: ICTs : dialogue among cultures :: fair trade : _____ (Paragraph 5) (a) reduced prices (b) fair wages	1
VI.	Why is cultural diversity described as "an asset indispensable for sustainable development"? (Paragraph 4)	2
VII.	What are the main ideas of paragraph 3 and paragraph 4?	1
	i) The 2030 Agenda recognises the role of culture in achieving SDGs ii) Intercultural dialogue ensures inclusive development iii) Cultural diversity drives both economic growth and intellectual enrichment iv) ICTs strengthen cultural exchange	

	Options: A. i and iii B. ii and iv C. i and ii D. iii and iv	
VIII.	Why should acceptance and recognition of cultural diversity be promoted through media and ICTs? (Paragraph 5)	2
2.	Read the following passage.	10
1.	Increasing traffic congestion every year is causing increasing air pollution, wasting time and productivity and diverse respiratory diseases. Moreover, the cost of solving or reducing traffic congestion is enormous. However, neglecting the traffic jam problem would increase the social problems among citizens.	
2.	The number of vehicles has increased considerably in the city in the past five years. Due to this increase, the city roads witness frequent traffic congestions, but above all, the vehicles emitting pollutants are affecting the environment adversely.	
3.	The Capital's vehicular population saw an addition of more than five lakh vehicles last year, registering an increase of over 4%, according to the Delhi Economic Survey 2020-21.	
4.	In spite of the largest road network, through metro and bus services in major cities the transport system is not being able to keep pace with the growing demand. Consequently, more and more people use their private vehicles, adding to increased congestion on the roads. In spite of these challenges people in India prefer road travel over air and other means of travel.	
5.	Citizens of Delhi/NCR have, time and again, pondered over the possibilities of how to reduce the traffic congestion in the city, especially during the peak hours. People should use public transport, the government must increase the facilities of public transport, people should avoid the unnecessary collection of vehicles and should use carpool and vehicle sharing.	
6.	What is required is proper implementation of corrective measures by citizens to get an organized traffic management system.	
Answer the following questions, based on the passage above.		
I	Why has reducing traffic congestion been described as a challenge in paragraph 1? This is so because reducing traffic congestion _____.	1
	A. requires advanced technologies that are unavailable in India B. involves very high costs and complex management C. depends only on citizens' awareness campaigns D. can be achieved by adding more private vehicles	

II.	Identify the phrase in paragraph 2 that conveys the harmful impact of vehicles on the environment.	1
III.	Complete the following by selecting the correct option from those given in the (Paragraph 3) brackets. Delhi witnessed a sharp rise in the number of vehicles last year, adding over five lakh new ones. This points to the _____ (growth / decline) in vehicular population in the city.	1
IV.	What does the writer mean by “in spite of the largest road network” in paragraph 4?	1
V.	Complete the following with the correct option. When the writer says “people in India prefer road travel over air and other means of travel,” in paragraph 4, it suggests that _____.	1
	A. road transport is seen as more convenient and affordable B. people dislike using buses and trains C. flights are banned in most Indian cities D. road travel reduces congestion naturally	
VI.	Complete the following appropriately. One likely reason why citizens of Delhi/NCR often discuss ways to (Paragraph 5) reduce traffic congestion is _____.	1
VII	How are ‘carpooling’ and ‘vehicle sharing’ connected in paragraph 5?	1
VIII	Elaborate how the “implementation of corrective measures” in paragraph 6 could lead to an organized traffic system	2
IX	Fill in the blank with ONE suitable word. (Paragraph 5) Measures like carpooling and vehicle sharing are encouraged because they help in reducing the number of private vehicles on the road, thereby making traffic flow more _____ and reducing environmental pollution.	1

SECTION-B
WRITING SKILLS AND GRAMMAR (20 Marks)

GRAMMAR

10

3.	Complete any ten of twelve of the following tasks, as directed.		
I.	Fill in the blank by using the correct form of the word in the bracket: The teacher’s lecture was so _____ (inform) that the students listened carefully.		1
II.	Identify the error and write the correction: She do not like to watch television in the evening. Use the format:		1
	Error	Correction	
III.	Fill in the blank with the correct form of verb given in bracket:		1

	By the time we reached the station, the train already _____ (leave).																
IV.	Change into reported speech: He said to his friend, "I will help you with your homework tomorrow." He told his friend that _____.	1															
V	Fill in the blank with the correct option: She is very particular _____ her health. A. about B. for C. of D. at	1															
VI	Report the following correctly: "Please, don't make so much noise," the librarian said to the students. The librarian told the students _____.	1															
VII.	Complete the opinion with the correct option: Watching the sunrise from the mountain top was an experience worth _____. A. remembering B. remembered C. remember D. to remember	1															
VIII	Identify the error in the given question and write the correction: Where you are going without telling me? Options: <table border="1" data-bbox="253 1150 727 1339"> <thead> <tr> <th>No.</th><th>Error</th><th>Correction</th></tr> </thead> <tbody> <tr> <td>A.</td><td>Where</td><td>When</td></tr> <tr> <td>B.</td><td>You are</td><td>Are you</td></tr> <tr> <td>C.</td><td>going</td><td>goes</td></tr> <tr> <td>D.</td><td>me</td><td>I</td></tr> </tbody> </table>	No.	Error	Correction	A.	Where	When	B.	You are	Are you	C.	going	goes	D.	me	I	1
No.	Error	Correction															
A.	Where	When															
B.	You are	Are you															
C.	going	goes															
D.	me	I															
IX	Change into reported question: He asked me, "Do you know the way to the library?" He asked me _____.	1															
X	Fill in the blank with the correct option (must/may): You _____ wear a helmet while riding a two-wheeler. It's compulsory.	1															
XI	Fill in the blank with the correct determiner: _____ of the participants could solve the puzzle correctly. A. Many B. Much C. Little D. Each	1															

XII	XII. Choose the correct option: There is very _____ sugar left in the jar; we need to buy some more. A. few B. little C. many D. plenty	1
WRITING		
NOTE: All details presented in the questions in writing section are imaginary and created for assessment purpose.		
4A.	As Ananya, the Cultural Secretary of your school, you believe that promoting local art and traditional crafts in schools can help preserve the rich cultural heritage of your region. Write a letter to the Director of Education, in about 120 words, emphasizing the importance of cultural awareness and suggesting the need to introduce workshops and clubs for traditional art and crafts in schools.	5
OR		
4B.	As Rohan, the Sports Captain of Crescent High School, you are concerned about the rise in unhealthy lifestyles among students due to excessive screen time and lack of physical activity. Write a letter to the editor of a leading newspaper in about 120 words, highlighting the health issues caused by sedentary habits and proposing ways to encourage fitness and outdoor sports among the youth.	5
5A.	You are the Cultural Secretary of your school. Two guest artists – Mr. Arvind Menon and Ms. Kavita Rao – have written to express their interest in performing at your school’s Annual Cultural Fest. Below are excerpts from their letters. Excerpt 1: ...I am delighted at the opportunity to perform at your Annual Cultural Fest. With over 15 years of experience as a classical dancer, I have performed in prestigious national festivals and trained several young students who now perform professionally. My performances are known for their discipline, grace, and deep connection with traditional art forms. I believe presenting classical dance at your event will help students appreciate India’s rich cultural heritage. Warm regards, Mr. Arvind Menon Excerpt 2: ...It would be a pleasure to perform at your school’s Annual Cultural Fest. I am a contemporary dancer and choreographer who has won awards at international platforms. My focus is on blending modern dance with themes that resonate with today’s youth, such as self-expression, social issues, and innovation. I enjoy interacting with students, encouraging them to explore creativity, and making dance a fun, engaging experience. Yours sincerely, Ms. Kavita Rao	5

	Task: Analyse the information in a paragraph, justifying which guest artist would be a better choice. Consider factors such as experience, relevance to the audience, and the purpose of the cultural event.	
	OR	
5B	Rohan, Class IX, is an intelligent and hardworking student who excels in logical reasoning and problem-solving. He enjoys teamwork but sometimes hesitates to take the lead. For the upcoming Science Exhibition, he needs to choose a partner from Neha, Kabir, and Sameer. Below are the profiles of the three candidates: Neha: Neha is highly creative and curious. She often comes up with innovative experiments and enjoys exploring new scientific ideas. However, she can be forgetful at times and may not always pay attention to small details. Kabir: Kabir is disciplined and systematic. He is good at research, record-keeping, and ensuring accuracy in every step of a project. However, he is not very confident while speaking in front of large groups. Sameer: Sameer is energetic and persuasive. He is an excellent speaker and can present ideas confidently. However, he sometimes avoids the hard work of research and prefers the presentation stage over the preparation. Task: Analyse the information in a paragraph, justifying which partner would be the best choice for Rohan. Consider factors such as creativity, organisation, presentation skills, and teamwork.	5
	SECTION-C LITERATURE TEXTBOOK (40 Marks)	
6.	Read the given extracts A and B and answer ANY ONE of the two.	5
A.	“It’s during the meal, as Lencho had predicted: big drops of rain began to fall. In the north-east huge mountains of cloud could be seen, and the air was fresh and sweet. The older boys were working in the field, while the smaller ones were playing near the house, until the woman called them all: ‘Come for dinner...’ In the very heart of the valley, the only thing the earth needed was a downpour or at least a shower and throughout the morning Lencho—who knew his fields intimately—had done nothing else but see the sky towards the northeast.” I. Justify with reference to the extract that Lencho’s belief in nature was both practical and emotional. II. Which of the following statement best reflects the deeper significance of the rain in Lencho’s life?	2 1

	a) The rain symbolised a divine blessing ensuring prosperity and security. b) The rain was an ordinary seasonal change with no special meaning. III. What can be inferred about Lencho’s personality from his behaviour before and during the rain? Support your inference with textual evidence. IV. Read the following words from the extract. i) Predicted ii) Downpour iii) Fresh iv) playing v) Sweet Select the option that correctly categorises (i–v) into nouns, verbs, and adjectives. <table><tr><th>Option</th><th>Noun</th><th>Verb</th><th>Adjectives</th></tr><tr><td>Option A:</td><td>i, iii</td><td>iv</td><td>ii, v</td></tr><tr><td>Option B</td><td>ii</td><td>i, iv</td><td>iii, v</td></tr><tr><td>Option C</td><td>ii</td><td>iv</td><td>i, iii, v</td></tr><tr><td>Option D:</td><td>i, ii</td><td>iii</td><td>iv, v</td></tr></table>	Option	Noun	Verb	Adjectives	Option A:	i, iii	iv	ii, v	Option B	ii	i, iv	iii, v	Option C	ii	iv	i, iii, v	Option D:	i, ii	iii	iv, v	
Option	Noun	Verb	Adjectives																			
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Option C	ii	iv	i, iii, v																			
Option D:	i, ii	iii	iv, v																			
OR																						
B.	And suddenly Bholi noticed that the teacher was standing by her side, smiling at her. “What’s your name, little one?” “Bh-Bho-Bho-.” She could stammer no further than that. Then she began to cry and tears flowed from her eyes in a helpless flood. She kept her head down as she sat in her corner, not daring to look up at the girls who, she knew, were still laughing at her. When the school bell rang, all the girls scurried out of the classroom, but Bholi dared not leave her corner. Her head still lowered, she kept on sobbing. “Bholi.” The teacher’s voice was so soft and soothing! In all her life she had never been called like that. It touched her heart. (Bholi) I. What is the tone the teacher is UNLIKELY to have used in the line, “What’s your name, little one?” A. reassuring B. comforting C. settling D. calming II. How does the author's use of Bholi 's perspective help build the narrative in the extract? III.Fill in the blank with the correct word from the bracket. The word ‘flood’ in the line ‘...tears flowed from her eyes in a helpless flood.’ Indicates that Bholi was crying _____ (uncontrollably / unintentionally). IV. How does the teacher's comforting demeanour contrast with the behaviour of the other girls in the classroom?	1 2 1 1																				

8.	Answer ANY FOUR of the following five questions, in about 40-50 words each. I. How does Mandela's emphasis on courage being the triumph over fear rather than the absence of it inspire individuals to face personal and social challenges? II. How does Valli's sense of independence and curiosity reflect the importance of experiential learning in a child's growth? (Madam Rides the Bus) III. Tea is described as both a popular beverage and an integral part of cultural identity. Support this statement with reference to two details from the chapter. ("Glimpses of India") IV. How does the poet use contrast to highlight the tiger's helplessness in captivity? (POEM- Tiger In the Cage) V. How does the poem use irony to bring out the difference between appearance and reality? (Poem – A Tale of Custard – The Dragon)	4x3 =12 3 3 3 3 3
9.	Answer ANY TWO of the following three questions, in about 40-50 words each. I. How does the refusal to accept an unfair marriage proposal reflect the importance of confidence and self-respect in an individual's life? II. In what way does the story of a grieving mother illustrate the universal truth of death and the path to overcoming sorrow? III. How does the act of returning stolen money highlight the power of trust and kindness in transforming human behaviour?	2x3 =6 3 3 3
10.	Answer ANY ONE of the following two questions, in about 100-120 words. A. The stories of human courage and faith in A Letter to God and The Black Aeroplane show that hope can guide people through difficult circumstances. Illustrate with reference to the stories. OR B. In what ways do the poems Fire and Ice and The Trees explore the destructive and restrictive forces in life, and how do they warn readers about the consequences of human behaviour?	1x6
11.	Answer ANY ONE of the following two questions, in about 100-120 words. A. Prove that 'A Triumph of Surgery' and 'The Making of a Scientist' highlight the role of careful observation, patience, and guidance in achieving. OR B. How do 'The Footprints Without Feet' and 'The Book That Saved the Earth' explore the consequences of misusing knowledge and power?	1x6

निर्धारित समय: 3 घंटे

अधिकतम अंक: 80

सामान्य निर्देश : निम्नलिखित निर्देशों को बहुत सावधानी से पढ़िए और उनका सख्ती से अनुपालन कीजिए।

1. प्रश्नपत्र में कुल चार खंड हैं - क, ख, ग, घ।
2. इस प्रश्न पत्र में कुल 15 प्रश्न हैं। सभी प्रश्न अनिवार्य हैं।
3. प्रश्नपत्र में आंतरिक विकल्प दिए गए हैं।
4. प्रश्नों के उत्तर दिए गए निर्देशों का पालन करते हुए लिखिए।

प्रश्न संख्या	खंड-क (अपठित)	अंक (14)
1.	निम्नलिखित गद्यांश को ध्यानपूर्वक पढ़कर उस पर आधारित पूछे गए प्रश्नों के उत्तर लिखिए :	7
	यदि हमारे वृक्ष स्वस्थ हैं तो निश्चित मानिए हम भी स्वस्थ हैं। हमें तो प्राणवायु उन्हीं से मिलती है। हम कार्बन डाई ऑक्साइड छोड़ते हैं या उन्हें देते हैं और वे बदले में ऑक्सीजन देते हैं, जो हमारे जीवन की हर गतिविधि के लिए आवश्यक है। हमारे स्वास्थ्य का हर बिंदु ऑक्सीजन की उपलब्धता से अनुप्राणित है। भले ही यह बात हमें कल्पना लोक की लगती हो लेकिन यह वैज्ञानिक प्रामाणिकता भी रखती है, इसमें रत्ती भर भी संदेह करने की गुंजाइश नहीं है। हम यदि अपने आस-पास खड़े वृक्षों की रक्षा का जिम्मा अपने कंधों पर उठा लें तो निश्चित मानिए हमने अपने स्वास्थ्य को लंबे समय तक स्वस्थ रखने की गारंटी प्राप्त कर ली है। वृक्षों की रक्षा में ही हमारे जीवन की सुरक्षा का राज छिपा है। कहा जाता है "एक स्वस्थ मन हजारों सोने के सिंहासनों से कहीं अधिक मूल्यवान होता है क्योंकि स्वस्थ मन ही समाज और स्वस्थ देश की रचना करने में समर्थ है। कुत्सित विचारों वाले लोग अपना जीवन तो चला सकते हैं लेकिन समाज और देश को नहीं चला सकते। करोड़ों परिवारों के सुनहरे भविष्य के बारे में वही चिंतन, मनन और सृजन कर सकता है जो व्यर्थ के लालच, लोभ और षड्यंत्रों से मुक्त हो और जिस पर किसी भी प्रकार का कोई अनुचित दबाव न हो।"	
(क)	कथन (A) लोभ-लालच से मुक्त व्यक्ति ही जनकल्याण कर सकता है। कारण (R) जनकल्याण के लिए अनुचित दबावों से मुक्त होना आवश्यक है। विकल्प (i) कथन सत्य है किंतु कारण असत्य है। (ii) कथन सत्य है और कारण भी सत्य है। (iii) कथन असत्य है और कारण भी असत्य है। (iv) कथन असत्य है किंतु कारण सत्य है।	1

(ख)	उपरोक्त गद्यांश का उचित शीर्षक दीजिए- (i) स्वस्थ वृक्ष (ii) स्वास्थ्य (iii) वृक्षों का महत्त्व (iv) प्राणवायु और वृक्ष।	1
(ग)	हमारा स्वास्थ्य वृक्षों पर क्यों निर्भर है? (i) वे हमें लकड़ी देते हैं। (ii) वे हमें प्राणवायु देते हैं। (iii) वे हमारी अर्थव्यवस्था का आधार हैं। (iv) उपर्युक्त सभी	1
(घ)	स्वस्थ मन सोने के सिंहासन से अधिक मूल्यवान है ऐसा क्यों कहा गया?	2
(ङ)	इस गद्यांश से क्या सीख मिलती है?	2
2.	निम्नलिखित काव्यांश को ध्यानपूर्वक पढ़कर उस पर आधारित पूछे गए प्रश्नों के उत्तर लिखिए	7
	वीर जवानो, सुनो तुम्हारे सम्मुख एक सवाल है। जिस धरती को तुमने सींचा अपने खून-पसीनों से हार गई दुश्मन की गोली वज्र सरीखे सीनों से। जब-जब उठीं तुम्हारी बाँहें, होता वश में काल है। जिस धरती के लिए सदा तुमने सब कुछ कुर्बान किया शूली पर चढ़-चढ़ हँस-हँस कर कालकूट का पान किया। जब-जब तुमने कदम बढ़ाया, हुई दिशाएँ लाल हैं। उस धरती को टुकड़े-टुकड़े करना चाह रहे दुश्मन बड़े गौर से अजब तुम्हारी चुप्पी थाह रहे दुश्मन जाति-पाँति, वर्गों-फिरकों के वह फैलाता जाल है। कुछ देशों की लोलुप नजरें लगी तुम्हारी ओर हैं कुछ अपने ही जयचंदों के मन में बैठा चोर है। सावधान कर दो उसको जो पहने कपटी खाल है।	

(क)	अपने ही जयचंद किन्हें कहा गया है? (i) ऐसे लोग जो देश में रहते हुए भी विदेशी इशारों पर देशद्रोह कर रहे हैं। (ii) ऐसे लोग जो देश को जोड़ रहे हैं। (iii) ऐसे लोग जो अपने स्वार्थवश शत्रुओं को भारत में नहीं बुला रहे हैं। (iv) ऐसे लोग जो विदेश में रहकर भारत के विरुद्ध षड्यंत्र कर रहे हैं	1
(ख)	कथन (A) इस देश को हमारे वीर सैनिकों ने अपने पौरुष से सँवारा और सुरक्षित किया है। कारण (R) कवि देश के लोगों को केवल विदेशियों से सतर्क रहने को कह रहा है। विकल्प- (i) कथन सत्य किन्तु कारण असत्य। (ii) कथन असत्य किंतु कारण सत्य। (iii) कथन और कारण दोनों सत्य। (iv) कथन और कारण दोनों असत्य।	1
(ग)	देश के शत्रु क्या करना चाहते हैं? (i) अहिंसा फैलाना (ii) देश पर कब्जा करना (iii) देश को जोड़ना (iv) भेदभाव फैलाना। कूट (i) कथन 1 सही है। (ii) कथन 2 सही है। (iii) कथन 1 और 2 सही हैं। (iv) कथन 2 और 4 सही हैं।	1
(घ)	वीर सैनिकों की किन-किन विशेषतों को उकेरा गया है स्पष्ट कीजिए ?	2
(ङ)	प्रस्तुत कविता में किस-किस उल्लेख किया गया है ?	2
	खंड ख (व्यावहारिकव्याकरण) अतिलघु/लघुप्रश्न)	16
3.	निर्देशानुसार 'रचना के आधार पर वाक्य भेद' पर आधारित पाँच प्रश्नों में से किन्हीं चार प्रश्नों के उत्तर लिखिए :	4×1=4
(क)	जो व्यक्ति परिश्रमी होते हैं वे अच्छे होते हैं।- (सरल वाक्य में बदलिए)	1
(ख)	सच बोलने वाले व्यक्ति को कोई नहीं डरा सकता। - (मिश्रवाक्य में बदलिए)	1
(ग)	अपराधी होने के कारण उसे सजा हुई।- (संयुक्त वाक्य में बदलिए)	1
(घ)	रहीम बोला, मैं कर्नाटक जा रहा हूँ।- (रेखांकित अंश उपवाक्य का कौन सा भेद है?)	1
(ङ)	जिन बालकों ने शोर मचाया था वे पकड़े गए हैं। - (रेखांकित अंश उपवाक्य का कौन सा भेद है?)	1

4.	निर्देशानुसार 'वाच्य' पर आधारित पाँच प्रश्नों में से किन्हीं चार प्रश्नों के उत्तर लिखिए :	4×1=4
(क)	क्या सुरेन्द्र ने सिनेमा देखा- (कर्मवाच्य में बदलिए)	1
(ख)	 में अकर्मक क्रिया का प्रयोग होता है, और क्रिया अक्सर असमर्थता या क्रिया के बारे में बताने वाली होती है. खाली स्थान में उचित वाच्य का नाम लिखिए।	1
(ग)	चला नहीं जाता।- (वाच्य का भेद लिखिए)	1
(घ)	छात्रों द्वारा पत्र लिखा जाता है।- (कर्तृवाच्य में बदलिए)	1
(ङ)	मजदूर ने काम पूरा कर लिया । (वाच्य का नाम बताओ)	1
5.	निर्देशानुसार 'पद परिचय' पर आधारित पाँच प्रश्नों में से किन्हीं चार प्रश्नों के रेखांकित पदों का पद-परिचय लिखिए :	4×1=4
(क)	उसने पत्र <u>लिखवाया</u>	1
(ख)	<u>मैं</u> गाय का दूध पीना पसंद करता हूँ।	1
(ग)	काला घोड़ा <u>बहुत तेज</u> भागता है।	1
(घ)	<u>माला</u> पत्र लिखती है।	1
(ङ)	राधा <u>सुंदर</u> बगीचे के सामने बैठी है।	1
6.	निर्देशानुसार 'अलंकार' पर आधारित पाँच प्रश्नों में से किन्हीं चार प्रश्नों की रेखांकित काव्य पंक्तियों में अलंकार पहचान कर लिखिए :	4×1=4
(क)	<u>देख लो साकेत नगरी है यही, स्वर्ग से मिलने गगन जा रही है।</u>	1
(ख)	नील गगन-सा शांत हृदय था सो रहा।	1
(ग)	उदित उदय गिरी मंच पर, रघुवर बाल पतंग। विगसे संत- सरोज सब, हरषे लोचन भ्रंग।।”	1
(घ)	फूले कास सकल महि छाई, जनु बरसा ऋतु प्रकट बुढ़ाई।	1
(ङ)	उषा सुनहरे तीर बरसाती, जय लक्ष्मी-सी उदित हुई।	1

	खण्ड 'ग' (पाठ्य पुस्तक एवं पूरक पाठ्य पुस्तक) बहुविकल्पीय/वर्णनात्मकप्रश्न	30
7.	निम्नलिखित पठित गद्यांश पर आधारित बहुविकल्पीय प्रश्नों के सर्वाधिक उपयुक्त उत्तर वाले विकल्प चुनकर लिखिए :	5×1=5
	शहनाई के इसी मंगलध्वनि के नायक बिस्मिल्ला खाँ साहब अस्सी बरस से सुर माँग रहे हैं। सच्चे सुर की नेमत। अस्सी बरस की पाँचों वक्त वाली नमाज इसी सुर को पाने की प्रार्थना में खर्च हो जाती है। लाखों सजदे, इसी एक सच्चे सुर की इबादत में खुदा के आगे झुकते हैं। वे नमाज के बाद सजदे में गिड़गिड़ाते हैं- 'मेरे मालिक एक सुर बरखा दे। सुर में वह तासीर पैदा कर कि आँखों से सच्चे मोती की तरह अनगढ़ आँसू निकल आएँ।' उनको यकीन है. कभी खुदा यूँ ही उन पर मेहरबान होगा और अपनी झोली से सुर का फल निकालकर उनकी ओर उछालेगा, फिर कहेगा, ले जा अमीरुद्दीन इसको खा ले और कर ले अपनी मुराद पूरी। अपने ऊहापोहों से बचने के लिए हम स्वयं किसी शरण, किसी गुफ़ा को खोजते हैं जहाँ अपनी दुश्चिताओं, दुर्बलताओं को छोड़ सकें और वहाँ से फिर अपने लिए एक नया तिलिस्म गढ़ सकें।	
(क)	कथन (A) और कारण (R) को पढ़कर उपयुक्त विकल्प चुनिए : कथन (A) : बिस्मिल्ला खाँ साहब देश के लिए इबादत में खुदा के आगे झुकते हैं। कारण (R) : बिस्मिल्ला खाँ साहब को विश्वास था कि अल्लाह उन्हें सच्चा सुर प्रदान करेगा i. कथन (A) गलत है, किन्तु कारण (R) सही है। ii. कथन (A) और कारण (R) दोनों गलत हैं। iii. कथन (A) सही है और कारण (R) कथन (A) की सही व्याख्या है। iv. कथन (A) सही है और कारण (R) कथन (A) की सही व्याख्या नहीं है।	1
(ख)	बिस्मिल्ला खाँ पाँचों वक्त वाली नमाज में क्या प्रार्थना करते हैं ? 1-नया तिलिस्म गढ़ सकें 2-सुर में वह तासीर 3-ऊहापोहों से बचने का 4-अपनी झोली मोतियों से भरने की कूट (i) कथन 1 सही है । (ii) कथन 2 सही है। (iii) कथन 1 और 2 सही हैं। (iv) कथन 2 और 3 सही हैं।	1
(ग)	बिस्मिल्ला खाँ सच्चा सुर मांगने के लिए करते हैं। 1- खुदा की इबादत करते हैं 2- सजदे में गिड़गिड़ाते हैं 3- तिलिस्म का सहारा लेते है 4- खुदा के आगे झुकते हैं। विकल्प - i. कथन 2 और 3 सही हैं। ii. कथन 1 और 2 सही हैं।	1

	iii. केवल कथन 3 सही है। iv. कथन 1, 2 और 4 सही हैं।	
(घ)	प्रस्तुत गद्यांश के अनुसार अपने ऊहापोहों से बचने के लिए क्या-क्या आवश्यक हैं - I. खुदा के आगे झुकना II. किसी गुफ़ा में रहना III. दुर्बलताओं को छोड़ना IV. उपर्युक्त सभी	1
(ङ)	बिस्मिल्ला खाँ साहब को मंगलध्वनि के नायक कहा गया है क्योंकि ? i. वे अस्सी बरस के है ii. पाँचों वक्त वाली नमाज iii. वे शहनाई वादन में अद्वितीय है iv. उपर्युक्त से कोई नहीं	
8.	निर्धारित गद्य पाठों के आधार पर निम्नलिखित चार प्रश्नों में से किन्हीं तीन प्रश्नों के उत्तर लगभग 25-30 शब्दों में लिखिए :	3X2=6
(क)	नवाब साहब की असुविधा और संकोच के क्या कारण रहे? 'लखनवी अंदाज़' पाठ के आधार पर उत्तर दीजिए।	2
(ख)	देशभक्ति की भावना भरी होने के कारण लोग चश्मे वाले को क्या कहते थे ? 'नेताजी का चश्मा' पाठ के आधार पर स्पष्ट कीजिए ।	2
(ग)	बालगोबिन भगत के मधुर गायन से सम्मोहित होकर लोग हर प्रकार की परेशानी को भूल जाते थे । 'बालगोबिन भगत' पाठ के आधार पर स्पष्ट कीजिए ।	2
(घ)	मन्नू भंडारी ने अपनी माँ की तुलना धरती से क्यों की है? 'एक कहानी यह भी' पाठ के आधार पर स्पष्ट कीजिए।	2
9.	निम्नलिखित पठित काव्यांश पर आधारित बहुविकल्पीय प्रश्नों के सर्वाधिक उपयुक्त उत्तर वाले विकल्प चुनकर लिखिए :	5X1=5
	तुम्हारी यह दंतुरित मुस्कान मृतक में भी डाल देगी जान धूलि-धूसर तुम्हारे ये गात... छोड़कर तालाब मेरी झोपड़ी में खेल रहे जलजात परस पाकर तुम्हारा ही प्राण, पिघलकर जल बन गया होगा कठिन पाषाण छू गया तुमसे कि झरने लग पड़े शेफालिका के फूल बाँस था कि बबूल ?	
(क)	कवि ने बच्चे की मुस्कान को दंतुरित क्यों कहा है ? i) क्योंकि बच्चे के मुख में दाँत नहीं है ii) बच्चे के दाँत टेढ़े-मेढ़े है iii) बच्चे का मुख नन्हें-नन्हें नए दाँतों से सुशोभित हो रहे है iv) सभी सही है	1

(ख)	पिघलकर जल बन गया होगा कठिन पाषाण से क्या आशय है ? 1. बच्चे के स्पर्श से पत्थरों से जल की धारा फूट पड़ती है । 2. पाषाण शब्द बच्चे के दाँतों के प्रयुक्त हुआ है । 3. शिशु के स्पर्श मात्र से ही कठोर-हृदय मनुष्य भी द्रवित हो उठता है । 4. पाषाण के पिघलने का कारण जल है। कूट (i) कथन 1 सही है । (ii) कथन 2 और 4 सही है। (iii) कथन 1 और 3 सही हैं। (iv) कथन 2 और 3 सही हैं।	1
(ग)	‘पाषाण का समानार्थी नहीं है? i) शिखर ii) पत्थर iii) पर्वत iv) प्रस्तर	1
(घ)	प्रस्तुत काव्य-पंक्तियों में किस भाव की प्रधानता है ? i) घृणा ii) विस्मय iii) वात्सल्य iv) वैराग्य	1
(ङ)	कथन (A) कवि की झोपड़ी में कमल का फूल खीला था कारण (R) कवि ने दंतुरित मुस्कान वाले शिशु को कमल के समान माना है (i) कथन (A) और कारण (R) दोनों सही हैं तथा कारण (R), कथन (A) की सही व्याख्या करता है। (ii) कथन (A) और कारण (R) दोनों सही हैं, परंतु कारण (R), कथन (A) की सही व्याख्या नहीं करता है । (iii) कथन (A) सही है, किंतु कारण (R) गलत है। (iv) कथन (A) गलत है, किंतु कारण (R) सही है।	1
10	निर्धारित कविताओं के आधार पर निम्नलिखित चार प्रश्नों में से किन्हीं तीन प्रश्नों के उत्तर लगभग 25-30 शब्दों में लिखिए :	3X2=6
(क)	गोपियों ने उद्धव के स्वभाव की तुलना किस-किस से की है?	2
(ख)	‘राम-लक्ष्मण-परशुराम संवाद’ - से क्या संदेश मिलता है?	2
(ग)	‘गायकों को गायन के दौरान कौन-कौन सी कठिनाइयाँ आती हैं?	2
(घ)	फसल के उत्पन्न होने में मनुष्य के हाथों की क्या भूमिका है?	2
11.	पूरक पाठ्य पुस्तक के निर्धारित पाठों पर आधारित निम्नलिखित तीन प्रश्नों में से किन्हीं दो प्रश्नों के उत्तर लगभग 50-60 शब्दों में लिखिए :	2X4=8
(क)	अपने बच्चों के प्रति माँ का ममत्व उनके प्रत्येक क्रिया-कलाप से झलकता है। भोलानाथ की माँ उसके भरपेट खाना खाने के बाद भी उसे थोड़ा और खिलाने का हठ करती थी। ‘माता का अँचल’ अध्याय में आए भोजन खिलाने वाले इस प्रसंग का उदाहरण देते हुए अपने विचार स्पष्ट कीजिए।	

(ख)	लॉग स्टॉक पर घूमते चक्र के बारे में पूछा तो यह बताया कि यह चक्र है इसको घुमाने से सारे पाप धुल जाते हैं। इससे भारत की आत्मा एक-सी क्यों दिखी? 'साना-साना हाथ जोड़ि' पाठ के आधार पर बताइए।	
(ग)	साना-साना हाथ जोड़ि' पाठ में प्रदूषण के कारण स्लोफ़ाल में कमी का ज़िक्र किया गया है। प्रदूषण के और कौन-कौन से दुष्परिणाम सामने आए हैं? लिखिए।	
	खंड-घ (रचनात्मक लेखन)	20
12.	निम्नलिखित तीन विषयों में से किसी एक विषय पर लगभग 120 शब्दों में अनुच्छेद लिखिए- (क) जल बचाओ, पृथ्वी बचाओ * जल के बिना जीवन असंभव * जल संरक्षण का महत्व * जल संरक्षण के उपाय (ख) संघर्ष ही जीवन है * संघर्ष में शक्ति * असंभव को संभव बनाने वाला गुण * संघर्ष से इतिहास रच पाने का उल्लेख - उदाहरण ग) अंतरिक्षमें भारत के बढ़ते कदम (संकेत बिंदु -अंतरिक्ष में भारत के कदमों का इतिहास, विदेशी सहायता से उपग्रह भेजना, स्वदेशी उपग्रह अंतरिक्ष में भेजना, निष्कर्ष ।	1X6=6
13.	क) सार्वजनिक स्थलों पर बढ़ते हुए धूम्रपान तथा उसके कारण बढ़ते संभावित रोगों की ओर संकेत करते हुए किसी दैनिक समाचार पत्र के संपादक को 100 शब्दों में पत्र लिखिए । अथवा ख) अपनी दाद माँ की चित्र - प्रदर्शनी पर अपनी प्रतिक्रिया लिखते हुए और दादी माँ को बधाई देते हुए एक पत्र लिखिए ।	1X5=5
14.	क) 'न्यू एज' पब्लिकेशंस नई दिल्ली को शैक्षणिक पुस्तकों के प्रचार प्रसार के लिए विक्रय कर्मियों की आवश्यकता है । आप आवेदन पत्र लिखते हुए स्ववृत्त लिखिए। अथवा ख) आपका एटीएम खो गया है इसकी सूचना देते हुए पंजाब नैशनल बैंक के शाखा प्रबंधक को एक ई-मेल लिखिए।	1X5=5
15.	क) अपने मोहल्ले में होने वाले रक्तदान शिविर के आयोजन से संबंधित एक आकर्षक विज्ञापन तैयार कीजिए अथवा ख) आपके बड़े भाई भारतीय सेना में मेजर है। दीपावली की बधाई देते हुए उन्हें एक शुभकामना संदेश लिखिए ।	1X4=4

MATHEMATICS (BASIC) – Code No. 241

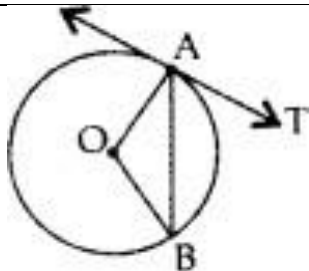
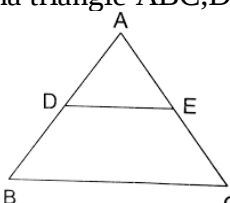
Maximum marks:80 Time:3 hours

General Instructions: -

Read the following instructions carefully and follow them: -

1. This question paper contains 38 questions. All Questions are compulsory.
2. This Question Paper is divided into 5 Sections A, B, C, D and E.
3. In Section A, Question numbers 1-18 are multiple choice questions (MCQs) and question no.19 and 20 are Assertion- Reason based questions of 1 mark each.
4. In Section B, Question numbers 21-25 are very short answer (VSA) type questions, carrying 02 marks each.
5. In Section C, Question numbers 26-31 are short answer (SA) type questions, carrying 03 marks each.
6. In Section D, Question numbers 32-35 are long answer (LA) type questions, carrying 05 marks each.
7. In Section E, Question numbers 36-38 are case study-based questions carrying 4 marks each with sub parts of the values of 1, 1 and 2 marks each respectively.
8. There is no overall choice. However, an internal choice in 2 questions of Section B, 2 questions of Section C and 2 questions of Section D has been provided. An internal choice has been provided in all the 2 marks questions of Section E.
9. Draw neat and clean figures wherever required. Take $\pi = 22/7$ wherever required if not stated.
10. Use of calculators is not allowed.

SECTION – A (Multiple Choice Questions)		
Each MCQ of 1mark, has four options with only one correct option, choose the correct option		
Q.No.	Question	Marks
Q1.	The prime factorisation of a number contains two 2's, one 3 and two 7's.The number is: a) 488 b)588 c)294 d)882	1
Q2.	If graph of a polynomial intersect x axis at 2 points and y axis at 1point then number of zeroes of polynomial are: a) 3 b) 1 c) 2 d) 4	1
Q3.	The value of k for which quadratic equation $kx^2 - 6x + 1 = 0$ has equal roots is: a) -6 b) -9 c) 9 d)-6	1
Q4.	The graph of a pair of linear equation intersect each other at one point .which of the following is the possible pair of equation a) $2x+3y=6$, $4x+6y= 12$ c) $3x-4y= -1$, $6x +8y= -2$ b) $-2x+3y= 6$, $4x-6y= 12$ d) $3x+4y=-1$, $-3x-4y=1$	1
Q5.	If zeroes of a quadraticpolynomial $2x^2-3x-k$ are reciprocal of each other than $k=$ a) -3 b) -2 c) 3 d) 2	1
Q6.	If $n+1$, $2n-5$ and $5n+3$ are in AP then n is: a) 8 b) -7 c) 7 d) -8	1

Q7.	A point on x axis is represented by (a)(x,0) (b)(0,x) (c) (0,0) (d) (x,y)	1												
Q8.	If the distance between the points (p, - 5) and (2,7) is 13 units, then the value of p is a)-3,-7 b) 3, -7 c)3, 7 d) -3, 7	1												
Q9.	Evaluate (secA +tan A) (1 – sin A) (a)secA (b)sin A (c)cosecA (d) cosA	1												
Q10.	Condition for no real roots for a quadratic equation $ax^2+bx+c=0$ is a) $b^2-4ac > 0$ b) $b^2-4ac < 0$ c) $b^2-4ac = 0$ d) $b-4ac < 0$	1												
Q11.	If $\sin A = \cos A$ for a given acute angle A, then A is a) 90° b) 30° c) 45° d) 0°	1												
Q12.	The area of the circle that can be inscribed in a square of side 6cm is: (a) $36\pi\text{cm}^2$ (b) $18\pi\text{cm}^2$ (c) $12\pi\text{cm}^2$ (d) $9\pi\text{cm}^2$	1												
Q13.	In the given figure, O is the centre of a circle, AB is a chord and AT is the tangent at A. If $\angle AOB=100^\circ$, then $\angle BAT$ is . a) 40° b) 50° c) 100° d) 60°		1											
Q14.	The area of sector of a circle is $\frac{5}{18}$ th time area of the circle then the central angle is a) 60° b) 90° c) 120° d) 100°	1												
Q15.	In a triangle ABC, $DE \parallel BC$, $AD= 2.5\text{cm}$, $BD=5\text{ cm}$, $AC= 12\text{ cm}$ then, find EC  (a)6 cm (b) 5cm (c)8cm (d) 4cm	1												
Q16.	For the following distribution the sum of lower limits of the median class and modal class is <table border="1" data-bbox="269 1520 1259 1621"><tr><td>Class</td><td>60 – 70</td><td>70 – 80</td><td>80 – 90</td><td>90 – 100</td><td>100 – 110</td></tr><tr><td>Frequency</td><td>10</td><td>15</td><td>12</td><td>20</td><td>9</td></tr></table> a)190 b)160 c) 180 d) 170	Class	60 – 70	70 – 80	80 – 90	90 – 100	100 – 110	Frequency	10	15	12	20	9	1
Class	60 – 70	70 – 80	80 – 90	90 – 100	100 – 110									
Frequency	10	15	12	20	9									
Q17.	Three coins are tossed simultaneously. the probability of getting 2 Heads is: a) $\frac{1}{2}$ b) $\frac{3}{4}$ c) $\frac{5}{8}$ d) $\frac{3}{8}$.	1												
Q18.	During conversion of a solid from one shape to another, the volume of the new shape will (a)increase (b)decrease (c) remain unaltered (d) be doubled	1												

Each of the following questions contains two statements i.e., ASSERTION and REASON, and has following four choices.

- A) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A).
- B) Both assertion (A) and reason (R) are true but reason (R) is not the correct explanation of assertion (A).
- C) Assertion (A) is true but reason (R) is false.
- D) Assertion (A) is false but reason (R) is true.

Only one of which is the correct answer.

Q19.	ASSERTION (A): If mean and mode is given than median can be find for a given data without actual calculation for a given data. REASON (R): The mean, median and mode are connected by the relation: $3\text{median} = 2\text{mean} + \text{mode}$	1
Q20.	ASSERTION (A): The value of $\sin A$ can never be greater than 1. REASON (R): $\sin A$ is the ratio of perpendicular to the hypotenuse.	1

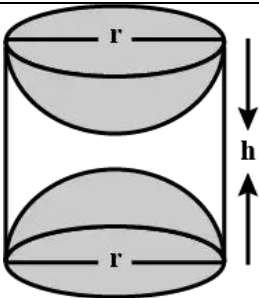
SECTION – B
(Very Short Answers)

This section comprises of VSA of 2 marks each

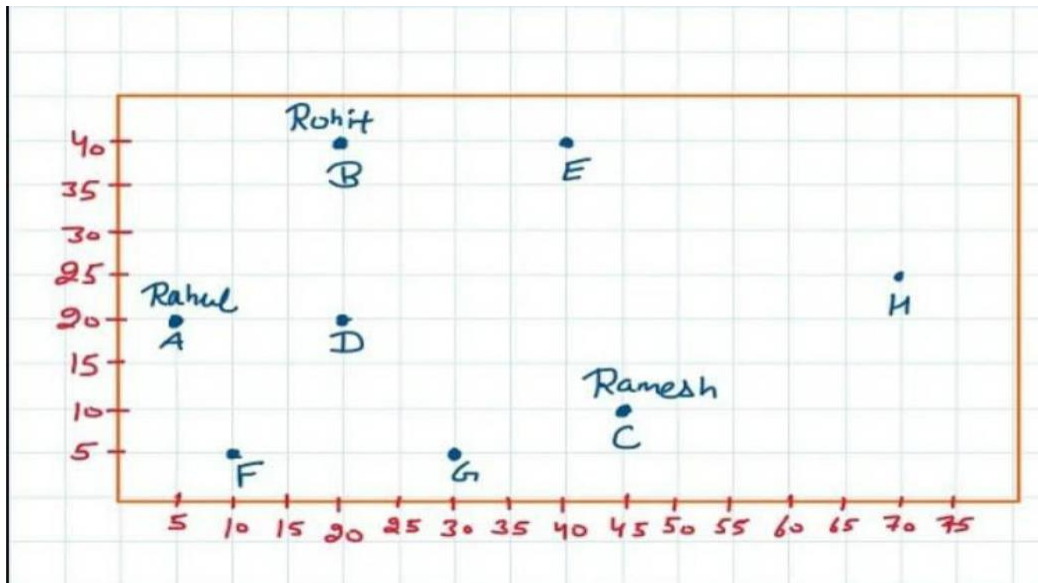
Q. No.	Question	Marks
Q21.	Check whether 6^n can end with 0 for any natural number n .	2
Q22.	The wheels of a car are of diameter 80 cm each. How many complete revolutions does each wheel make in 10 minutes when the car is travelling at a speed of 66 km per hour. OR The length of the minute hand of a clock is 14 cm. Find the area swept by the minute hand in 5 minutes.	2
Q23.	A quadrilateral ABCD circumscribes a circle. Show that $AB + CD = BC + DA$. Or	2
Q24.	Find the zeroes of the quadratic polynomial $f(x) = x^2 - x - 2$ and verify the relationship between zeroes and coefficients.	2
Q25.	If $\tan(A-B)=1$ and $\tan(A+B)=\sqrt{3}$, $0^\circ < A+B \leq 90^\circ$ and $A > B$, then find the measures of angles A and B.	2

SECTION – C (Short Answers) This section comprises of SA of 3 marks each		
Q. No.	Question	Marks
Q26.	The taxi charges in a city consist of a fixed charge together with the charge for the distance covered. For a distance of 10 km, the charge paid is ₹ 205 and for a journey of 15 km, the charge paid is ₹ 255. What are the fixed charges and the charge per km? How much does a person have to pay for travelling a distance of 35 km? OR The sum of a two-digit number and the number obtained by reversing the digits is 66. If the digits of the number differ by 2, find the number. How many such numbers are there?	3
Q27.	If $\cot \theta = 7/8$, evaluate: i) $\frac{(1 + \sin \theta)(1 + \sin \theta)}{(1 + \cos \theta)(1 - \cos \theta)}$ ii) $\sec^2 \theta - 1$	3
Q28.	Prove that radius is perpendicular to the tangent at the point of contact. If the length of tangent to a circle of radius 5 cm is 12 cm then find the distance of the external point from the centre. Or Prove that tangents drawn from external point to a circle are equal.	3
Q29.	Two dice are thrown simultaneously at random. Find the probability of getting i) a doublet ii) sum a multiple of 4 iii) sum 12.	3
Q30.	Prove that $\sqrt{5}$ is irrational.	3
Q31.	ABCD is a trapezium with $AB \parallel DC$. E and F are points on non-parallel sides AD and BC respectively such that EF is parallel to AB. Show that $\frac{AE}{ED} = \frac{BF}{FC}$	3

SECTION – D (Long Answers) This section comprises of LA type questions of 5 marks each		
Q. No.	Question	Marks
Q32.	Prove that in a triangle a line drawn parallel to any one side of the triangle intersecting the other two sides at distinct points then the two sides are divided in the same ratio.	5

Q33.	 A wooden article was made by scooping out a hemisphere from each end of a solid cylinder, as shown in fig. If the height of the cylinder is 10cm, and its base is of radius 3.5 cm, find the total surface area of the article. OR From a solid cylinder whose height is 2.4 cm and diameter 1.4 cm, a conical cavity of the same height and same diameter is hollowed out. Find the total surface area of the remaining solid to the nearest cm^2.	5																														
Q34.	The marks of the students in half yearly exam were recorded as follows. <table><tr><th>Marks</th><td>0 - 10</td><td>10 - 20</td><td>20 - 30</td><td>30 - 40</td><td>40 - 50</td><td>50 - 60</td></tr><tr><th>Number of students</th><td>12</td><td>18</td><td>27</td><td>20</td><td>17</td><td>6</td></tr></table> Find the median and modal marks from the above data. hence find the mean marks using empirical formula. OR The mode of the following frequency distribution is 36. Find the missing frequency f. <table><tr><th>Class interval</th><td>0- 10</td><td>10-20</td><td>20-30</td><td>30-40</td><td>40-50</td><td>50-60</td><td>60-70</td></tr><tr><th>Frequency</th><td>8</td><td>10</td><td>f</td><td>16</td><td>12</td><td>6</td><td>7</td></tr></table>	Marks	0 - 10	10 - 20	20 - 30	30 - 40	40 - 50	50 - 60	Number of students	12	18	27	20	17	6	Class interval	0- 10	10-20	20-30	30-40	40-50	50-60	60-70	Frequency	8	10	f	16	12	6	7	5
Marks	0 - 10	10 - 20	20 - 30	30 - 40	40 - 50	50 - 60																										
Number of students	12	18	27	20	17	6																										
Class interval	0- 10	10-20	20-30	30-40	40-50	50-60	60-70																									
Frequency	8	10	f	16	12	6	7																									
Q35.	The difference of the squares of two positive numbers is 180. Find the numbers if square of smaller number is 8 times than the greater number.	5																														

SECTION – E (Case-study Based Questions) This section comprises of 3 case-study based questions of 4 marks each with three sub-parts.		
Q. No.	Question	Marks
Q36.	Football is the most popular game in the world. It combines strength, speed, and skills. Football is the most-watched and most played sport on the earth. In Canada and America, it is called Soccer. Football was invented in China nearly 476 BC. It is a 90 minutes long game and those 90 minutes are distributed in two 45 minutes halves. Three friends Rohit, Rahul, and Ramesh decide to play Football in a playground of the School. The position of Rohit, Rahul, and Ramesh is shown in the diagram.	



- (a) What is the Co-ordinate of Ramesh's position on the field?
- (ii) Find the distance between Rahul and Ramesh position.
- (c) If Rahul takes Football to position E and Rohit comes at position G then find the distance between them.
- OR
- Find the midpoint of the line segment joining the Rahul and Ramesh position.

1
1
2

Q37.

A group of students visited India Gate on a trip. The teacher narrated that India Gate, official name Delhi Memorial, originally called All-India War Memorial is dedicated to troops of British India who died in wars fought between 1914 and 1919. It is also about 138 feet (42m) in height.



- (a) What is the angle of elevation if they're standing 42m away from India Gate?
- (b) What distance should be between the monument and students if they wish to view it from 60 degrees?

1
1

	(c) If altitude of sun is at 30degrees, then what is the length of shadow that it will cast? OR India Gate's height is 42m. What will be the cost of the wire if it were to be tied from the top of the monument and reach the ground at elevation angle of 30° @ ₹50 per metre?	2
Q38.	Sales goals are the objectives a company or a team wants to achieve in a given time. It gives sales teams a roadmap of what they need to do to help their company achieve specific targets. At the time that I was newly hired, 100 sales per month was what I required. Each following month the last plus 20 more, as I work for the goals of top sales award. When 2500 sales are thusly made, I got a holiday package. Based on the above information answer the following questions: (i) Write an AP for the given situation. ii) How many sales were made by this person in the seventh month? iii) What were the total sales after the 12th month? OR After how many month will the sale be 2500 ?	1 1 2

Pre – Board Examination (2025-26)
Class- X
Subject- Mathematics (Standard) Code No. - 041

Time: 3 hours

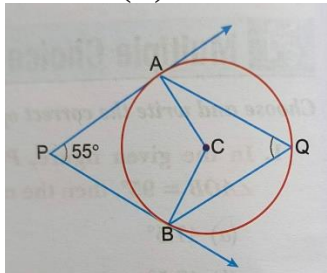
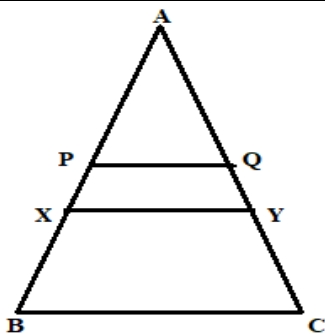
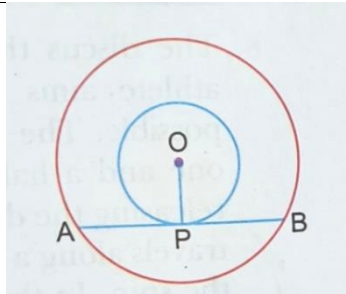
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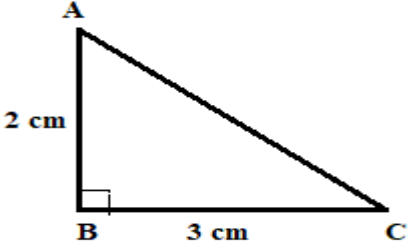
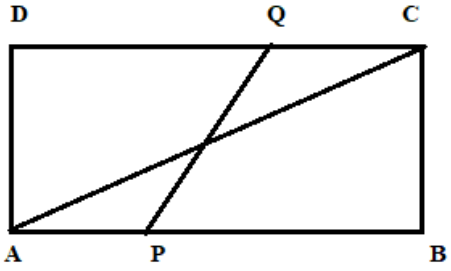
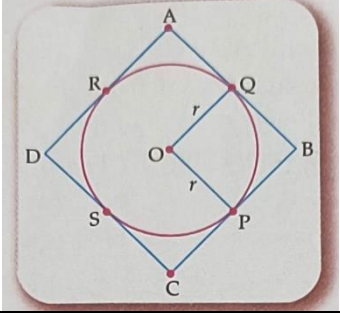
General Instructions:

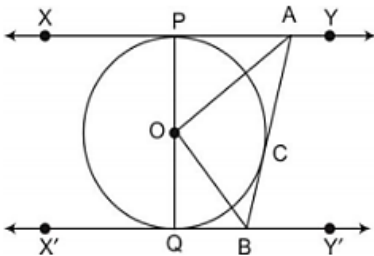
Read the following instructions carefully and follow them:

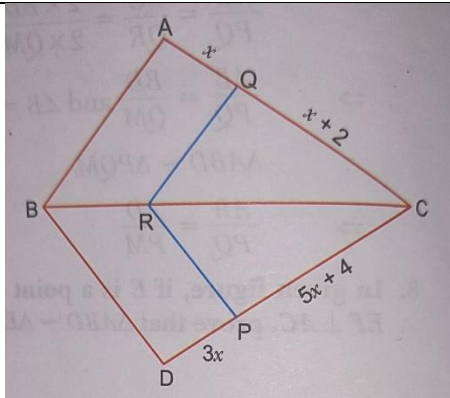
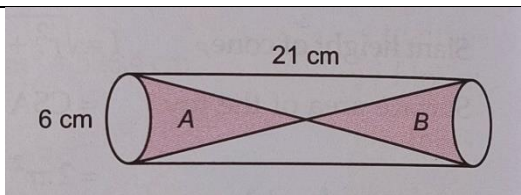
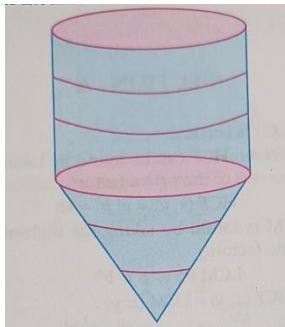
1. This question paper contains 38 questions. All Questions are compulsory.
2. This Question Paper is divided into 5 Sections A, B, C, D and E.
3. In Section A, Questions no. 1-18 are multiple choice questions (MCQs) and questions no. 19 and 20 are Assertion- Reason based questions of 1 mark each.
4. In Section B, Questions no. 21-25 are very short answer (VSA) type questions, carrying 02 marks each.
5. In Section C, Questions no. 26-31 are short answer (SA) type questions, carrying 03 marks each.
6. In Section D, Questions no. 32-35 are long answer (LA) type questions, carrying 05 marks each.
7. In Section E, Questions no. 36-38 are case study based questions carrying 4 marks each with sub parts of the values of 1, 1 and 2 marks each respectively.
8. There is no overall choice. However, an internal choice in 2 Question of Section B, 2 Questions of Section C and 2 Questions of Section D has been provided. An internal choice has been provided in all the 2 marks questions of Section E.
9. Draw neat and clean figures wherever required.
10. Take $\pi = 22/7$ wherever required if not stated.
11. Use of calculators is not allowed.

SECTION - A		
	Section A consists of 20 questions of 1 mark each.	
S.NO	Question	Marks
1	Let 'a' and 'b' be the two positive integers such that $a = p^3q^4$ and $b = p^2q^3$, where p and q are prime numbers. If $HCF(a,b) = p^m q^n$ and $LCM(a,b) = p^r q^s$, then $(m+n)(r+s) =$ (A) 15 (B) 30 (C) 35 (D) 72	1
2	If one of the zeros of a quadratic polynomial of the form $x^2 + ax + b$ is the negative of the other, then it (A) has no linear term and the constant term is negative. (B) has no linear term and the constant term is positive. (C) can have a linear term but the constant term is negative. (D) can have a linear term but the constant term is positive.	1
3	The pair of equations $ax + 2y = 9$ and $3x + by = 18$ represent parallel lines, where a,b are integers, if (A) $a = b$ (B) $3a = 2b$ (C) $2a = 3b$ (D) $ab = 6$	1
4	Which of the following quadratic equations has the sum of its root as 4? (A) $2x^2 - 4x + 8 = 0$ (B) $-x^2 + 4x - 4 = 0$ (C) $\sqrt{2}x^2 - \frac{4}{\sqrt{2}}x + 1 = 0$ (D) $4x^2 - 4x + 4 = 0$	1
5	If the mid- point of the line segment joining the points (a, 4) and (2, 2b) is (2, 6), then the value of (a+b) is given by: (A) 6 (B) 7 (C) 8 (D) 16	1
6	If $\alpha + \beta = 90^\circ$ and $\alpha = 2\beta$, then $\cos^2 \alpha + \sin^2 \beta$ is equal to : (A) 0 (B) $\frac{1}{2}$ (C) 1 (D) 2	1

7	In the given figure, PA and PB are tangents from external point P to a circle with centre C and Q is any point on the circle. Then the measure of $\angle AQB$ is: (A) 62.5° (B) 125° (C) 55° (D) 90° 	1												
8	Two numbers are in the ratio 4:5 and their HCF is 11. Find the LCM of these numbers. (A) 220 (B) 200 (C) 120 (D) 300	1												
9	In the adjoining figure, $PQ \parallel XY \parallel BC$, $AP = 2$ cm, $PX = 1.5$ cm and $BX = 4$ cm. If $QY = 0.75$ cm, then $AQ + CY$ is: (A) 6 cm (B) 4.5 cm (C) 3 cm (D) 5.25 cm 	1												
10	In the adjoining figure, AB is the chord of the larger circle touching the smaller circle. The centre of both the circles is O. If $AB = 2r$ and $OP = r$, then the radius of larger circle is : (A) $2r$ (B) $3r$ (C) $2\sqrt{2}r$ (D) $r\sqrt{2}$ 	1												
11	If $(\tan\theta + \sin\theta) = m$ and $(\tan\theta - \sin\theta) = n$, then $m^2 - n^2$ is equal to: (A) $4\sqrt{mn}$ (B) $\sqrt{mn}$ (C) $2\sqrt{mn}$ (D) $3\sqrt{mn}$	1												
12	The length of a minor arc is $\frac{2}{8}$ of the circumference of the circle. Find the area of minor sector if radius of the circle is 2 cm. (A) π (B) 2π (C) 3π (D) $\frac{\pi}{2}$	1												
13	AD is the median of $\triangle ABC$ with vertices A (5,-6), B (6,4) and C(0,0). Length of AD is equal to : (A) $\sqrt{68}$ units (B) $2\sqrt{15}$ units (C) $\sqrt{101}$ units (D) 10 units	1												
14	Area of the largest triangle that can be inscribed in a semi-circle of radius 'r' units is: (A) r^2 squ. units (B) $\frac{1}{2} r^2$ squ. units (C) $2r^2$ squ. units (D) $r^2\sqrt{2}$ squ. units	1												
15	If a cone of greatest possible volume is hollowed out from a solid wooden cylinder, then the ratio of the volume of remaining wood to the volume of cone hollowed out is: (A) 1:1 (B) 1:3 (C) 2:1 (D) 3:1	1												
16	The mean of five observations is 15. If the mean of first three observations is 14 and that of last three observations is 17, then the third observation is: (A) 20 (B) 19 (C) 18 (D) 17	1												
17	The probability of drawing an even prime number out of numbers from 1 to 30 is: (A) $\frac{1}{30}$ (B) $\frac{4}{15}$ (C) $\frac{7}{30}$ (D) 0	1												
18	For the following distribution: <table><tr><td>Class</td><td>0-5</td><td>5-10</td><td>10-15</td><td>15-20</td><td>20-25</td></tr><tr><td>Frequency</td><td>10</td><td>15</td><td>12</td><td>20</td><td>9</td></tr></table>	Class	0-5	5-10	10-15	15-20	20-25	Frequency	10	15	12	20	9	1
Class	0-5	5-10	10-15	15-20	20-25									
Frequency	10	15	12	20	9									

	The sum of lower limits of the median class and modal class is (A) 15 (B) 25 (C) 30 (D) 35	
	DIRECTION: In the question number 19 and 20, a statement of Assertion (A) is followed by a statement of Reason (R). Choose the correct option (A) Both assertion (A) and reason (R) are true and reason (R) is the correct explanation of assertion (A) (B) Both assertion (A) and reason (R) are true and reason (R) is not the correct explanation of assertion (A) (C) Assertion (A) is true but reason (R) is false. (D) Assertion (A) is false but reason (R) is true.	
19	Assertion (A) : The perimeter of $\triangle ABC$ is a rational number. Reason (R) : The sum of the squares of two rational numbers is always rational. 	1
20	Assertion (A): The value of $\sin \theta = \frac{4}{3}$ is not possible. Reason (R) : Hypotenuse is the longest side in any right angled triangle.	1
SECTION B		
Section B consists of 5 questions of 2 marks each.		
S.No	Question	Marks
21	The sum of the first three terms of an AP is 33. If the product of the first and the third term exceeds the second term by 29, find the AP. OR Find the sum of first seven numbers which are multiples of 2 as well as of 9.	2
22	ABCD is a parallelogram, point P divides AB in the ratio 2:3 and point Q divides DC in the ratio 4:1. Prove that OC is half of OA. 	2
23	In the given figure, a circle is inscribed in a quadrilateral ABCD in which $\angle B = 90^\circ$. If AD = 23 cm, AB = 29 cm and DS = 5 cm, find the radius 'r' of the circle. 	2
24	Prove that : $1 + \frac{\cot^2 \theta}{1 + \operatorname{cosec} \theta} = \operatorname{cosec} \theta$	2
25	With vertices A, B and C of $\triangle ABC$ as centres, arcs are drawn with radii 14 cm and the three portions of the triangle so obtained are removed. Find the total area removed from the triangle. OR	2

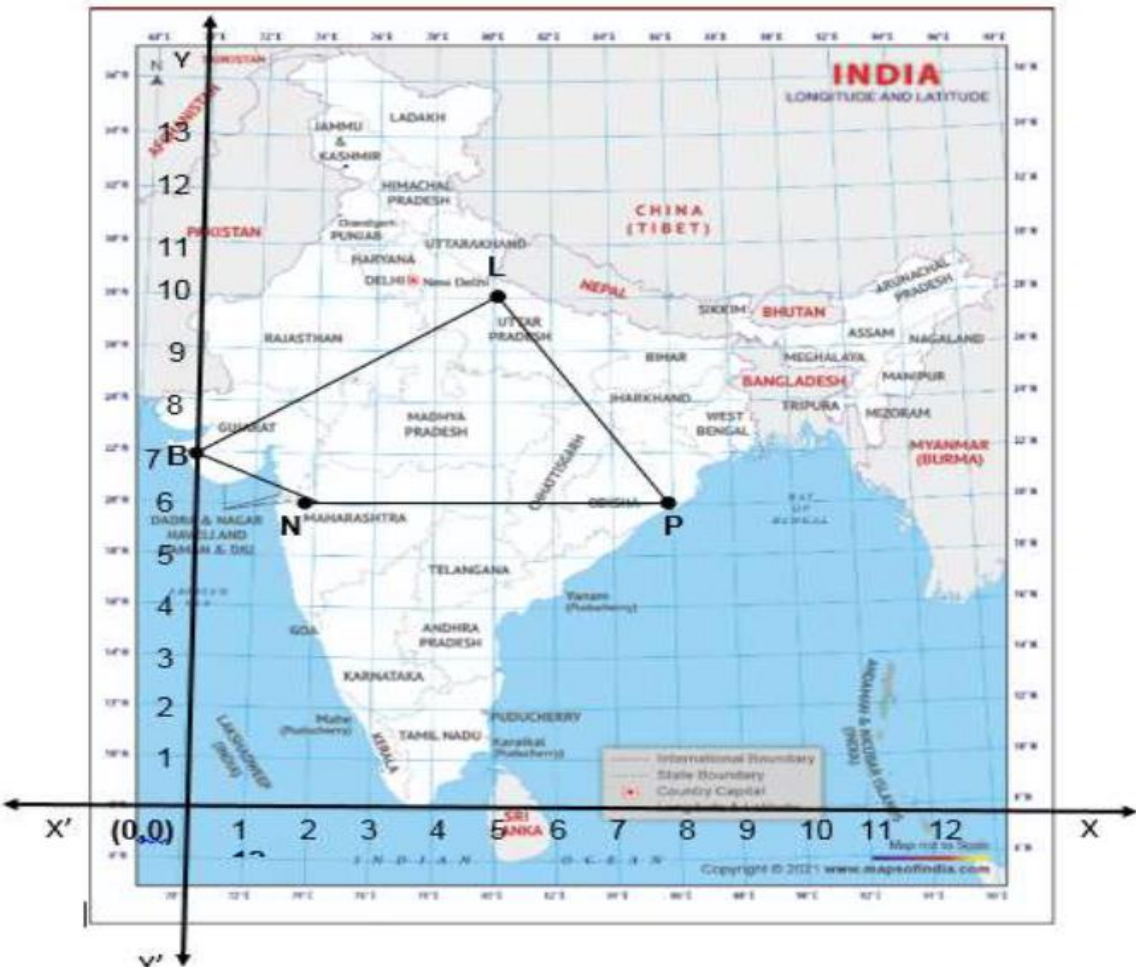
	An arc of a circle of radius 10 cm subtends an angle of 60° at the centre. Find the area of the minor segment of the circle made by the corresponding chord.	
	SECTION C	
	Section C consists of 6 questions of 3 marks each.	
S.No	Question	Marks
26	National Art Convention got registration of students from all parts of the country, of which 60 are interested in music, 84 are interested in dance and 108 students are interested in handicrafts. For optimum cultural exchange, organisers wish to keep them in minimum number of groups such that each group consists of students interested in the same art form and the number of students in each group is the same. Find the number of students in each group. Find the number of groups in each art form. How many rooms are required if each group will be allotted a room?	3
27	Find the zeros of the quadratic polynomial $pqx^2 + (pr + qs)x + rs$ and verify the relationship between the zeros and the coefficients.	3
28	Kamlesh sold a table and a chair for Rs 1050, thereby making a profit of 10% on the table and 25% on the chair. If he had taken a profit of 25% on the table and 10% on the chair he would have got Rs 1065. Find the cost price of each. OR Draw the graphs of the lines $x = -2$ and $y = 3$. Write the vertices of the figure formed by these lines, the x-axis and the y-axis. Also, find the area of the figure.	3
29	In given figure XY and X'Y' are two parallel tangents to a circle with centre O and another tangent AB with point of contact C intersecting XY at A and X'Y' at B. Prove that $\angle AOB = 90^\circ$. 	3
30	Given that $\sin\theta + \cos\theta = x$, prove that $\sin^4\theta + \cos^4\theta = \frac{2 - (x^2 - 1)^2}{2}$ OR If $\sin\theta + \sin^2\theta = 1$, then find the value of :- $\cos^{12}\theta + 3\cos^{10}\theta + 3\cos^8\theta + \cos^6\theta + 2\cos^4\theta + 2\cos^2\theta - 2$	3
31	Two different dice are rolled together. Find the probability of getting : - a multiple of 2 on one and a multiple of 3 on the other dice. - the product of two numbers on the top of the two dice is a perfect square. - a doublet	3
	SECTION D	
	Section D consists of 4 questions of 5 marks each.	

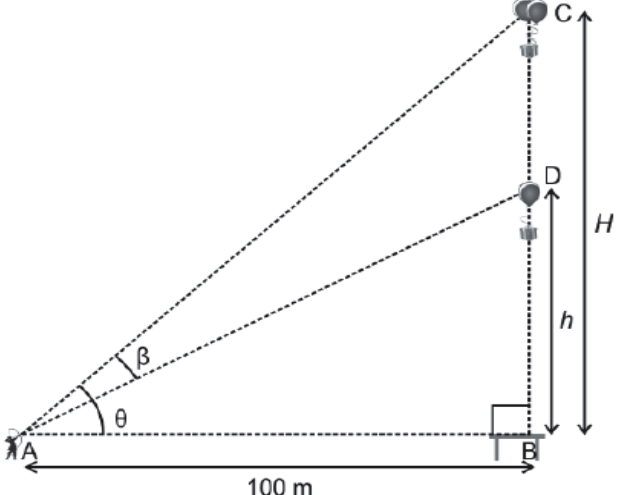
S.No	Question	Marks																														
32	State and prove Basic proportionality theorem. Using the above theorem, find the value of 'x' in the given figure where $QR \parallel AB$ and $RP \parallel BD$. 	3+2																														
33	A person on tour has ₹ 10800 for his expenses. If he extends his tour by 4 days, he has to cut down his daily expenses by ₹ 90. Find the original duration of the tour.	5																														
34	Two solid cones A and B are placed in a cylindrical tube as shown in the figure. The ratio of their capacities is 2:1. Find the heights and capacities of cones. Also, find the volume of the remaining portion of the cylinder.  OR Fermentation tanks are designed in the form of cylinder mounted on a cone as shown in figure: The total height of the tank is 3.3 m and height of conical part is 1.2 m. The diameter of the cylindrical as well as conical part is 1 m. Find the capacity of the tank. If the level of liquid in the tank is 0.7 m from the top, find the surface area of the tank in contact with liquid. 	5																														
35	Following data shows the number of family members living in different bungalows of a locality: <table><tr><th>Number of members</th><td>0-2</td><td>2-4</td><td>4-6</td><td>6-8</td><td>8-10</td><td>Total</td></tr><tr><th>Number of bungalows</th><td>10</td><td>p</td><td>60</td><td>q</td><td>5</td><td>120</td></tr></table> If the median number of members is found to be 5, find the values of p and q. Also, find the mean if mode of the data 5.01. OR Find the missing frequency 'f' in the following table, if the mean of the given data is 18. Hence, find the mode. <table><tr><th>Daily allowance</th><td>11-13</td><td>13-15</td><td>15-17</td><td>17-19</td><td>19-21</td><td>21-23</td><td>23-25</td></tr><tr><th>Number of children</th><td>7</td><td>6</td><td>9</td><td>13</td><td>f</td><td>5</td><td>4</td></tr></table>	Number of members	0-2	2-4	4-6	6-8	8-10	Total	Number of bungalows	10	p	60	q	5	120	Daily allowance	11-13	13-15	15-17	17-19	19-21	21-23	23-25	Number of children	7	6	9	13	f	5	4	5
Number of members	0-2	2-4	4-6	6-8	8-10	Total																										
Number of bungalows	10	p	60	q	5	120																										
Daily allowance	11-13	13-15	15-17	17-19	19-21	21-23	23-25																									
Number of children	7	6	9	13	f	5	4																									

SECTION E

Case study based questions are compulsory.

This section comprises of 3 case-study based questions of 4 marks each with three sub-parts

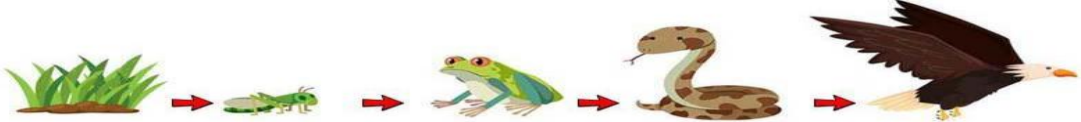
S.N	Question	Marks
36	In a pathology lab, a culture test has been conducted. In the test, the number of bacteria taken into consideration in various samples is all 3 – digit numbers that are divisible by 7, taken in order. (1) How many bacteria are considered in the fifth sample? (2) How many samples should be taken into consideration? Or Find the total number of bacteria in the first 10 samples. (3) How many bacteria are there in the 7th sample from the last?	1 1 2
37	In a GPS, The lines that run east-west are known as lines of latitude, and the lines running north-south are known as lines of longitude. The latitude and the longitude of a place are its coordinates and the distance formula is used to find the distance between two places. The distance between two parallel lines is approximately 150 km. A family from Uttar Pradesh planned a round trip from Lucknow (L) to Puri (P) via Bhuj (B) and Nashik (N) as shown in the given figure below.  Based on the above information answer the following questions using the coordinate geometry. (i) Find the distance between Lucknow (L) to Bhuj(B). (ii) If Kota (K), internally divide the line segment joining Lucknow (L) to Bhuj (B) into 3 : 2 then find the coordinate of Kota (K). (iii) Name the type of triangle formed by the places Lucknow (L), Nashik (N) and Puri (P).	1 1

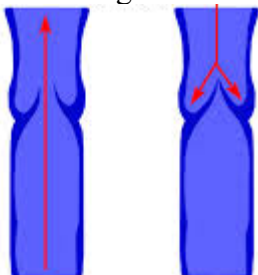
	[OR] Find a place (point) on the longitude (y-axis) which is equidistant from the points Lucknow (L) and Puri (P).	2
38	At an archery academy, Guru Drona had floated a gift box with two balloons at a height of ‘H’ meters from the table. As part of his practice, Arjuna was given the task to bring the gift box to the table placed below. Arjuna was standing on the ground at a horizontal distance of 100 meters from the table kept at point B. He aimed at the balloons with an elevation angle of ‘θ’ and shot the arrow to burst one of the balloons. When Arjuna burst the first balloon, the box came down to the height of ‘h’ meters from the table. He now reduced his angle of elevation by ‘β’ and shot his arrow at the second balloon. The second balloon burst and the gift box landed safely on the table. Assume that Arjuna’s arrows travelled in straight lines and did not curve down.  (Note: The figure is not to scale.) (Use $\sqrt{3} = 1.73$, $\sqrt{2} = 1.41$) (i) What was the original height of the gift box, if $\theta = 45^\circ$? (ii) What is the distance that the arrow has to travel to burst the second balloon, if $\theta = 45^\circ$ and $\beta = 15^\circ$? (iii) If $\theta = 45^\circ$ and $\beta = 15^\circ$, what is the difference between the box’s initial height and its height after the first shot? 1 1 OR If $\theta = 60^\circ$ and $\beta = 30^\circ$, what is the value of the ratio $\frac{H}{h}$? 2	

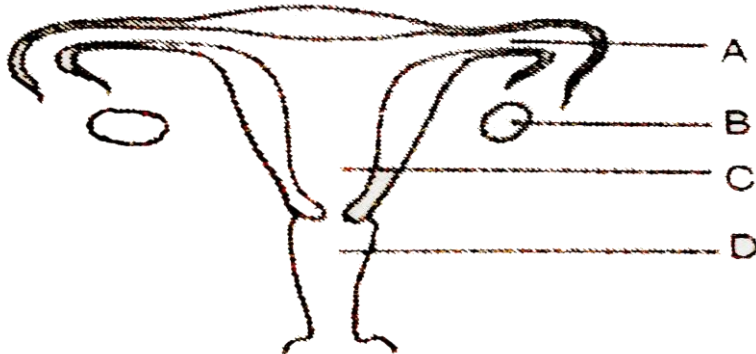
Pre-Board Examination (2025-26)**Class:10****Subject & Subject Code: Science Theory, (086)****Time allowed:3 hours****Max. Marks: 80****Instructions:**

(i) This question paper consists of 39 questions in 3 sections. Section A is Biology; Section B is Chemistry and Section C is Physics.

(ii) All questions are compulsory. However, an internal choice is provided in some questions. A student is expected to attempt only one of these questions.

Q.No.	Section – A	Marks
1.	In humans, carbohydrates are stored in the form of - A. glucose B. starch C. glycogen D. pyruvate	1
2.	In a person the tubular part of nephron is not functioning at all. What will its effect be on urine formation? A. The urine will not be formed B. Quality and quantity of urine is unaffected C. Urine is more concentrated D. Urine is more diluted	1
3.	During puberty, teenagers experience physical changes due to the release of hormones. Which gland is primarily involved in this process? A. thyroid gland B. pituitary gland C. adrenal gland D. pancreas	1
4.	Part of brain controlling voluntary movements - A. Cerebellum B. Medulla C. Cerebrum D. Pons	1
5.	If a round, green seeded pea plant (RRyy) is crossed with wrinkled, yellow seeded pea plant, (rrYY) the seeds produced in F1 generation are - A. round and yellow B. round and green C. wrinkled and green D. wrinkled and yellow	1
6.	Which trophic level will have maximum pesticides by biomagnification? A. Grass B. Grasshopper C. Frog D. Hawk	1
7.	Which of these statements would be correct if the population of snakes is greatly increased?  A. Population of green plants will decrease. B. Population of frogs will decrease. C. Population of snakes will decrease. D. Population of hawks will decrease.	1

	The following two questions consist of two statements – Assertion (A) and Reason (R). Answer these questions by selecting the appropriate option given below: A. Both A and R are true, and R is the correct explanation of A. B. Both A and R are true, and R is not the correct explanation of A. C. A is true, but R is false. D. A is false, but R is true.	
8.	Assertion (A): DNA copying is essential in reproduction. Reason (R): It maintains stability of species.	1
9.	Assertion (A): Energy available at each trophic level decreases. Reason (R): Only 1% of energy passes to next trophic level.	1
10.	(i) Draw a labelled diagram of stomata. (ii) Explain how guard cells regulate opening and closing of stomata.	2
11.	Attempt either option A or B A):- The image below shows the cross section of a blood vessel of a human arm.  i) What is the type of blood vessel shown in the image? ii) Which blood vessel carries oxygenated blood from the lungs to the heart? OR B):- State two differences between arteries and veins.	2
12.	Attempt either option A or B A. State one reason to justify the position of man at the top of most food chain. OR B. If all the wastes we generate are biodegradable, will this have no impact on the environment?	2
13.	Define reflex action & draw reflex arc involved in withdrawal of hand from hot object.	3
14.	(i) Does the genetic combination of the mother play a significant role in determining sex of a new born child? (ii) How is the sex of the child determined in human beings? Draw a diagrammatic sketch showing sex determination in human beings.	3
15.	A group of students conducted an experiment to compare aerobic and anaerobic respiration. They observed that during aerobic respiration, glucose breaks down completely in the presence of oxygen to release energy, carbon dioxide, and water. In anaerobic conditions, glucose breaks down partially to form alcohol or lactic acid along with lesser energy. They also noted that respiration is essential for ATP formation, which powers cellular activities. (i) Complete breakdown of glucose occurs in which type of respiration?	4

	(ii) Name the end products formed when glucose undergoes anaerobic respiration in human muscle cells. (iii) Identify the organelle where aerobic respiration mainly occurs. Attempt either subpart (iv) or (v) (iv) ATP is often called the “energy currency” of the cell. Justify this statement in one line. OR (v) What are the products formed during the fermentation in Yeast?	
16.	Attempt either option A or B. A:- In following diagram: -  (i) Identify part B. (ii) Identify part A and also write its functions. (iii) Identify part C and write in brief about the important event occurring here during reproduction. OR B. The gardener noticed that some plants in his garden reproduced without seeds. He decided to explore different methods of asexual reproduction in plants and animals. (i) Identify the method of reproduction in Yeast and explain how it helps in rapid increase of population. (ii) Analyse why potato and Bryophyllum are considered good examples of vegetative propagation. (iii) Compare binary fission in Amoeba and Leishmania, focusing on plane of division. (iv) Predict the disadvantage if only asexual reproduction existed in all organisms. (v) Evaluate the economic importance of artificial vegetative propagation techniques for farmers.	5
	Section B	
17.	Seema got her room walls white washed with slaked lime. After two-three days she found that white washing gave a shiny finish on the walls. Predict the reaction that has taken place on the whitewashed walls. A. Slaked lime reacts with CO_2 B. Slaked lime reacts with NO_2 C. Slaked lime reacts with O_2 D. Slaked lime reacts with SO_2	1
18.	Classify the type of reaction in which exchange of ions between reactants takes place. A. displacement reaction B. double displacement reaction C. combination reaction D. decomposition reaction	1

19.	Colour of methyl orange in acid is: - A. Yellow B. Red C. Pink D. Green	1
20.	Your teacher demonstrated a simple experiment by squeezing lemon juice on a chalk piece, what will you observe? A. Change in colour of the chalk B. No reaction will take place C. Formation of salt. D. Production of bubbles due to CO ₂ gas	1
21.	Which of the following drinks would cause more damage to the tooth enamel due to its pH level? A. Coffee (pH = 5) B. Milk (pH = 6.4) C. Water (pH = 7) D. Soda (pH = 3.3)	1
22.	The correct arrangement of metals Mg, Zn, Fe and Al in decreasing order of their reactivity with dilute acids is: A. Al > Mg > Zn > Fe B. Al > Mg > Fe > Zn C. Mg > Al > Zn > Fe D. Mg > Al > Fe > Zn	1
23.	Cinnabar is an ore of A. Mercury B. Copper C. Calcium D. Lead	1
	The following two questions consist of two statements – Assertion (A) and Reason (R). Answer these questions by selecting the appropriate option given below: A. Both A and R are true, and R is the correct explanation of A. B. Both A and R are true, and R is not the correct explanation of A. C. A is true, but R is false. D. A is false, but R is true	
24.	Assertion: - While converting Ethanol to Ethene, some drops of conc.H ₂ SO ₄ are added. Reason: - In the reaction of conversion of Ethanol to Ethene, concentrated H ₂ SO ₄ removes water molecules and also acts as a catalyst.	1
25.	A metallic element, M, has the following properties: -can be cut with a knife -occurs naturally as its chloride, of formula MCl - its oxide dissolves in water to form the hydroxide (i) State the method of extraction of the metal M. (ii) Name the major by-product obtained in the process.	2
26.	(i) Identify the oxidising and reducing agents in the reaction: $2\text{Mg} + \text{O}_2 \rightarrow 2\text{MgO}$ (ii) A student heated a blue crystalline substance. It turned white and released steam. Identify the substance and type of reaction. Write the balanced equation also.	3
27.	Attempt either option A or B A. (i) A student is given a sample of an ore containing copper sulphide. How would he extract copper metal from this ore? (ii) How is the thermit reaction used in practical applications? OR B. Write chemical equations for the following: - (i) Reaction between Aluminium and oxygen.	3

	(ii) Reaction of potassium with cold water. (iii) Reaction of Iron with steam.	
28.	A dry pellet of a common base B when kept in open absorbs moisture and turns sticky. The compound is also a byproduct of the Chlor-alkali process. (i). Identify B (ii). What is the chemical nature of this compound? (iii). Write the chemical equation for its reaction with hydrochloric acid? Mention the type of reaction. OR (iii) Why is this process named as Chlor-alkali process?	4
29.	Attempt either option A or B. A. (i) Carbon forms covalent bonds. Explain why it does not form ionic bonds. (ii) Name the second member each of alkane and alkyne? (iii) Show how many isomers are possible for the saturated hydrocarbon having four carbon atoms. OR B. A compound X is used in cough syrups and many tonics. It is also soluble in water in all proportions. i) Name the compound X and write its chemical formula ii) Which gas evolves when the compound X reacts with sodium? Write a chemical equation for the reaction. iii) What happens when compound X is heated in the presence of alkaline potassium permanganate? iv) Name the product formed when compound X reacts with ethanoic acid. Mention its one use.	5
	Section - C	
30.	A doctor has prescribed a corrective lens of -3.0D. Which type of lens is this? A. diverging lens B. converging lens C. bi-focal lens D. Plane	1
31.	What is the main function of pupil in a human eye? A. To focus light B. To regulate the amount of light entering the eye C. To provide colour vision D. To protect the eye from dust and foreign particles	1
	The following question consists of two statements - Assertion (A) and Reason (R). Answer these questions by selecting the appropriate option given below: A. Both A and R are true, and R is the correct explanation of A. B. Both A and R are true, and R is not the correct explanation of A. C. A is true, but R is false. D. A is false, but R is true.	
32.	Assertion: The word AMBULANCE on the hospital vans is written in the form of its mirror image. Reason: The image formed in a plane mirror is same size of the object.	1

33.	Explain the difference between absolute and relative refractive index.	2
34.	Domestic circuits are always connected in parallel. Justify this arrangement (Any two points). OR State Joule's law of heating. Write its mathematical expression.	2
35.	i) . How will you use two identical prisms so that a narrow beam of white light incident on one prism emerges out of the second prism as white light? Show through a diagram. ii) . A blue coloured ray is passed through a glass prism . What will be the colour of the emergent ray?	3
36.	(i) With the help of a diagram, show how the magnetic field behaves at the centre of a current-carrying circular loop. (ii) Draw the magnetic field lines around a bar magnet.	3
37.	Give reasons for the following: - (i) Earthing is necessary in a domestic circuit. (ii) A fuse is used in a circuit. (iii) A three-pin plug is used for heavy appliances.	3
38.	While taking a bath, Ravi's soap dropped into a bucket filled with water. He put his hand in water to pick the soap. He found that soap appears at a higher position than its actual position. i) Explain why the soap appeared raised? ii) If the water in the bucket is replaced with kerosene then how would the apparent position of soap change? iii) The absolute refractive indices of water and glass is $\frac{4}{3}$ and $\frac{3}{2}$ respectively. If the speed of light in glass is 2×10^8 m/s, find the speed of light in vacuum. OR iii) An object is placed at a distance of 15cm from the pole of convex mirror of focal length 20cm. Draw the ray diagram & find the position, and nature of the image.	4
39.	Attempt either option A or B. A. Two wires A and B are of equal length, different cross sectional areas and made of the same metal. (i) Name the property which is the same for both the wires. (ii) Name the property which is different for both the wires. (iii) Give the expression to show the relation between resistance and resistivity. (iv) If the resistance of wire A is four times the resistance of wire B, calculate the ratio of the cross sectional areas of the wires and the ratio of the radii of the wire. OR B. i) How is electric current related to the potential difference across the terminals of a conductor? ii) Draw labelled circuit diagram to verify this relation. iii) Why should an ammeter have low resistance? iv) What kind of graph is obtained by plotting values of V and I?	5

Pre-Board Examination (2025-26)

Class – 10 Subject – Social Science (087) Time – 3 Hrs. M.M. – 80

Time Allowed: 3:00 Hours

Maximum Marks: 80

General Instructions:

1. There are 38 questions in the Question paper. All questions are compulsory.

प्रश्न पत्र में कुल 38 प्रश्न हैं। सभी प्रश्न अनिवार्य हैं।

2. The question paper has Four Sections – A-History, B-Geography C- Political Science, and D-Economics.

प्रश्न पत्र चार खंडों में विभाजित है- खंड : इतिहास, खंड ख: भूगोल, खंड ग: राजनीतिक विज्ञान, और खंड घ: अर्थशास्त्र।

3. Each Section is of 20 Marks and has MCQs, VSA, SA, LAs and CBQ.

प्रत्येक खंड 20 अंकों का है और इसमें बहुविकल्पीय प्रश्न (MCQs), अति लघु उत्तरीय प्रश्न (VSA), लघु उत्तरीय प्रश्न (LA) और केस आधारित प्रश्न (CBQ) शामिल हैं।

4. Very Short Answer Type Questions (VSA), carry 2 marks each. Answers to each question Should not exceed 40 words.

अति लघु उत्तरीय प्रश्न (VSA) प्रत्येक 2 अंक के हैं। प्रत्येक प्रश्न का उत्तर 40 शब्दों से अधिक नहीं होना चाहिए।

5. Short Answer Type Questions (SA), carry 3 marks each. Answers to each question should not Exceed 60 words.

लघु उत्तरीय प्रश्न (SA) प्रत्येक 3 अंक के हैं। प्रत्येक प्रश्न का उत्तर 60 शब्दों से अधिक नहीं होना चाहिए।

6. Long answer type questions (LA), carry 5 marks each. Answers to each question should not Exceed 120 words.

दीर्घ उत्तरीय प्रश्न (LA) प्रत्येक 5 अंक के हैं। प्रत्येक प्रश्न का उत्तर 120 शब्दों से अधिक नहीं होना चाहिए।

7. There are case based questions (CBQ) with three sub questions and are of 4 marks each.

Answers to each question should not exceed 100 words.

केस आधारित प्रश्न (CBQ) में तीन उप - प्रश्न हैं और ये प्रत्येक का उत्तर 100 शब्दों से अधिक नहीं होना चाहिए।

8. The map-based questions, carry 5 marks with two parts- Q9. In Section A-History (2 marks) And Q19. In Section B -Geography (3 marks)

मानचित्र आधारित प्रश्न 5 अंक के हैं, जिसमें दो भाग होते हैं - खंड क (इतिहास) में प्रश्न 9 (2 अंक) और खंड ख (भूगोल) में प्रश्न 19 (3 अंक)।

9. There is no overall choice in the question paper. However, an internal choice has been

Provided in few questions. Only one of the choices in such questions must be attempted.

प्रश्न पत्र में समग्र विकल्प नहीं दिया गया है। हालांकि, कुछ प्रश्नों में आंतरिक विकल्प प्रदान किए गए हैं। ऐसे प्रश्नों में केवल एक विकल्प का ही उत्तर देना अनिवार्य है।

SECTION A – HISTORY (20 Marks)

1. Assertion (A): The female allegory “Germania” became a symbol of the German nation.

Reason (R): Germania was shown wearing a crown of oak leaves, symbolising heroism.

Choose the correct option:

(1)

- A. Both A and R are true, and R is the correct explanation of A.
- B. Both A and R are true, but R is not the correct explanation of A.
- C. A is true but R is false.
- D. A is false but R is true.

1. अभिकथन (A): स्त्री रूपक "जर्मनिया" जर्मन राष्ट्र का प्रतीक बन गया।

कारण (R): जर्मनिया को ओक के पत्तों का मुकुट पहने दिखाया गया था, जो वीरता का प्रतीक था।

सही विकल्प चुनें:

- A. A और R दोनों सत्य हैं, और R, A की सही व्याख्या है।
- B. A और R दोनों सत्य हैं, लेकिन R, A की सही व्याख्या नहीं है।
- C. A सत्य है लेकिन R असत्य है।
- D. A असत्य है लेकिन R सत्य है।

2. Consider the following statements about the Quit India Movement (1942):

(1)

- I. It was launched in August 1942 at Bombay.
 - II. Gandhiji gave the slogan “Do or Die.”
 - III. The movement was strictly non-violent with no clashes.
 - IV. It witnessed mass participation of students, workers, and peasants.
2. भारत छोड़ो आंदोलन (1942) के बारे में निम्नलिखित कथनों पर विचार कीजिए:

- I. यह अगस्त 1942 में बंबई में शुरू किया गया था।
- II. गांधीजी ने "करो या मरो" का नारा दिया था।
- III. यह आंदोलन पूरी तरह अहिंसक था और इसमें कोई झड़प नहीं हुई।
- IV. इसमें छात्रों, श्रमिकों और किसानों की व्यापक भागीदारी देखी गई।

Which statements are correct?

- A. I, II and IV
- B. II and III
- C. I and III
- D. I and IV only

3. Which of the following was a significant contribution of Bankim Chandra Chattopadhyay to Indian nationalism?

(1)

- A. Founded the Indian National Congress.
- B. Wrote the book *Hind Swaraj*.
- C. Composed the song “Vande Mataram.”
- D. Led the Revolt of 1857.

3. भारतीय राष्ट्रवाद में बंकिम चंद्र चट्टोपाध्याय का निम्नलिखित में से कौन सा महत्वपूर्ण योगदान था?

- A. भारतीय राष्ट्रीय कांग्रेस की स्थापना की।
- B. हिंद स्वराज पुस्तक लिखी।
- C. "वंदे मातरम" गीत की रचना की।
- D. 1857 के विद्रोह का नेतृत्व किया।

4. Which one of the following correctly explains the impact of the Industrial Revolution on European workers in the 19th century?

(1)

- A. Workers enjoyed high wages and good working conditions.
- B. Workers faced long working hours and unemployment.

C. Workers were given voting rights and equal opportunities.

D. Workers became owners of factories.

4. निम्नलिखित में से कौन सा कथन 19वीं शताब्दी में यूरोपीय श्रमिकों पर औद्योगिक क्रांति के प्रभाव की सही व्याख्या करता है? (

A. श्रमिकों को उच्च वेतन और अच्छी कार्य परिस्थितियाँ प्राप्त थीं।

B. श्रमिकों को लंबे कार्य घंटे और बेरोजगारी का सामना करना पड़ा।

C. श्रमिकों को मताधिकार और समान अवसर दिए गए।

D. श्रमिक कारखानों के मालिक बन गए।

5A. "The growth of nationalism in India can be linked to economic hardships created by colonialism." Explain with two points. (2)

5A. "भारत में राष्ट्रवाद के विकास को उपनिवेशवाद द्वारा उत्पन्न आर्थिक कठिनाइयों से जोड़ा जा सकता है।" दो बिंदुओं के साथ व्याख्या कीजिए।

OR

5B. Explain with two examples how Romanticism created nationalist feelings in **Europe**. (2)

5बी. दो उदाहरणों के साथ समझाइए कि कैसे स्वच्छंदतावाद ने यूरोप में राष्ट्रवादी भावनाएँ पैदा कीं।

6A. How did culture play an important role in creating the idea of the nation in Europe? Explain with any three examples. (3)

6A. यूरोप में राष्ट्र की अवधारणा के निर्माण में संस्कृति ने किस प्रकार महत्वपूर्ण भूमिका निभाई? किन्हीं तीन उदाहरणों द्वारा स्पष्ट कीजिए।

OR

6B. How did Mahatma Gandhi experiment with Satyagraha in India before launching mass movements? Explain with three examples. (3)

6B. महात्मा गांधी ने जनांदोलन शुरू करने से पहले भारत में सत्याग्रह का प्रयोग कैसे किया? तीन उदाहरणों द्वारा स्पष्ट कीजिए।

7A. "The role of Otto von Bismarck was crucial in unifying Germany." Support with five arguments. (5)

7A. "जर्मनी के एकीकरण में ओटो वॉन बिस्मार्क की भूमिका महत्वपूर्ण थी।" पाँच तर्कों के साथ समर्थन कीजिए।

OR

7B. Examine any five major features of the Civil Disobedience Movement (1930–34). (5)

7B. सविनय अवज्ञा आंदोलन (1930-34) की किन्हीं पाँच प्रमुख विशेषताओं का परीक्षण कीजिए।

8. Read the given text and answer the following questions: (4)

"By the mid-19th century, cheap printed books flooded the market. Improvements in technology brought down the price of books. Public libraries were set up in many towns. Innovations like serialised novels became popular. Charles Dickens's *Pickwick Papers* was published in a series, making it affordable. Serialisation allowed readers to relish the suspense of a story in installments, creating a new culture of reading."

Questions:

8.1) What development reduced the price of books in the mid-19th century? (1)

8.2) Name one innovation that made novels popular among the public. (1)

8.3) How did serialisation create a new reading culture? (2)

8. दिए गए पाठ को पढ़ें और निम्नलिखित प्रश्नों के उत्तर दें: (4) “19वीं शताब्दी के मध्य तक, सस्ती मुद्रित पुस्तकों ने बाजार में बाढ़ ला दी। प्रौद्योगिकी में सुधार ने पुस्तकों की कीमतों को कम कर दिया। कई शहरों में सार्वजनिक पुस्तकालय स्थापित किए गए। धारावाहिक उपन्यासों जैसे नवाचार लोकप्रिय हो गए। चार्ल्स डिक्केस के पिकविक पेपर्स को एक श्रृंखला में प्रकाशित किया गया था, जिससे यह सस्ती हो गई। धारावाहिककरण ने पाठकों को किशतों में कहानी के रहस्य का आनंद लेने की अनुमति दी, जिससे पढ़ने की एक नई संस्कृति का निर्माण हुआ।”

प्रश्न:

8.1) 19वीं शताब्दी के मध्य में किस विकास ने पुस्तकों की कीमत कम कर दी?

8.2) एक नवाचार का नाम बताइए जिसने उपन्यासों को जनता के बीच लोकप्रिय बनाया।

8.3) धारावाहिककरण ने एक नई पढ़ने की संस्कृति कैसे बनाई?

MAP SKILL-BASED QUESTION (2 marks)

9. Two places A and B have been marked on the given outline map of India. Identify them and write their correct names on the lines marked on the map. (1+1=2)

A. A Place associated with the Indian National Congress took place in December 1920.

B. Place where Gandhiji organised the Salt March in 1930.

9. दिए गए भारत के रेखा मानचित्र पर दो स्थान A और B अंकित हैं। उन्हें पहचानिए और मानचित्र पर अंकित रेखाओं पर उनके सही नाम लिखिए।

A. A. दिसंबर 1920 में भारतीय राष्ट्रीय कांग्रेस से संबंधित स्थान।

B. वह स्थान जहाँ गांधीजी ने 1930 में नमक मार्च का आयोजन किया था।

SECTION B – GEOGRAPHY (20 Marks)

10. Assertion (A): Resources are dynamic in nature.

Reason (R): Their value changes with time, technology, and human needs.

Choose the correct option:

(1)

A. Both A and R are true, and R is the correct explanation of A.

B. Both A and R are true, but R is not the correct explanation of A.

C. A is true but R is false.

D. A is false but R is true.

10. अभिकथन (A): संसाधन गतिशील प्रकृति के होते हैं।

कारण (R): उनका मूल्य समय, प्रौद्योगिकी और मानवीय आवश्यकताओं के साथ बदलता रहता है।

सही विकल्प चुनें:

A. A और R दोनों सत्य हैं, और R, A की सही व्याख्या है।

B. A और R दोनों सत्य हैं, लेकिन R, A की सही व्याख्या नहीं है।

C. A सत्य है लेकिन R असत्य है।

D. A असत्य है लेकिन R सत्य है।

11. Which one of the following soils is the most fertile and widely spread in India? (1)

- A. Black Soil B. Alluvial Soil C. Red Soil D. Laterite Soil

8. निम्नलिखित में से कौन सी मिट्टी भारत में सबसे उपजाऊ और व्यापक रूप से फैली हुई है?

- A. काली मिट्टी B. जलोढ़ मिट्टी C. लाल मिट्टी D. लैटेराइट मिट्टी

12. Consider the following statements about agriculture in India: (1)

- I. Rice requires high temperature and heavy rainfall.
II. Wheat is grown in areas with moderate rainfall.
III. Jute is grown in the black soil of Maharashtra.
IV. Cotton grows well in black soil with high temperature.

12. भारत में कृषि के बारे में निम्नलिखित कथनों पर विचार कीजिए:

- I. चावल के लिए उच्च तापमान और भारी वर्षा की आवश्यकता होती है।
II. गेहूँ मध्यम वर्षा वाले क्षेत्रों में उगाया जाता है।
III. जूट महाराष्ट्र की काली मिट्टी में उगाया जाता है।
IV. कपास उच्च तापमान वाली काली मिट्टी में अच्छी तरह उगता है।

Which of the above are correct? (1)

- A. I, II and IV B. II, III and IV C. I and III only D. I and II only

13. Which of the following is the largest producer of manganese in India?

- A. Odisha B. Karnataka C. Madhya Pradesh D. Chhattisgarh

13. निम्नलिखित में से कौन भारत में मैंगनीज का सबसे बड़ा उत्पादक है?

- A. ओडिशा B. कर्नाटक C. मध्य प्रदेश D. छत्तीसगढ़

14. Assertion (A): The Chota Nagpur plateau region has large reserves of coal.

Reason (R): This region provides raw material for many thermal power plants and industries.

Choose the correct option: (1)

- A. Both A and R are true, and R is the correct explanation of A.
B. Both A and R are true, but R is not the correct explanation of A.
C. A is true but R is false.
D. A is false but R is true.

14. अभिकथन (A): छोटा नागपुर पठारी क्षेत्र में कोयले के विशाल भंडार हैं।

कारण (R): यह क्षेत्र कई ताप विद्युत संयंत्रों और उद्योगों के लिए कच्चा माल उपलब्ध कराता है।

सही विकल्प चुनें:

- A. A और R दोनों सत्य हैं, और R, A की सही व्याख्या है।
B. A और R दोनों सत्य हैं, लेकिन R, A की सही व्याख्या नहीं है।
C. A सत्य है लेकिन R असत्य है।
D. A असत्य है लेकिन R सत्य है।

15. Which of the following transport systems is most suitable for carrying international trade in bulk goods like petroleum and iron ore? (1)

- A. Airways B. Pipelines C. Railways D. Waterways

15. निम्नलिखित में से कौन सी परिवहन प्रणाली पेट्रोलियम और लौह अयस्क जैसे थोक माल के अंतर्राष्ट्रीय

व्यापार के लिए सबसे उपयुक्त है?

A. वायुमार्ग B. पाइपलाइन C. रेलवे D. जलमार्ग

16. Mention any two problems caused by shifting cultivation. (2)

16. स्थानान्तरित खेती से उत्पन्न किन्हीं दो समस्याओं का उल्लेख कीजिए।

17A. “Minerals are indispensable for economic development.” Explain with five arguments. (5)

17A. “खनिज आर्थिक विकास के लिए अपरिहार्य हैं।” पाँच तर्कों के साथ व्याख्या कीजिए।

OR

17B. Highlight any five measures to promote sustainable development of natural resources.

17B. प्राकृतिक संसाधनों के सतत विकास को बढ़ावा देने के लिए किन्हीं पाँच उपायों पर प्रकाश डालिए।

18. Read the given text and answer the following questions: (4)

“The textile industry occupies a unique position in the Indian economy. It contributes significantly to industrial production, employment generation and foreign exchange earnings. It is the only industry that is self-reliant and complete in the value chain — from raw material to the highest value-added products. India has a large share of the world’s textile exports. The cotton textile industry is the oldest and largest, while silk, woollen, and jute industries are also significant.”

Questions:

18.1) Why does the textile industry occupy a unique position in the Indian economy? (1)

18.2) Which is the oldest and largest textile industry in India? (1)

18.3) Mention two other important textile industries in India. (2)

18. दिए गए पाठ को पढ़ें और निम्नलिखित प्रश्नों के उत्तर दें:

“कपड़ा उद्योग भारतीय अर्थव्यवस्था में एक अद्वितीय स्थान रखता है। यह औद्योगिक उत्पादन, रोजगार सृजन और विदेशी मुद्रा अर्जन में महत्वपूर्ण योगदान देता है। यह एकमात्र ऐसा उद्योग है जो कच्चे माल से लेकर उच्चतम मूल्यवर्धित उत्पादों तक, मूल्य श्रृंखला में आत्मनिर्भर और पूर्ण है। भारत का विश्व के कपड़ा निर्यात में एक बड़ा हिस्सा है। सूती वस्त्र उद्योग सबसे पुराना और सबसे बड़ा है, जबकि रेशम, ऊनी और जूट उद्योग भी महत्वपूर्ण हैं।”

प्रश्न:

18.1) कपड़ा उद्योग भारतीय अर्थव्यवस्था में एक अद्वितीय स्थान क्यों रखता है?

18.2) भारत का सबसे पुराना और सबसे बड़ा कपड़ा उद्योग कौन सा है?

18.3) भारत के दो अन्य महत्वपूर्ण कपड़ा उद्योगों का उल्लेख कीजिए।

MAP SKILL-BASED QUESTION (3 marks)

19. On the same outline map of India locate and label the following with suitable symbols: 1

I. (p) A major sea port in West Bengal.

OR

(q) Rajiv Gandhi International airport.

19. भारत के उसी रेखा मानचित्र पर निम्नलिखित को उपयुक्त प्रतीकों से चिह्नित करें और उनका पता लगाएँ:

I. (p) पश्चिम बंगाल में एक प्रमुख समुद्री बंदरगाह।

या

(q) राजीव गांधी अंतर्राष्ट्रीय हवाई अड्डा।

II. Any two of the following:

1+1=2

- Hirakud Dam
- Digboi Oil Field
- Durgapur Steel Plant
- Chennai – Software Technology Park

II. निम्नलिखित में से कोई दो:

- हीराकुंड बांध
- डिगबोई तेल क्षेत्र
- दुर्गापुर इस्पात संयंत्र
- चेन्नई - सॉफ्टवेयर प्रौद्योगिकी पार्क

SECTION – C (Political Science – 20 Marks)

20. Which of the following is correct regarding the ethnic composition of Belgium? (1)

- A. 59% in the Flemish region speak Dutch, 40% in Wallonia speak French.
- B. 59% in the Wallonia region speak French, 40% in the Flemish region speak Dutch.
- C. 59% in Brussels speak French, 40% in Brussels speak Dutch.
- D. 59% in the Wallonia region speak Dutch, 40% in the Flemish region speak French.

20. बेल्जियम की जातीय संरचना के संबंध में निम्नलिखित में से कौन सा सही है?

- A. फ्लेमिश क्षेत्र में 59% लोग डच बोलते हैं, वालोनिया में 40% लोग फ्रेंच बोलते हैं।
- B. वालोनिया क्षेत्र में 59% लोग फ्रेंच बोलते हैं, फ्लेमिश क्षेत्र में 40% लोग डच बोलते हैं।
- C. ब्रुसेल्स में 59% लोग फ्रेंच बोलते हैं, ब्रुसेल्स में 40% लोग डच बोलते हैं।
- D. वालोनिया क्षेत्र में 59% लोग डच बोलते हैं, फ्लेमिश क्षेत्र में 40% लोग फ्रेंच बोलते हैं।

21. Assertion (A): Power sharing reduces the possibility of conflict in society.

Reason (R): It ensures that power is concentrated only in the hands of the majority.

Choose the correct option:

(1)

- A. Both A and R are true, and R is the correct explanation of A.
- B. Both A and R are true, but R is not the correct explanation of A.
- C. A is true but R is false.
- D. A is false but R is true.

21. अभिकथन (A): सत्ता की साझेदारी समाज में संघर्ष की संभावना को कम करती है।

कारण (R): यह सुनिश्चित करता है कि सत्ता केवल बहुमत के हाथों में केंद्रित रहे।

सही विकल्प चुनें:

- A. A और R दोनों सत्य हैं, और R, A की सही व्याख्या है।
- B. A और R दोनों सत्य हैं, लेकिन R, A की सही व्याख्या नहीं है।
- C. A सत्य है लेकिन R असत्य है।
- D. A असत्य है लेकिन R सत्य है।

22. Identify the correct option:

Which level of government in India enjoys authority over subjects like education, health and agriculture? (1)

- A. Union Government B. State Government
C. Local Government D. Both Union and State Government jointly

22. सही विकल्प की पहचान कीजिए:

भारत में किस स्तर की सरकार को शिक्षा, स्वास्थ्य और कृषि जैसे विषयों पर अधिकार प्राप्त है?

- A. संघ सरकार B. राज्य सरकार
C. स्थानीय सरकार D. संघ और राज्य सरकार दोनों संयुक्त रूप से

23. Who among the following was the first woman to become the President of a major national political party in India? (1)

- A. Sarojini Naidu B. Sonia Gandhi C. Indira Gandhi D. Annie Besant

23. निम्नलिखित में से कौन भारत में किसी प्रमुख राष्ट्रीय राजनीतिक दल की अध्यक्ष बनने वाली पहली महिला थीं?

- A. सरोजिनी नायडू B. सोनिया गांधी C. इंदिरा गांधी D. एनी बेसेंट

24. State any two key features of a federal government system. (2)

24. संघीय सरकार प्रणाली की कोई दो प्रमुख विशेषताएँ बताइए।

25. Mention two ways in which women face disadvantages in Indian society. (2)

25. भारतीय समाज में महिलाओं को किन दो प्रकार से असुविधाओं का सामना करना पड़ता है?

26. "Democracy is considered superior to any other form of government." Support the statement with three arguments. (3)

26. "लोकतंत्र को किसी भी अन्य शासन प्रणाली से श्रेष्ठ माना जाता है।" इस कथन का समर्थन तीन तर्कों से कीजिए।

27A. "Political parties are necessary for the proper functioning of democracy." Justify the statement with suitable arguments. (5)

OR

27B. "The challenge of dynastic succession weakens the functioning of political parties." Analyse this statement. (5)

27A. "लोकतंत्र के समुचित संचालन के लिए राजनीतिक दल आवश्यक हैं।" उपयुक्त तर्कों सहित इस कथन की पुष्टि कीजिए।

या

27B. "वंशवादी उत्तराधिकार की चुनौती राजनीतिक दलों के कामकाज को कमजोर करती है।" इस कथन का विश्लेषण कीजिए।

28. Read the following passage carefully and answer the questions that follow:

Sri Lanka emerged as an independent country in 1948. The leaders of the Sinhala

community sought to secure dominance over government by virtue of their majority. As a result, the democratically elected government adopted a series of *majoritarian measures* to establish Sinhala supremacy. Over the years, it created feelings of alienation among the Sri Lankan Tamils. They felt that none of the major political parties led by the Buddhist Sinhala leaders was sensitive to their language and culture. As a result, the relations between the Sinhala and Tamil communities strained over time. On the other hand, the Belgian leaders took a different path. They recognised the existence of regional differences and cultural diversities. Between 1970 and 1993, they amended their constitution four times to work out an arrangement that would enable everyone to live together within the same country.

28.1 State any two demands of Tamils in Sri Lanka. (1)

28.2 What was the result of the Majoritarian government in Sri Lanka? (1)

28.3 Explain any two features of the Belgian model of power sharing. (2)

28. निम्नलिखित गद्यांश को ध्यानपूर्वक पढ़ें और उसके बाद दिए गए प्रश्नों के उत्तर दें:

श्रीलंका 1948 में एक स्वतंत्र देश के रूप में उभरा। सिंहली समुदाय के नेताओं ने अपने बहुमत के आधार पर सरकार पर प्रभुत्व स्थापित करने की कोशिश की। परिणामस्वरूप, लोकतांत्रिक रूप से चुनी गई सरकार ने सिंहली वर्चस्व स्थापित करने के लिए कई बहुसंख्यकवादी उपाय अपनाए। वर्षों से, इसने श्रीलंकाई तमिलों में अलगाव की भावनाएँ पैदा कीं। उन्हें लगा कि बौद्ध सिंहली नेताओं के नेतृत्व वाली कोई भी प्रमुख राजनीतिक पार्टी उनकी भाषा और संस्कृति के प्रति संवेदनशील नहीं थी। परिणामस्वरूप, समय के साथ सिंहली और तमिल समुदायों के बीच संबंध तनावपूर्ण हो गए। दूसरी ओर, बेल्जियम के नेताओं ने एक अलग रास्ता अपनाया। उन्होंने क्षेत्रीय मतभेदों और सांस्कृतिक विविधताओं के अस्तित्व को मान्यता दी। 1970 और 1993 के बीच, उन्होंने एक ऐसी व्यवस्था बनाने के लिए अपने संविधान में चार बार संशोधन किया जिससे सभी लोग एक ही देश में एक साथ रह सकें।

28.1 श्रीलंका में तमिलों की कोई दो माँगें बताइए।

28.2 श्रीलंका में बहुसंख्यकवादी सरकार का क्या परिणाम हुआ?

28.3 सत्ता साझेदारी के बेल्जियम मॉडल की किन्हीं दो विशेषताओं की व्याख्या कीजिए।

SECTION – D (Economics – 20 Marks)

29. Which of the following best illustrates the meaning of development? (1)

- A. Increase in national income only B. Growth of agriculture alone
C. Material well-being and improvement in quality of life D. Growth of industrial sector alone

29. निम्नलिखित में से कौन सा विकास के अर्थ को सबसे अच्छी तरह दर्शाता है?

- A. केवल राष्ट्रीय आय में वृद्धि B. केवल कृषि का विकास
C. भौतिक कल्याण और जीवन की गुणवत्ता में सुधार D. केवल औद्योगिक क्षेत्र का विकास

30. Which of the following is an example of disguised unemployment? (1)

- A. A worker in a factory is removed due to recession.
B. More people working in agriculture than actually required.
C. A graduate waiting for a job opportunity.
D. A worker employed on daily wages in a city.

30. निम्नलिखित में से कौन सा प्रच्छन्न बेरोजगारी का उदाहरण है?

- A. मंदी के कारण एक कारखाने में काम करने वाले एक कर्मचारी को नौकरी से निकाल दिया जाता है।
B. कृषि में आवश्यकता से अधिक लोग काम करते हैं।

- C. नौकरी के अवसर की प्रतीक्षा कर रहा एक स्नातक।
D. एक शहर में दैनिक मजदूरी पर कार्यरत एक कर्मचारी।

31. Which sector provides services like banking, insurance and communication? (1)

- A. Primary sector B. Secondary sector C. Tertiary sector D. Organised sector

28. कौन सा क्षेत्र बैंकिंग, बीमा और संचार जैसी सेवाएँ प्रदान करता है? (1)

- A. प्राथमिक क्षेत्र B. द्वितीयक क्षेत्र C. तृतीयक क्षेत्र D. संगठित क्षेत्र

32. Which institution issues currency notes in India? (1)

- A. Finance Ministry B. Reserve Bank of India
C. State Bank of India D. Commercial Banks

32. भारत में करेंसी नोट कौन सी संस्था जारी करती है? (1)

- A. वित्त मंत्रालय B. भारतीय रिज़र्व बैंक
C. भारतीय स्टेट बैंक D. वाणिज्यिक बैंक

33. Identify the correct statement regarding double coincidence of wants. (1)

- A. It simplifies trade as people get what they want.
B. It makes trade difficult since each person must have what the other wants.
C. It ensures equal distribution of goods in society.
D. It eliminates the need for money.

33. आवश्यकताओं के दोहरे संयोग के संबंध में सही कथन की पहचान कीजिए।

- A. यह व्यापार को सरल बनाता है क्योंकि लोगों को वह मिलता है जो वे चाहते हैं।
B. यह व्यापार को कठिन बनाता है क्योंकि प्रत्येक व्यक्ति के पास वह होना चाहिए जो दूसरे को चाहिए।
C. यह समाज में वस्तुओं का समान वितरण सुनिश्चित करता है।
D. यह धन की आवश्यकता को समाप्त करता है।

34. Match the following correctly: (1)

Column A (Factors)

Column B (Outcomes)

- | | |
|-------------------------------|--|
| 1. Technology | i. Faster communication and transport |
| 2. Liberalisation | ii. Opening of foreign trade and investment |
| 3. Globalisation | iii. Interconnection of markets and ideas |
| 4. Multinational corporations | iv. Expansion of production across countries |

Options:

- (A). 1-i, 2-ii, 3-iii, 4-iv (B). 1-iv, 2-iii, 3-i, 4-ii
(C). 1-ii, 2-iv, 3-i, 4-iii (D). 1-iii, 2-ii, 3-iv, 4-i

34. निम्नलिखित का सही मिलान करें:

स्तंभ अ (कारक)

स्तंभ ब (परिणाम)

- | | |
|-----------------|--|
| 1. प्रौद्योगिकी | i. तेज़ संचार और परिवहन |
| 2. उदारीकरण | ii. विदेशी व्यापार और निवेश का खुलना |
| 3. वैश्वीकरण | iii. बाज़ारों और विचारों का अंतर्संबंध |

4. बहुराष्ट्रीय निगम iv. विभिन्न देशों में उत्पादन का विस्तार
विकल्प:

- (A). 1-i, 2-ii, 3-iii, 4-iv (B). 1-iv, 2-iii, 3-i, 4-ii
(C). 1-ii, 2-iv, 3-i, 4-iii (D). 1-iii, 2-ii, 3-iv, 4-i

35. “Public facilities are important for overall development.” Explain with three points. (3)

35. “सार्वजनिक सुविधाएँ समग्र विकास के लिए महत्वपूर्ण हैं।” तीन बिंदुओं के साथ स्पष्ट कीजिए।

36. (Data Based Question)

Study the following table and answer the questions:

Year	Share of Primary Sector प्राथमिक क्षेत्र (%)	Share of Secondary Sector द्वितीयक क्षेत्र (%)	Share of Tertiary Sector तृतीयक क्षेत्र (%)
1973	45	23	32
2018	27	25	48

36.1 What change is observed in the share of the primary sector from 1973 to 2018? (1)

36.2 Which sector has emerged as the largest in 2018? (1)

36.3 Give one reason for the rise of this sector. (1)

36.1 1973 से 2018 तक प्राथमिक क्षेत्र की हिस्सेदारी में क्या परिवर्तन देखा गया है?

36.2 2018 में कौन सा क्षेत्र सबसे बड़ा बनकर उभरा है?

36.3 इस क्षेत्र की वृद्धि का एक कारण बताइए।

37. Mention any three factors that have enabled globalisation. (3)

37. वैश्वीकरण को संभव बनाने वाले किन्हीं तीन कारकों का उल्लेख कीजिए।

38A. “Organised sector provides better security to workers than unorganised sector.” Justify the statement with five arguments. (5)

OR

38B. “Privatisation has both positive and negative impacts on the Indian economy.” Explain with five points.

38A. “संगठित क्षेत्र, असंगठित क्षेत्र की तुलना में श्रमिकों को बेहतर सुरक्षा प्रदान करता है।” इस कथन की पुष्टि पाँच तर्कों से कीजिए।

या

38B. “निजीकरण का भारतीय अर्थव्यवस्था पर सकारात्मक और नकारात्मक दोनों प्रभाव पड़ता है।” पाँच बिंदुओं के साथ व्याख्या कीजिए।

Map for Q. no. 9 (Section A) & Q. no. 19 (Section B)

प्रश्न संख्या 9 (खंड A) और प्रश्न संख्या 19 (खंड B) के लिए मानचित्र

