

**KENDRIYA VIDYALAYA SANGATHAN RAIPUR REGION**  
**SECOND PRE-BOARD EXAM (2025-26)**  
**SUBJECT: ENGLISH COMMUNICATIVE (SUBJECT CODE: 101)**  
**CLASS: X**

**M M: 80**

**TIME: 3 HOURS**

**GENERAL INSTRUCTIONS:**

**Read the following instructions carefully and follow them:**

- i) This question paper has 12 questions and all questions are compulsory.**
- ii) This question Paper contains four sections:**  
**Section A: Reading Skills**  
**Section B: Writing Skills**  
**Section C: Grammar**  
**Section D: Literature**
- iii) Attempt all questions based on specific instructions for each part. Write the question number and part thereof in your answer sheet.**
- iv) Adhere to the prescribed word limit while answering the questions.**
- v) Separate instructions are given with each question/part, wherever necessary.**

**SECTION A: READING SKILLS (22 MARKS)**

**1. Read the following passage carefully:**

- 1 Tourism has long been regarded as one of the world's largest industries, contributing significantly to global economies and cultural exchange. In today's interconnected world, tourism is not merely about leisure; it is also about education, heritage conservation, sustainable development, and building bridges between communities. From ancient pilgrimages to modern-day adventure sports, the purpose and style of travel have constantly evolved with the times.
- 2 One of the most remarkable aspects of tourism is its ability to generate employment. According to the World Travel and Tourism Council, millions of jobs across the world are directly or indirectly linked to this industry, ranging from tour operators and hotel staff to local artisans and guides. In countries like India, which is blessed with diverse landscapes and rich cultural heritage, tourism acts as a powerful tool for rural development. Villagers often find employment in eco-tourism projects, handicraft markets, and homestays, thereby supplementing their income and improving their quality of life.
- 3 Tourism also plays an important role in preserving history and culture. When heritage monuments, temples, palaces, or ancient towns attract visitors, governments and local authorities are motivated to invest in their upkeep. This not only safeguards the nation's identity but also instils pride among its citizens. Festivals like the PushkarFair in Rajasthan, the Durga Puja in Kolkata, and the Hornbill Festival in Nagaland have gained international recognition because of tourism. Visitors not only witness these vibrant traditions but also promote them globally through social media, thus increasing cultural visibility.

- 4 The rise of eco-tourism and responsible travel marks a significant shift in recent decades. Travellers are now more conscious about their environmental footprint and seek experiences that are sustainable. Trekking in the Himalayas, visiting wildlife sanctuaries, or staying in eco-friendly resorts are examples of how tourism can coexist with nature. Eco-tourism encourages conservation of biodiversity while offering travellers a chance to reconnect with nature. Importantly, it also educates tourists about the fragile balance between human activity and the environment.
- 5 Technology has further revolutionized tourism. Online booking platforms, travel blogs, and mobile apps have made planning a trip easier than ever. Virtual tours allow people to explore destinations from their homes, and artificial intelligence is being used to design personalized travel experiences. Social media platforms like Instagram and YouTube have become powerful influencers, with images and videos inspiring millions to pack their bags and explore the world.
- 6 However, tourism is not without challenges. Over-tourism in popular destinations such as Venice, Bali, or the Taj Mahal has led to overcrowding, environmental degradation, and cultural dilution. In some cases, the local population suffers as rising tourist demand increases the cost of living. Moreover, the COVID-19 pandemic demonstrated how fragile the industry can be. Lockdowns, travel restrictions, and fear of infection brought tourism to a near halt in 2020, causing severe economic losses worldwide.
- 7 In conclusion, travel and tourism remain one of the most dynamic and influential industries of the modern era. While it offers immense opportunities for cultural enrichment, employment, and global harmony, it must also be practiced responsibly. Sustainable tourism, cultural sensitivity, and technological innovation are the keys to ensuring that this industry continues to flourish without harming the planet or undermining local communities. Ultimately, tourism is not just about visiting new places—it is about broadening horizons, embracing diversity, and celebrating the shared heritage of humanity.

**505 words/ Adapted from Times of India**

**Answer the following questions, based on the above passage:**

- I. Which example best shows how tourism can support **inclusive rural development**? (Para 2) 1
  - a) Expansion of five-star hotels
  - b) Villagers working in eco-tourism and handicrafts
  - c) Online booking apps for urban travellers
  - d) Increase in international flights

- II. A tourist attending the **Hornbill Festival in Nagaland** is most likely contributing to: (Para 3) 1
- a) Urban migration
  - b) Cultural preservation and global visibility
  - c) Decline in local traditions
  - d) Environmental degradation
- III. A family choosing to stay in an **eco-friendly resort** while vacationing is demonstrating: 1
- a) Irresponsible travel
  - b) Technology-driven tourism
  - c) Sustainable tourism practices
  - d) Luxury-focused tourism
- IV. Mention two ways technology has transformed the travel experience for tourists. (Para 5) 2
- V. If a student cannot afford to travel abroad, which technological advancement from the passage could still help them experience new places? (Para 5) 1
- a) Artificial intelligence
  - b) Virtual tours
  - c) Travel blogs
  - d) Mobile booking apps
- VI. Find a word from Paragraph 2, which means the same as ‘adding to’. 1
- VII. Explain two major challenges faced by the tourism industry in the modern era with reference to the passage. 2
- VIII. According to the passage, three key practices which ensure that tourism flourishes without harming the planet or local communities are \_\_\_\_\_ 2
- IX. What idea in the conclusion shows the **true purpose of tourism**? 1

2. **Read the following passage carefully:**

**“Rising Sleep Disorders Among Children: A Silent Health Crisis”**

In today’s fast-paced world, sleep disorders among children are becoming an increasing concern for doctors and parents alike.

Research published in the *Journal of Paediatric Medicine* highlights that nearly 30% of school-going children in India suffer from insufficient or disturbed sleep.

The reasons are varied—excessive screen time, irregular bedtime routines, academic stress, and reduced outdoor activity. Children who do not get enough sleep often display symptoms like irritability, poor concentration, headaches, and lower immunity. Doctors also warn that chronic sleep deprivation may affect brain development and emotional well-being in the long term.

Health experts recommend practical lifestyle changes: limiting the use of gadgets before bedtime, ensuring at least one hour of physical play daily, and creating a calm sleep environment at home. Parents are also encouraged to observe sleep patterns and consult paediatricians if problems persist.

Interestingly, schools are now being advised to start later in the morning, recognising that children require 8–10 hours of quality sleep for healthy growth. With awareness, timely intervention, and collective effort from parents, schools, and society, sleep disorders in children can be managed effectively.

<b>Cause of Sleep Disorder</b>	<b>Percentage of Affected (approx.)</b>	<b>Common Symptoms</b>	<b>Impact on Daily Life</b>	<b>Preventive Measures</b>
Excessive Screen Time (TV/phones)	<b>30%</b>	Irritability, delayed sleep onset	Difficulty in waking up, lack of focus in class	<b>Less Use of Gadgets</b>
Academic Stress & Homework Load	<b>20%</b>	Anxiety, restlessness, poor concentration	Decline in academic performance, mood swings	<b>Balanced study schedule, Meditation</b>
Irregular Bedtime Routines	<b>15%</b>	Disturbed sleep, nightmares	Daytime sleepiness, inconsistent energy levels	<b>Set fixed sleep–wake timings</b>
Reduced Outdoor Activity	<b>10%</b>	Low immunity, headaches, lethargy	low physical stamina	<b>One-hour Physical activity</b>
Poor Diet / Excess Junk Food	<b>8%</b>	Stomach discomfort, restlessness at night	Loss of appetite, poor growth rate	<b>Nutritious meals, avoid caffeine &amp; sugar</b>

**Source:** The Health Times, Children’s Wellness Section

(approx. 200 words) Based on MCB Theme: Health and Medicine

**Answer the following questions, based on your reading of the above information.**

- I. Children with irregular bedtime routines often face:
- High stamina
  - Nightmares and daytime sleepiness
  - Increased appetite
  - Better concentration

**1**

- II. Identify one school-level step suggested in the passage to support healthy sleep. **1**
- III. The percentage of children who are affected with excessive screen time and irregular bedtime routines is \_\_\_\_\_ **1**  
 a) 30%  
 b) 50%  
 c) 45%  
 d) 55%
- IV. Explain how excessive use of gadgets before bedtime can affect a child's daily life. **2**
- V. Doctors warn that chronic sleep deprivation may affect \_\_\_\_\_ development and emotional well-being. **1**
- VI. According to the passage, how can parents help in managing their child's sleep disorders? **1**
- VII. State which of the following is **True**: **1**  
 a) Nearly 50% of school-going children in India suffer from sleep disorders.  
 b) Health experts recommend at least one hour of physical play daily for children.  
 c) Sleep deprivation has no effect on emotional well-being.
- VIII. Describe the role of lifestyle changes in reducing sleep disorders among children. **2**

### SECTION: B WRITING SKILLS (22 MARKS)

3. Write an application to your school principal, in not more than 50 words, requesting for renovation of the school library with e-books, digital resources, and comfortable reading spaces. You are Abhijeet Singh, Class X-B, Vice-Captain. **1X3=3**
4. You are Neha/Nikhil. You visited a hotel with your family and were welcomed by a polite receptionist who guided you in every possible way. Write a descriptive paragraph on the receptionist in 80-100 words. **1X4=4**
5. **Attempt any one out of the two, A or B in 120 words. 1X7=7**
- A.** During your MCB lesson, a topic '*Cyber Safety – Think Before You Click*' was discussed. It warned students about cyber bullying, online frauds, misuse of personal data, and excessive screen time. You strongly feel the need to create awareness among school children and parents as **Rahul Khanna of Class X-B**, write a letter to the Editor of a leading newspaper expressing your concern. Emphasize the role of schools, parents, and government in ensuring safe use of the internet. Suggest steps like workshops, parental control apps, and strict laws against cybercrime.  
 Use your own ideas along with those from MCB Unit 3: Science, to write this letter.

**OR**

- B.** Your teacher showed you a poster on *Digital Education – The Future of Learning*. It mentioned how online platforms, smart classrooms, and e-resources are changing the way children study. However, it also highlighted the gap between urban and rural areas in terms of access to devices and internet. Write a letter to the Editor of a national daily expressing your views on the importance of making digital education accessible to all. Suggest measures like affordable internet, digital libraries, and teacher training.

Use your own ideas along with those from MCB Unit 2: Education, to write this letter.

**6. Attempt any one out of the two in 150 words. 1X8=8**

Imagine you are Atul of class X. Write an article for your school magazine on “Unity in Diversity – The True Strength of India.” India’s greatest strength lies in its vibrant tapestry of diversity. Explain how unity amidst diversity is not just a beautiful ideal, but the bedrock of our existence.

You may use your own ideas along with the given cues and your reading of MCB Unit 6: National Integration.

Unity ensures political stability, fuels robust economic growth, and strengthens our collective resilience-respecting our differences but prioritizing our identity as Indians, our national integration safeguards the democratic spirit, a magnificent confluence of languages, cultures, and traditions

**OR**

Write an article about the latest advancements in renewable energy technologies. Highlight solar, wind, and hydroelectric power, discuss innovations in energy storage and distribution, and the potential impact on global carbon emissions.

You may use your own ideas along with the given cues and your reading of MCB Unit 4: Environment.

Solar, wind, and hydroelectric power advances improve renewable energy efficiency and accessibility. • Innovations in photovoltaic cells, wind turbines, and hydroelectric systems are expanding clean energy globally. • Energy storage technologies such as batteries and pumped-storage hydroelectricity enhance renewable energy reliability. • These developments are critical for reducing global carbon emissions by replacing fossil fuel-based electricity.

**SECTION: C GRAMMAR (10 MARKS)**

**7. Fill in the blanks (i) – (iii) with the appropriate option from those in the brackets. 3X1=3**

A series of lectures on climate change (i) \_\_\_\_\_ (is / are / were) being conducted at the university where scientists explain how global warming

(ii) \_\_\_\_\_ (has created / create / creating) alarming consequences for ecosystems. Each topic (iii) \_\_\_\_\_ (highlight / highlights / highlighting) the urgent need to take immediate actions before the situation worsens for future generations.

8. In the following paragraph, one word has been omitted in each box. In your answer sheets, remember to write the missing word along with the word that comes before and after it, as shown below. The first one has been done as an example. 4X1=4

S NO.	TEXT	WORD BEFORE	OMISSION	WORD AFTER
e.g.	I walked the library yesterday,	walked	to	the
i	The silence inside was absolute comfort a busy day			
ii	I spent a few minutes browsing fiction section			
iii	Found a historical epic that looked fascinating decided to check it out			
iv	The book long but it promised a great adventure.			

9. Do as directed. 1+2=3  
 a) Rearrange the following jumbled words/phrases in the given dialogue to create a meaningful sentence.

**SARAH:** I have so many tasks every day, I never feel like I manage my time well. What's the best first step to take?1

**ADITYA:** (i) start by prioritizing / your goals / and breaking / to achieve / down large tasks / what you need / into small steps /

- b) Report the dialogues to complete the paragraph that follows. 2

Sneha: "I love to travel, especially to exotic destinations." Jeet: "That sounds amazing! Have you been anywhere interesting recently?" Sneha: "Yes, I just got back from a trip to Europe. It was incredible!"

Senha said that (a) \_\_\_\_\_. Jeet responded by expressing that it sounded amazing and (b) \_\_\_\_\_. Sneha replied in the affirmative and stated that she had just returned from a trip to Europe and described it as incredible.

**SECTION D: LITERATURE TEXTBOOK (26 MARKS)**

**10. Read the given extract and answer the questions briefly, for any two extracts, of the three, given. 2X4=8**

**A.** “Nor dim nor red, like God’s own head  
The glorious sun uprist:  
Then all averred, I had killed the bird  
That brought the fog and mist.  
“Twas right,’ said they, ‘such birds to slay,  
That bring the fog and mist.” **(The Rime of the Ancient Mariner)**

- I.** What does the description “*like God’s own head*” suggest about the sun? **1**
- II.** In this context, what belief about nature do the sailors reveal? **1**
- III.** How does the word “*glorious*” set the mood in contrast to the earlier fog and mist? **1**
- IV.** What poetic device is used in the first line? **1**

**B.** I said, “Nicola, the way you and Jacopo work, you must earn quite a bit. You spend nothing on clothes. You eat little enough... when I see you have a meal it’s usually black bread and figs. Tell me, what do you with your money?” He coloured deeply under his sunburn, then grew pale. He looked to the ground. “You must be saving up to emigrate to America,” I suggested. He looked at me sideways, spoke with an effort.

**(Two Gentlemen of Verona)**

- I.** What does the narrator’s remark ‘... the way you and Jacopo work...’ refer to? **1**
- II.** How did the narrator’s question impact Nicola? **1**
- III.** State one aspect that might have led the narrator to think that the boys must be saving to emigrate to America. **1**
- IV.** Choose one remark from the passage which shows that the narrator observed things keenly? **1**

**C. Calpurnia:** My lord, I fear something dreadful may happen today. Please do not go out.

**Caesar:** (with calm dignity) Calpurnia, listen. Cowards die many times before their deaths; the valiant never taste of death but once.

**Calpurnia:** But why take the risk when danger can be avoided?

**Caesar:** Of all the strange things I have heard, this is the strangest—that men should fear death. Seeing that death, a necessary end, will come when it will come. **(Julius Caesar)**

- I.** What does Caesar mean by “*Cowards die many times before their deaths*”? **1**
- II.** Which quality of Caesar’s character is revealed in this speech? **1**
- III.** How does the line “*death, a necessary end, will come when it will come*” reflect acceptance of fate? **1**
- IV.** How does Caesar try to calm Calpurnia’s fear about going out? **1**

11. Answer any five of the following questions in 30 40 words each:5X2=10

- I. How does Shakespeare use imagery and contrast in the poem to convey the theme of the enduring power of poetry over physical monuments and time? 2
- II. “The incidental expenses are so heavy.” Why do you think Mrs. Packletidefelt so after killing the tiger? 2
- III. Ben appreciates grandfather saying “it’s a good thing he did”. Later he calls him a ‘drunken old beggar’. Why does he change his opinion about grandfather? 2
- IV. The postmaster regrets the way he treated Ali. He was full of remorse. Words once spoken cannot be taken back. Elaborate. 2
- V. Bring out the irony in the statement: I did not specialize in ghost stories, but more or less, they seemed to specialize in me.’ 2
- VI. In the story, virtually true, Michael said, “That’s what I like about computers. The more futuristic they get the better you can understand the past.” Explain what he meant. 2

12. Answer any one of the following two questions in about 150 words: 1X8=8

- I. The frog exploits the nightingale’s talent, and the nightingale’s over-dependence on him leads to her tragic end. Discuss how the poem highlights the importance of **self-confidence, critical thinking, and independence**. How can this lesson be applied in real-life situations where blind trust or over-dependence can be harmful?

OR

- II. In *Two Gentlemen of Verona*, the boys’ maturity surprises the narrator; in *The Letter*, Ali’s love moves the postmaster; and in *PatolBabu*, the protagonist finds joy in doing his role well. Discuss how these stories teach us that **true fulfilment comes from selfless actions and moral courage**, not from recognition or wealth.

केन्द्रीय विद्यालय संगठन ,रायपुर संभाग

द्वितीय प्री-बोर्ड परीक्षा (2025-26)

कक्षा- दसवीं

विषय-हिन्दी

अधिकतम अंक-80

निर्धारित समय- 3 घंटे

सामान्य निर्देश-

निम्नलिखित निर्देशों को सावधानी से पढ़िए और उनका अनुपालन कीजिए –

- 1-इस प्रश्नपत्र में कुल चार खंड हैं- क,ख,ग और घ I
- 2-इस प्रश्नपत्र में कुल 15 प्रश्न हैं I सभी प्रश्न अनिवार्य है I
- 3-प्रश्नपत्र में आंतरिक विकल्प दिए गए हैं I
- 4-प्रश्नों के उत्तर निर्देशानुसार लिखिए I

खंड क (अपठित बोध) अंक 14

प्रश्न 1-निम्नलिखित गद्यांश को ध्यानपूर्वक पढ़कर उस पर आधारित पूछे गए प्रश्नों के उत्तर लिखिए- 7

परमात्मा की इस सृष्टि में समस्त प्राणियों में मनुष्य ही सर्वोत्तम प्राणी है, जो अपने विवेक, बुद्धिमत्ता तथा चिंतन-शक्ति के कारण उचित-अनुचित, पाप-पुण्य, धर्म-अधर्म जैसे विषयों पर गंभीरतापूर्वक विचार करके सही निर्णय लेने की क्षमता रखता है I मनुष्य को अपने जीवन में अनेक कष्टों को सहना पड़ता है I कर्मवीर अथवा पुरुषार्थी मनुष्य अपने पुरुषार्थ के बल पर सफलता प्राप्त कर लेता है I पुरुषार्थ का सम्बन्ध मनुष्य के 'मन' से है, जो उसके सभी प्रकार के कर्मों तथा व्यवहारों को नियंत्रण करने वाली एक शक्ति है I इसके विपरीत कर्मभीरु मनुष्य भाग्य पर निर्भर रहता है I भाग्यवादी मनुष्य आलसी तथा निकम्मा हो जाता है I आलस्य मनुष्य का सबसे बड़ा दुश्मन है और जो मनुष्य आलसी होता है, वह प्रत्येक काम करने से पहले ही सुस्ती व अनुत्साह दिखने लगता है I अधिकतर जो मनुष्य आलसी होते हैं, वे केवल अपने भाग्य को ही कोसते रहते हैं I वे सोचते हैं कि जो भाग्यमें लिखा है, वही होगा I भाग्य तो आलसियों का सबसे बड़ा सहारा होता है I वे हर कार्य भाग्य पर छोड़ देते हैं और परिश्रम से दूर भागते हैं I असफल होने पर वे जीवनभर भाग्य को कोसते रहते हैं I इसके विपरीत जो मनुष्य पुरुषार्थ का दामन थामे रहते हैं, सफलता उनका वरण करती है I जो मनुष्य भाग्य के भरोसे न बैठकर पुरुषार्थ करते हैं, वे ही समय पर शासन करते हैं I आज मनुष्य पुरुषार्थ के बल पर आकाश में विचरण करने लगा है, समुद्र की गहराइयों तक पहुँच गया है I पृथ्वी के गर्भ से उसने रत्न निकले हैं, पर्वतों के उन्नत शिखरों को उसने नाप लिया है अर्थात् मनुष्य ने प्रायः सभी क्षेत्रों में अपने पुरुषार्थ का डंका बजाते हुए विजयश्री प्राप्त की है I मनुष्य ने पुरुषार्थ द्वारा अलभ्य को भी सुलभ्य बना दिया है I भाग्यवादी मनुष्य मानते हैं कि उन्हें जो कुछ प्राप्त होता है, उनके भाग्य के अनुसार ही मिलता है I वे तो कहते हैं- 'कर्म गति टारे नाही टरे I' उस अज्ञात शक्ति (भाग्य) के आगे बड़े-बड़े वैज्ञानिकों को भी नतमस्तक होना पड़ता है I कुछ मनुष्यों का विश्वास है कि भाग्य के लिखे को कोई नहीं मिटा सकता I लेकिन पुरुषार्थ के पक्षधर मानते हैं कि मनुष्य अपने पुरुषार्थ और दृढ़-संकल्प से भाग्य को बदल सकता है I

क-पुरुषार्थी के कर्मों तथा व्यवहारों को कौन नियंत्रित करता है ?

i-पाप-पुण्य

ii- चिंतन-शक्ति

iii-मन

iv-कर्म

**ख-कथन (A) और कारण (R) को पढ़कर उपयुक्त विकल्प चुनिए-**

1

**कथन(A)-पुरुषार्थी मनुष्य अपने पुरुषार्थ के बल पर सफलता प्राप्त कर लेता है I**

**कारण(R)-पुरुषार्थी मनुष्य भाग्यवादी होते हैं I**

i-कथन (A) गलत है, किन्तु कारण (R) सही है I

ii-कथन (A) और कारण (R) दोनों गलत है I

iii-कथन (A) सही है और कारण (R) कथन की सही व्याख्या है I

iv-कथन (A) सही है, किन्तु कारण (R) कथन (A) की सही व्याख्या नहीं है I

**ग-‘पुरुषार्थी मनुष्य अलभ्य को भी सुलभ्य बना देता है I’**

1

उपर्युक्त कथन के पक्ष में निम्नलिखित तर्कों पर विचार करके उत्तर चुनिए –

1-पुरुषार्थी मनुष्य भाग्यशाली होते हैं I

2-पुरुषार्थी मनुष्य अपने दृढ़-संकल्प से भाग्य को बदल देते हैं I

3-पुरुषार्थी कर्मवीर होते हैं I

**विकल्प-**

i-कथन 1 सही है

ii- कथन 2 सही है

iii- कथन 3 सही है

iv- कथन 2 और 3 सही है

**घ-मनुष्य को सृष्टि में सर्वोत्तम प्राणी क्यों माना गया है ?**

2

**ड.-आलसियों का सबसे बड़ा सहारा कौन होता है ? वे इसके बारे में क्या सोचते हैं ?**

2

**प्रश्न 2-निम्नलिखित पद्यांश को ध्यानपूर्वक पढ़कर उस पर आधारित पूछे गए प्रश्नों के उत्तर लिखिए-7**

सुनता हूँ, मैंने भी देखा,

काले बादल में रहती चाँदी की रेखा I

काले बादल जाति द्वेष के,  
काले बादल विश्व क्लेश के,  
काले बादल उठते पथ  
नव स्वतंत्रता के प्रवेश के !  
सुनता आया हूँ, है देखा,  
काले बादल में हँसती चाँदी की रेखा !  
आज दिशा है घोर अँधेरी  
नभ में गरज रही रणभेरी,  
चमक रही चपला क्षण-क्षण पर  
झनक रही झिल्ली झन-झन कर,  
नाच-नाच आँगन में गाते केकी-केका  
काले बादल में लहरी चाँदी की रेखा !  
काले बादल, काले बादल,  
मन भय से हो उठता चंचल I  
कौन हृदय में कहता पल-पल  
मृत्यु आ रही साजे दल-बल !  
आग लग रही, घात चल रहे, विधि का लेखा !  
काले बादल में छिपती चाँदी की रेखा !  
मुझे मृत्यु की भीति नहीं है,  
पर अनीति से प्रीति नहीं है,  
यह मनुजोचित रीति नहीं है,  
जन में प्रीति प्रतीति नहीं है,  
देश जातियों का कब होगा,  
नव मानवता में एका,  
काले बादल में कल की  
सोने की रेखा !

क- 'काले बादल' और 'चाँदी की रेखा' किनका प्रतीक है ?

1

नीचे दिए गए प्रतीकों से उचित विकल्प का चयन कर उत्तर लिखिए I

- 1-विपत्तियाँ      2-कालिमा  
3-आशा की किरण      4-बिजली

**विकल्प-**

- i-विकल्प 1 और 2 सही हैं  
ii-विकल्प 3 और 4 सही हैं  
iii-विकल्प 1 और 3 सही हैं  
iv-विकल्प 2 और 4 सही हैं

ख- स्वतंत्रता प्राप्ति के मार्ग में किस प्रकार के बादल छाए हुए हैं ? नीचे दिए गए कारकों को पढ़कर इस प्रश्न का उत्तर देने के लिए उचित विकल्प का चयन कर लिखिए –

1

- 1-जाति द्वेष के      2-घनघोर घटाओं के  
3-परस्पर वैमनस्य के      4-वैश्विक अशांति के

**विकल्प-**

- i-कथन 1 और 2 सही हैं  
ii-कथन 2 और 3 सही हैं  
iii-कथन 3 और 4 सही हैं  
iv-कथन 1 और 4 सही हैं

ग- कैसे वातावरण में आशा की किरण छिप जाती है? नीचे दिए गए कारकों को पढ़कर इस प्रश्न का उत्तर देने के लिए उचित विकल्प का चयन कर लिखिए-

1

- 1-जब तेज़ वर्षा हो      2-जब मन निराशा से भयभीत हो  
3-जब षड्यंत्र रचे जा रहे हों      4-जब बादल न छाए हों

**विकल्प-**

- i-कथन 1 और 2 सही हैं  
ii-कथन 2 और 3 सही हैं  
iii-कथन 3 और 4 सही हैं  
iv-कथन 1 और 4 सही हैं

घ-मोर-मोरनी द्वारा आँगन में नृत्य प्रस्तुत करने से क्या अभिप्राय है?	2
ड.-‘चाँदी की रेखा’ को ‘सोने की रेखा’ में कब बदला जा सकता है?	2

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### खंड ख (व्यावहारिक व्याकरण)16

प्रश्न 3- निर्देशानुसार ‘रचना के आधार पर वाक्य भेद’ पर आधारित पाँच प्रश्नों में से किन्हीं चार प्रश्नों के उत्तर लिखिए- 4x1=4

क-जो व्यक्ति परिश्रमी होता है, वह अवश्य सफल होता है I

(सरल वाक्य में बदलिए)

ख-पत्थर की मूर्ति पर चश्मा असली था I

(संयुक्त वाक्य में बदलिए)

ग-मन्नू जी की साहित्यिक उपलब्धियों के लिए उन्हें अनेक पुरस्कार प्राप्त हो चुके हैं I

(मिश्र वाक्य में बदलिए)

घ-एक चश्मेवाला है जिसका नाम कैप्टन है I

(आश्रित उपवाक्य छँटकर उसका भेद भी लिखिए)

ड.-जैसे ही बच्चे को खिलौना मिला, वह चुप हो गया I

(रचना की दृष्टि से वाक्य का भेद लिखिए)

प्रश्न 4 - निर्देशानुसार ‘वाच्य’ पर आधारित पाँच प्रश्नों में से किन्हीं चार प्रश्नों के उत्तर लिखिए- 4x1=4

क-देशभक्तों की शहादत को आज भी याद किया जाता है I

(कर्तृवाच्य में बदलिए)

ख-बालगोबिन भगत प्रभातियाँ गाते थे I

(कर्मवाच्य में बदलिए)

ग-बीमारी के कारण वह यहाँ न आ सका I

(भाववाच्य में बदलिए)

घ-मई महीने में शीला अग्रवाल को कॉलेज वालों ने नोटिस थमा दिया I (कर्मवाच्य में बदलिए)

ड.-मैं प्रतिदिन खेलता हूँ I

(वाच्य का प्रकार पहचानिए)

प्रश्न 5 - निर्देशानुसार 'पद-परिचय' पर आधारित पाँच प्रश्नों में से किन्हीं चार प्रश्नों के रेखांकित पदों का परिचय लिखिए-

4x1=4

क-दादी जी प्रतिदिन समाचार पत्र पढ़ती हैं।

ख-वे मुंबई जा चुके हैं।

ग-रेखा कहती है कि वह अपना काम स्वयं करती है।

घ-अपने गाँव की मिट्टी छूने के लिए मैं तरस गया।

ड.-सरला अपने भाई को राखी भेजती है।

प्रश्न 6 - निर्देशानुसार 'अलंकार' पर आधारित पाँच प्रश्नों में से किन्हीं चार प्रश्नों के उत्तर पंक्तियों में अलंकार पहचान कर लिखिए-

4x1=4

क-चरण-कमल बन्दों हरि राई।

ख-सागर के उर पर नाच-नाच, करती हैं लहरें मधुर गान।

ग-कोटि कुलिस सम बचनु तुम्हारा, ब्यर्थ धरहु धनु बान कुठारा।

घ-सुनत जोग लागत है ऐसो, ज्यों करुई ककरी।

ड.-देख लो साकेत नगरी है यह, स्वर्ग से मिलने गगन में जा रही।

खंड ग (पाठ्य पुस्तक एवं पूरक पाठ्य पुस्तक) 30

प्रश्न 7-निम्नलिखित पठित गद्यांश पर आधारित बहुविकल्पीय प्रश्नों के सर्वाधिक उपयुक्त उत्तर वाले विकल्प चुनकर लिखिए -

5x1=5

प्रभात -फेरियाँ, हड़तालें, जुलूस, भाषण हर शहर का चरित्र था और पूरे दमखम और जोश-खरोश के साथ इन सबसे जुड़ना हर युवा का उन्माद। मैं भी युवा थी और शीला अग्रवाल की जोशीली बातों ने रगों में बहते खून को लावे में बदल दिया था। स्थिति यह हुई कि एक बवंडर शहर में मचा हुआ था एक घर में। पिताजी की आज्ञादी की सीमा यहीं तक थी कि उनकी उपस्थिति में घर आए लोगों के बीच उठूँ-बैठूँ, जानूँ-समझूँ। हाथ उठा-उठाकर नारे लगाती, हड़तालें करवाती, लड़कों के साथ सड़कें नापती लड़की को अपनी सारी आधुनिकता के बावजूद बर्दाश्त करना उनके लिए मुश्किल हो रहा था तो किसी की दी हुई आज्ञादी के दायरे में चलना मेरे लिए। जब रगों में लहू की जगह लावा बहता हो तो सारे निषेध, सारी वर्जनाएँ और सारा भय कैसे ध्वस्त हो जाता है, यह तभी जाना।

क-हर शहर का चरित्र कैसा था ?

i-हड़तालें एवं जुलूस

ii-हड़तालें एवं आधुनिकता

iii- भाषण एवं आजादी

iv-उपर्युक्त सभी

**ख-लेखिका किससे अधिक प्रेरित थी ?**

i-युवाओं से

ii-पिताजी से

iii-शीला अग्रवाल से

iv-लोगों से

**ग-लेखिका के खून को किन बातों ने लावे में बदल दिया?**

1-जुलूस और हड़तालों ने 2-शीला अग्रवाल की जोशीली बातों ने

3-आजादी की सीमा ने 4-निषेधों और वर्जनाओं ने

**विकल्प-**

i-कथन 1 और 3 सही हैं

ii-कथन 2 और 3 सही हैं

iii-कथन 1 और 2 सही हैं

iv-कथन 3 और 4 सही हैं

**घ-मनुष्य में साहस एवं जोश के सामने क्या ध्वस्त हो जाता है ?**

1-सड़कें 2-घर

3-दमखम 4-निषेध और वर्जनाएँ

**विकल्प-**

i-कथन 1 और 2 सही हैं

ii-कथन 3 और 4 सही हैं

iii-केवल कथन 4 सही है

iv-कथन 2 और 4 सही हैं

**ड.-शहर का हर युवा किस भाव से भरा था ?**

i-जोश-खरोश से

ii-उन्माद से

iii-पूरे दमखम से

iv-उपर्युक्त सभी

**प्रश्न 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-**‘नेताजी का चश्मा’पाठ का सन्देश क्या है ?

**ख-**‘बालगोबिन भगत’ पाठ के आधार पर बताइए कि ‘मोह और प्रेम’ में क्या अंतर है ?

**ग-**बिस्मिल्ला खां मिली-जुली संस्कृति के प्रतीक थे। कैसे ?

**घ-**वास्तविक अर्थों में ‘संस्कृत व्यक्ति’ किसे कहा जा सकता है ?

**प्रश्न 9-निम्नलिखित पठित पद्यांश पर आधारित बहुविकल्पीय प्रश्नों के सर्वाधिक उपयुक्त उत्तर वाले विकल्प चुनकर लिखिए -**

**5x1=5**

मुख्य गायक के चट्टान जैसे भारी स्वर का साथ देती

वह आवाज़ सुन्दर कमज़ोर काँपती हुई थी

वह मुख्य गायक का छोटा भाई है

या उसका शिष्य

या पैदल चलकर सीखने आने वाला दूर का कोई रिश्तेदार

मुख्य गायक की गरज में

वह अपनी गूँज मिलाता आया है प्राचीन काल से

गायक जब अंतरे की जटिल तानों के जंगल में

खो चुका होता है

या अपने सरगम को लाँघकर

चला जाता है भटकता हुआ एक अनहद में

तब संगतकार ही स्थायी को संभाले रहता है

जैसे समेटता हो मुख्य गायक का पीछे छूटा हुआ सामान

जैसे उसे याद दिलाता हो उसका बचपन

जब वह नौसिखिया था

**क-**किसकी आवाज़ सुन्दर कमज़ोर काँपती हुई थी ?

i-मुख्य गायक की

ii-संगतकार की

iii-बचपन की

iv-भाई की

**ख-मुख्य गायक कहाँ भटक जाता है ?**

i-जंगल में

ii-चट्टान में

iii-सरगम, लय-ताल में

iv-प्राचीनकाल में

**ग-मुख्य गायक के भटकने पर संगतकार उसकी सहायता कैसे करता है ?**

i-उसका सामान उठाकर

ii-उसका हाथ पकड़कर

iii-उसको बचपन की याद दिलाकर

iv-स्थायी को संभालकर

**घ-बचपन में मुख्य गायक कैसा था ?**

1-मुख्य गायक छोटा था और रोता था

2-मुख्य गायक अपना सामान छोड़ देता था

3-जब मुख्य गायक ने संगीत में पदार्पण किया था ,तब उससे भी गलतियाँ हुआ करती थीं

4-बचपन में उसकी आवाज़ चट्टान जैसे भारी थी

**विकल्प-**

i-कथन 1 सही है

ii-कथन 2 और 3 सही है

iii-कथन 3 और 4 सही है

iv-कथन 3 सही है

**ड.-कथन (A) और कारण (R) को पढ़कर उपयुक्त विकल्प चुनिए-**

**कथन(A)- संगतकार गीत के स्थायी को संभालकर गीत के स्वरूप को बिगड़ने से बचा लेता है I**

**कारण (R) संगतकार मुख्य गायक की गलतियाँ बताता है I**

i-कथन (A) गलत है, किन्तु कारण (R) सही है I

ii-कथन (A) और कारण (R) दोनों गलत है I

iii-कथन (A) सही है और कारण (R) कथन की सही व्याख्या है I

iv-कथन (A) सही है, किन्तु कारण (R) कथन (A) की सही व्याख्या नहीं है I

**प्रश्न 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-**सूरदास द्वारा रचित पदों के आधार पर गोपियों के वाक्चातुर्य की विशेषताओं का उल्लेख कीजिए I

**ख-**‘साहस और शक्ति के साथ विनम्रता भी हो तो बेहतर हैI’ राम-लक्ष्मण-परशुराम संवाद ‘के आधार पर अपने विचार लिखिए I

**ग-**‘उज्ज्वल गाथा कैसे गाऊँ, मधुर चाँदनी रातों की’ -इस पंक्ति द्वारा कवि ने चाँदनी रात की गाथा को उज्ज्वल क्यों कहा है ?

**घ-**‘उत्साह’ कविता में बादल किन-किन अर्थों की ओर संकेत करता है ?

**प्रश्न 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 -**

**4x2=8**

**क-**‘माता का अंचल’ पाठ में किस दशक की ग्राम्य-संस्कृति का कैसा चित्रण किया गया है ?आज की ग्रामीण संस्कृति में आपको किस तरह के परिवर्तन दिखाई देते हैं ?

**ख-**सिक्रिम की युवती के कथन ‘मैं इंडियन हूँ’ से स्पष्ट होता है कि अपनी जाति,धर्म-क्षेत्र और संप्रदाय से अधिक महत्वपूर्ण राष्ट्र है I आप किस प्रकार अपने राष्ट्र के प्रति अपने कर्तव्य निभाकर देश के प्रति अपना प्रेम प्रकट कर सकते हैं ? समझाइए I

**ग-**‘मैं क्यों लिखता हूँ?’ पाठ के आधार पर बताइए कि लेखक को कौन-सी बातें लिखने के लिए प्रेरित करती हैं और किसी रचनाकार के प्रेरणास्रोत किसी दूसरे को भी रचने के लिए किस तरह उत्साहित कर सकते हैं ?

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### **खंड घ(रचनात्मक लेखन) 20**

**प्रश्न 12-निम्नलिखित तीन विषयों में से किसी एक विषय पर संकेत बिन्दुओं के आधार पर लगभग 120 शब्दों में एक अनुच्छेद लिखिए-**

**1x6=6**

**क-**साइबर युग,साइबर ठगी – सावधानियाँ एवं सुरक्षा उपाय

**संकेत बिंदु-**

भूमिका, बढ़ते ऑनलाइन कार्य ,साइबर ठगी की बढ़ती घटनाएँ ,सावधानियाँ ,इससे बचने के उपाय

**ख-**ऑनलाइन शिक्षा- शिक्षा जगत की नवीन क्रांति

**संकेत बिंदु-**

भूमिका, वर्तमान परिप्रेक्ष्य में अनिवार्यता, सकारात्मक प्रभाव, कमियाँ, सुझाव

ग-बेरोजगारी और युवा पीढ़ी

**संकेत बिंदु-**

भारत की प्रमुख समस्या, बेरोजगारी के कारण, योजनाओं का अभाव, शिक्षा का व्यवसायीकरण होना, कुटीर उद्योगों का अभाव

**प्रश्न 13- क-** आप रोहित/रोहिता हैं I यातायात के नियमों का उल्लंघन करने वालों के विरुद्ध कड़ी कार्रवाई करने का निवेदन तथा कुछ सुझाव देते हुए अपने क्षेत्र के यातायात पुलिस आयुक्त को एक पत्र लगभग 100 शब्दों में लिखिए I

**1x5=5**

**अथवा**

**ख-**आप रोहित/रोहिता हैं Iआपके छोटे भाई/बहन ने एक माह पूर्व ही एक आवासीय विद्यालय में प्रवेश लिया है I उसको मित्रों के चुनाव में सावधानी बरतने के लिए समझाते हुए एक पत्र 100 शब्दों में लिखिए I

**प्रश्न 14- क-**आप मनीष/मनीषा हैं I आपने इसी वर्ष बी.कॉम.की परीक्षा प्रथम श्रेणी में उत्तीर्ण की है I अपनी शैक्षणिक योग्यताओं और रुचि का वर्णन करते हुए रेलवे बोर्ड में कार्यालय सहायक के रिक्त पद के लिए एक संक्षिप्त स्ववृत्त लगभग 80 शब्दों में तैयार कीजिए I

**1x5=5**

**अथवा**

**ख-**आप मनीष/मनीषा हैं I अपने बैंक के खाते में नेट बैंकिंग की सुविधा प्राप्त करने के लिए सम्बंधित शाखा प्रबंधक को लगभग 80 शब्दों में एक ई.मेल लिखिए I

**प्रश्न 15- क-**देश की जनता को 'मतदान अधिकार' के प्रति जागरूक करने के लिए मुख्य निर्वाचन आयुक्त कार्यालय की ओर से लगभग 40 शब्दों में एक विज्ञापन तैयार कीजिए I

**1x4=4**

**अथवा**

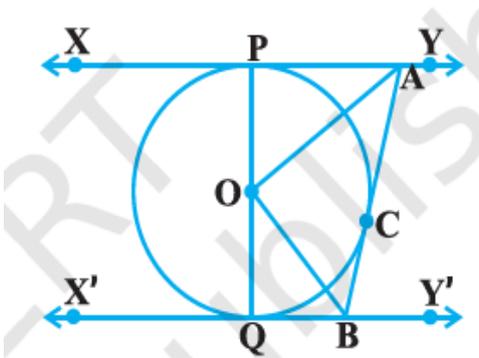
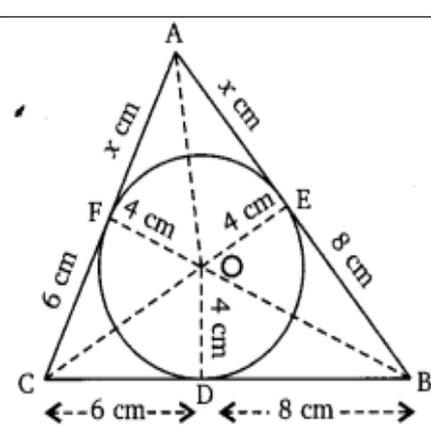
**ख-**आपके मित्र का चयन राष्ट्रीय रक्षा अकादमी(एन.डी.ए.) में हो गया है I उनके लिए लगभग 40 शब्दों में एक बधाई संदेश लिखिए I

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8.	Name the criteria of similarity if applicable in the given figure : (a). SAS (b) SSS (c) AAA (d) None of these	1												
9.	From a point Q, the length of the tangent to a circle is 24 cm and the distance of Q from the centre is 25 cm. The radius of the circle is: (a) 7 cm (b) 12 cm (c) 15 cm (d) 24.5 cm	1												
10.	In the given figure, tangents PA and PB from a point P to a circle with centre O are inclined to each other at an angle of $80^\circ$ . $\angle ABO$ is equal to (a) $80^\circ$ (b) $50^\circ$ (c) $100^\circ$ (d) $40^\circ$	1												
11.	What is the value of $\frac{2\tan 30^\circ}{1+\tan^2 30^\circ}$ ? (a) $\sin 60^\circ$ (b) $\cos 60^\circ$ (c) $\tan 60^\circ$ (d) $\sin 30^\circ$	1												
12.	If $\sin A = \frac{1}{2}$ and $\cos B = \frac{1}{2}$ , then the value of $(A+B)$ is: (a) $90^\circ$ (b) $60^\circ$ (c) $30^\circ$ (d) $0^\circ$	1												
13.	A ladder 18 m long makes an angle of $60^\circ$ with a wall. The height of the point where the ladder reaches the wall is: (a) $9\sqrt{3}$ m (b) $18\sqrt{3}$ m (c) 18 m (d) 9 m	1												
14.	The diameter of a wheel is 1 m. The number of revolution it will make a travel a distance of 22 km will be: (a) 2,800 (b) 4,000 (c) 5,500 (d) 7,000	1												
15.	The perimeter of a circle is equal to the perimeter of a square numerically, then the ratio of their areas is: (a) 22:7 (b) 14:11 (c) 7:22 (d) 11:14	1												
16.	A card is selected from a deck of 52 cards. The probability of being a red face card is: (a) $\frac{3}{26}$ (b) $\frac{3}{13}$ (c) $\frac{2}{13}$ (d) $\frac{1}{2}$	1												
17.	A box contains 90 discs, numbered from 1 to 90. If one disc is drawn at random from the box, then the probability that it bears a prime number less than 23 is : (a) $\frac{7}{90}$ (b) $\frac{10}{90}$ (c) $\frac{4}{45}$ (d) $\frac{9}{89}$	1												
18.	Consider the following frequency distribution: <table border="1" style="margin-left: 20px;"> <tbody> <tr> <td>Class</td> <td>0-5</td> <td>6-11</td> <td>12-17</td> <td>18-23</td> <td>24-29</td> </tr> <tr> <td>Frequency</td> <td>13</td> <td>10</td> <td>15</td> <td>8</td> <td>11</td> </tr> </tbody> </table> The upper limit of the median class is (a) 17 (b) 17.5 (c) 18 (d) 18.5	Class	0-5	6-11	12-17	18-23	24-29	Frequency	13	10	15	8	11	1
Class	0-5	6-11	12-17	18-23	24-29									
Frequency	13	10	15	8	11									
	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.													

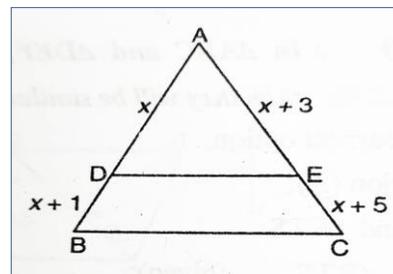
	d) Assertion (A) is false but reason (R) is true.	
19.	Statement A (Assertion): The radii of two cones are in the ratio 2:3 and their volumes in the ratio 1:3. Then the ratio of their heights is 3:2. Statement R (Reason): Volume of the cone = $\frac{1}{3}\pi r^2 h$	1
20.	Statement A (Assertion): Sum of first 15 terms of 2, 5, 8 ... is 345. Statement R (Reason): Sum of n term of an AP is $\frac{n}{2}[2a + (n - 1)d]$ where a is the first term and d is the common difference.	1
<b>SECTION – B</b>		
<b>Section - B consists of 5 questions of 2 marks each.</b>		
21.	Prove that $\sqrt{5}$ is irrational.	2
22.	In the given figure, $\frac{QR}{QS} = \frac{QT}{PR}$ and $\angle 1 = \angle 2$ Show that $\Delta PQS \sim \Delta TQR$	2
23.	A quadrilateral ABCD is drawn to circumscribe a circle. Prove that $AB + CD = AD + BC$ .	2
24.	Evaluate: $\frac{\cos 45^\circ}{\sec 30^\circ + \operatorname{cosec} 30^\circ}$	2
[OR]		
	Evaluate the value of: $\frac{\sin 30^\circ + \tan 45^\circ - \operatorname{cosec} 60^\circ}{\sec 30^\circ + \cos 60^\circ + \cot 45^\circ}$	
25.	The length of the minute hand of a clock is 14 cm. Find the area swept by the minute hand in 5 minutes.	2
[OR]		
	Find the area of a quadrant of a circle whose circumference is 22 cm.	
<b>SECTION – C</b>		
<b>Section - C consists of 6 questions of 3 marks each</b>		
26.	There is a circular path around a sports field. Sonia takes 18 minutes to drive one round of the field, while Ravi takes 12 minutes for the same. Suppose they both start at the same point and at the same time, and go in the same direction. After how many minutes will they meet again at the starting point?	3
27.	Find the zeroes of the quadratic polynomial $x^2 + 7x + 10$ , and verify the relationship between	3

	the zeroes and the coefficients.																			
28.	The sum of the digits of a two-digit number is 9. Also, nine times this number is twice the number obtained by reversing the order of the digits. Find the number.	3																		
	[OR]																			
	The taxi charges in a city consist of a fixed charge together with the charge for the distance covered. For a distance of 6 km, the charges paid are Rs. 58 while for a journey of 10 km, the charges paid are Rs. 90. Find the charge per km and the fixed charge.																			
29.	In the 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																		
																				
	[OR]																			
	A triangle ABC is drawn to circumscribe a circle of radius 4 cm such that the segments BD and DC into which BC is divided by the point of contact D are of lengths 8 cm and 6 cm respectively (see figure). Find the sides AB and AC.																			
																				
30.	Prove that: $\frac{\sin\theta - \cos\theta + 1}{\sin\theta + \cos\theta - 1} = \frac{1}{\sec\theta - \tan\theta}$	3																		
31.	A student noted the number of Trucks passing through a spot on a road for 100 periods each of 3 minutes and summarized it in the table given below. Find the mode of the data : <table border="1" data-bbox="159 1612 1356 1724"> <tbody> <tr> <td>Number of Trucks</td> <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> <td>70-80</td> </tr> <tr> <td>Frequency</td> <td>7</td> <td>14</td> <td>13</td> <td>12</td> <td>20</td> <td>11</td> <td>15</td> <td>8</td> </tr> </tbody> </table>	Number of Trucks	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80	Frequency	7	14	13	12	20	11	15	8	3
Number of Trucks	0-10	10-20	20-30	30-40	40-50	50-60	60-70	70-80												
Frequency	7	14	13	12	20	11	15	8												
	<b>SECTION – D</b>																			
	<b>Section - D consists of 4 questions of 5 marks each</b>																			
32.	An express train takes 1 hour less than a passenger train to travel 132 km between Mysore and Bangalore (without taking into consideration the time they stop at intermediate stations). If the average speed of the express train is 11km/h more than that of the passenger train, find the average speed of the two trains.	5																		

[OR]

A cottage industry produces a certain number of pottery articles in a day. It was observed on a particular day that the cost of production of each article (in rupees) was 3 more than twice the number of articles produced on that day. If the total cost of production on that day was Rs90, find the number of articles produced and the cost of each article.

33. (a) State and prove Basic Proportionality Theorem.  
(b) By using above Theorem if  $DE \parallel BC$ , then find the value  $x$ .



5

34. A gulab jamun, contains sugar syrup up to about 30% of its volume. Find approximately how much syrup would be found in 45 gulab jamuns, each shaped like a cylinder with two hemispherical ends with length 5 cm and diameter 2.8 cm.

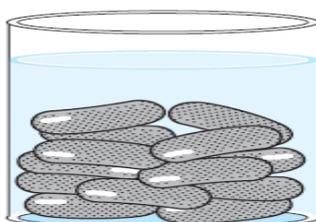
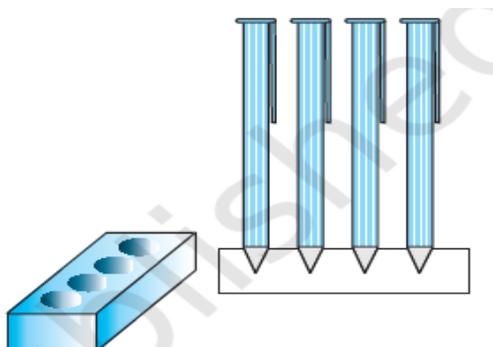


Fig. 13.15

5

[OR]

A pen stand made of wood is in the shape of a cuboid with four conical depressions to hold pens. The dimensions of the cuboid are 15 cm by 10 cm by 3.5 cm. The radius of each of the depressions is 0.5 cm and the depth is 1.4 cm. Find the volume of wood in the entire stand. (See given figure)



35.	The median of the following data is 525. Find the values of x and y, if the total frequency is 100.	Class interval	Frequency	5
		0-100	2	
		100-200	5	
		200-300	X	
		300-400	12	
		400-500	17	
		500-600	20	
		600-700	Y	
		700-800	9	
		800-900	7	
		900-1000	4	

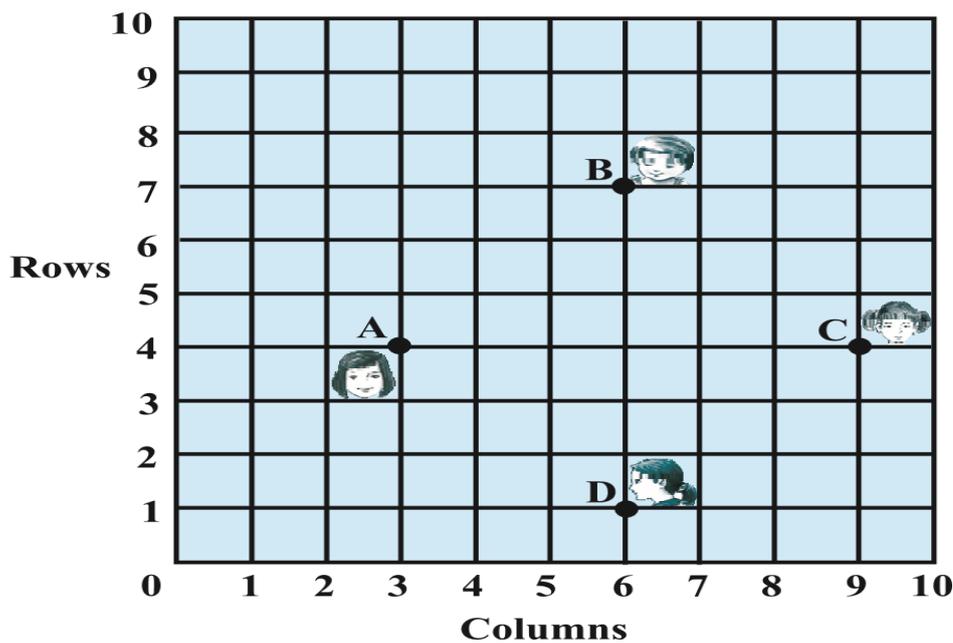
**SECTION – E**

**Section - E consists of 3 questions of 4 marks each**

36.	<p><b>CASE STUDY 1</b></p> <p>India is a competitive manufacturing location due to low cost of man power and strong technical and engineering capabilities contributing to higher quality production runs. The production of TV sets in a factory increases uniformly by a fixed number every year. It produced 16000 sets in 6<sup>th</sup> year and 22600 in 9<sup>th</sup> year.</p> <p><b>Based on the above information, answer the following questions.</b></p>	
		
	(a) Find the production during the first year.	1
	(b) Find the production during the 8 <sup>th</sup> year.	1
	(c) In which year the production was 29200?	2
	<b>OR</b>	
	Find the difference in production during 7 <sup>th</sup> and 4 <sup>th</sup> year.	

37. **CASE STUDY 2**

Morning assembly is an integral part of the school’s schedule. Almost all the schools conduct morning assemblies which include prayers, information of latest happenings, inspiring thoughts, speech, national anthem, etc. A good school is always particular about their morning assembly schedule. Morning assembly is important for a child’s development. It is essential to understand that morning assembly is not just about standing in long queues and singing prayers or national anthem, but it’s something beyond just prayers. All the activities carried out in morning assembly by the school staff and students have a great influence in every point of life. The positive effects of attending school assemblies can be felt throughout life.



Have you noticed that in school assembly you always stand in row and column and this make a coordinate system. Suppose a school have 100 students and they all assemble in prayer in 10 rows as given.

(i) What is the distance between A and B ?

1

(ii) What is the middle position of B and C?

2

[OR]

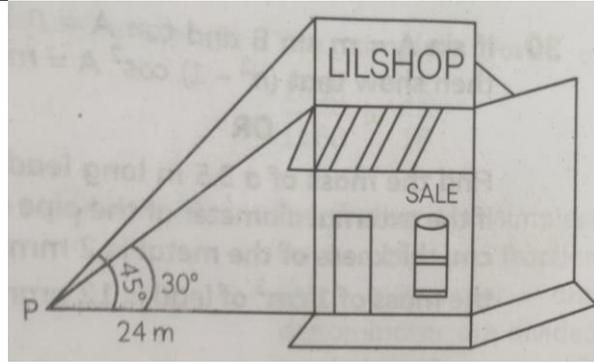
What is the distance between A and C ?

(iii) What is the distance between D and B ?

1

38. **CASE STUDY 3**

Arnav purchased a new building for his business. Being in the prime location, he decided to make some more money by putting up an advertisement sign board for a rental income on the roof of the building.



From a point P on the ground level, the angle of elevation of the roof of the building is  $30^\circ$  and the angle of elevation of the top of the sign board is  $45^\circ$ . The point P is at a distance of 24 m from the base of the building.

On the basis of the above information, answer the following questions:

(i) Find the distance of the point P from the top of the sign board.	1
(ii) Find the height of the building (without the sign board) [OR] The height of the building (with the sign board)	2
(iii) Find the height of the sign board.	1

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**KENDRIYA VIDYALAYA SANGATHAN, RAIPUR REGION**

**SECOND PRE BOARD EXAM (2025-26)**

**SUBJECT: MAHEMATICS (BASIC) (CODE:241)**

**CLASS: X**

**MAX MARKS: 80**

**TIME: 3HRS**

General Instructions :

Read the following instructions carefully and follow them :

- (i) This question paper contains 38 questions. All questions are compulsory.
- (ii) Question Paper is divided into 5 Sections — Section A, B, C, D and E.
- (iii) In Section—A question number 1 to 18 are Multiple Choice Questions (MCQs) and question number 19 & 20 are Assertion-Reason based questions of 1 mark each.
- (iv) In Section—B question number 21 to 25 are Short Answer-I (SA-I) type questions of 2 marks each.
- (v) In Section—C question number 26 to 31 are Short Answer-II (SA-II) type questions carrying 3 marks each.
- (vi) In Section—D question number 32 to 35 are Long Answer (LA) type questions carrying 5 marks each.
- (vii) In Section—E question number 36 to 38 are Case Based integrated units of Assessment questions carrying 4 marks each. Internal choice is provided in 2 marks question in each case-study.

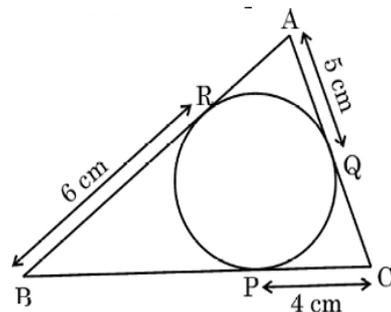
**Note: 15 minutes time will be allotted for reading the question paper.**

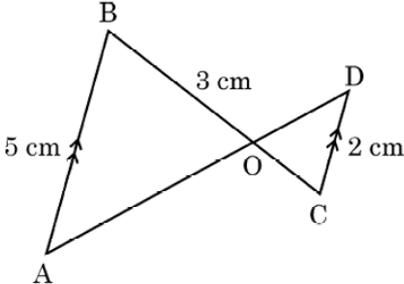
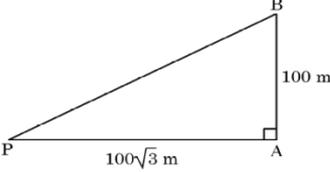
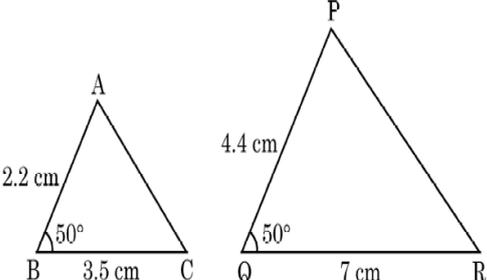
**SECTION A**

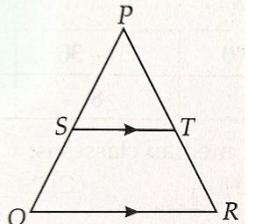
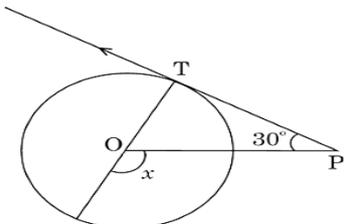
**MULTIPLE CHOICE QUESTIONS**

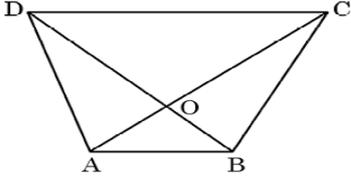
(Section A consists of 20 questions of one mark each)

1	A die is thrown once. Find the probability of getting a number less than 7.  (a) $\frac{5}{6}$ (b) 1                      (c) $\frac{1}{6}$ (d) 0	1
2	The Prime Factorisation of the natural no. 288 is (a) $2^4 \times 3^3$ (b) $2^4 \times 3^2$ (c) $2^5 \times 3^2$ (d) $2^5 \times 3^1$	1
3	If $2\cos\theta = 1$ , then the value of $\theta$ is (a) $45^\circ$ (b) $30^\circ$ (c) $60^\circ$ (d) $90^\circ$	1
4	The discriminant of the quadratic equation $2x^2 - 5x - 3 = 0$ (a) 49                      (b) 1                      (c) 7                      (d) 19	1
5	The distance between the point (3,0) and (0,-3) is (a) $3\sqrt{2}$ (b) 6                      (c) 3                      (d) $2\sqrt{3}$	1
6	In the given figure, the perimeter of the triangle ABC is  (a) 30    (b) 15  (c) 60    (d) 45	1



7	<p>In the given figure <math>AB \parallel CD</math>. If <math>AB = 5</math> cm, <math>CD = 2</math> cm and <math>OB = 3</math> cm, then the length of <math>OC</math> is</p> <p>a) <math>\frac{15}{2}</math> cm    b) <math>\frac{10}{3}</math> cm  (c) <math>\frac{6}{5}</math> cm        (d) <math>\frac{3}{5}</math> cm</p>		1											
8	<p>The sum and product of the zeroes of the polynomial <math>p(x) = 2x^2 - 8x + 6</math> are</p> <p>(a) <math>-4, 3</math>        (b) <math>4, 3</math>        (c) <math>8, 6</math>        (d) <math>-8, 6</math></p>	1												
9	<p>Find the coordinates of the midpoint of the line segment joining the points <math>(6, -2)</math> and <math>(-4, 8)</math>.</p> <p>(a) <math>(1, 3)</math>        (b) <math>(4, 3)</math>        (c) <math>(3, 0)</math>        (d) <math>(5, 5)</math></p>	1												
10	<p>The mean and median of some data is 32 and 30 respectively. Using Empirical relation mode of this data is:</p> <p>(a) 31    (b) 28    (c) 30    (d) 26</p>	1												
11	<p>The angle subtended by a vertical pole of height 100 m at a point on the ground <math>100\sqrt{3}</math> m from the base of the pole is</p> <p>(a) <math>30^\circ</math>    (b) <math>45^\circ</math>  (c) <math>60^\circ</math>    (d) <math>90^\circ</math></p>		1											
12	<p>If the sum of first 7 terms of an A.P is 49 and the sum of first 10 terms is 100. Then what is the sum of the first <math>n</math> terms of this A.P ?</p> <p>(a) <math>2n + 1</math>    (b) <math>2n - 1</math>    (c) <math>n^2</math>    (d) <math>n^2 + 1</math></p>	1												
13	<p>The shape of the table is in the shape of a semicircle with radius 63 cm. Then, the perimeter of the top of the table is.</p> <p>(a) 300 cm        (b) 324 cm        (c) 314 cm        (d) 328 cm</p>	1												
14	<p>In the figure criteria of similarity by which <math>\Delta ABC \sim \Delta PQR</math> is :</p> <p>(a) SSA (Side-Side-Angle) Similarity  (b) ASA (Angle-Side-Angle) Similarity  (c) SAS (Side-Angle-Side) Similarity  (d) AA (Angle-Angle) Similarity</p>		1											
15	<p>The median class of the data given below is:</p> <table border="1" data-bbox="272 1648 1190 1720"> <tbody> <tr> <td>Class</td> <td>20-40</td> <td>40-60</td> <td>60-80</td> <td>80-100</td> <td>100-120</td> </tr> <tr> <td>Frequency</td> <td>10</td> <td>12</td> <td>14</td> <td>13</td> <td>17</td> </tr> </tbody> </table> <p>(a) 40 – 60    (b) 60-80    (c) 80-100    (d) 100-120</p>	Class	20-40	40-60	60-80	80-100	100-120	Frequency	10	12	14	13	17	1
Class	20-40	40-60	60-80	80-100	100-120									
Frequency	10	12	14	13	17									
16	<p>The larger of the two supplementary angle exceeds the smaller angle by 18 degrees. What is the measure of the larger angle?</p> <p>(a) 81    (b) 99    (c) 36    (d) 54</p>	1												

17	<p>In the figure <math>ST \parallel QR</math>, point S divides PQ in the ratio 4:5. If <math>ST = 1.6\text{cm}</math>, what is the length of QR?</p> <p>(a) <math>0.71\text{cm}</math> (b) <math>2\text{cm}</math>  (c) <math>3.6\text{cm}</math> (d) <math>5.4\text{cm}</math></p>		1
18	<p>Find the 7<sup>th</sup> term of an AP whose first term is 28 and the common difference is -4.</p> <p>(a) 0 (b) 56 (c) 52 (d) 4</p>	1	
<p style="text-align: center;"><b>(Assertion- Reason based questions)</b></p> <p><b>Directions for questions 19 and 20:</b> In the question number (19) and (20), a statement of assertion (A) is followed by a statement of Reason (R).  <b>Choose the correct option:</b></p> <p>(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.</p>			
19	<p><b>Assertion (A):</b> All equilateral triangles are similar.  <b>Reason (R):</b> In all equilateral triangles, all corresponding angles are equal and the sides are in the same ratio.</p>	1	
20	<p><b>Assertion (A) :</b> The median of the data <b>2,3,6,8,12,12,13,15,16</b> is <b>12</b>.  <b>Reason (R):</b> The median of a data set is the value that occurs most frequently in the data.</p>	1	
<p style="text-align: center;"><b>SECTION — B</b></p> <p style="text-align: center;"><b>This section comprises of short answer (SA-I) type of questions of 2 marks each</b></p>			
21	<p>In two concentric circles, a chord of length 8cm of the larger circle touches the smaller circle. If the radius of the bigger circle is 5cm, find the radius of the smaller circle.</p> <p style="text-align: center;"><b>OR</b></p> <p>In the adjoining figure, PT is a tangent at T to the circle with centre O. If <math>\angle TPO = 30^\circ</math>, find the value of <math>x</math>.</p>		2
22	<p>Evaluate : <math>\tan^2 60^\circ - 2 \operatorname{cosec}^2 30^\circ - 2 \tan^2 30^\circ</math>.</p>	2	
23	<p>Find the LCM and HCF of 92 and 510, using prime factorisation</p>	2	
24	<p>Determine the value of <math>p</math> for which the equation: <math>px(x - 2) + 6 = 0</math> has 2 equal roots.</p>		
25	<p>Find the quadratic polynomial, the sum and product of whose zeroes are -3 and 2, respectively.</p> <p style="text-align: center;"><b>OR</b></p> <p>If the product of zeroes of the quadratic polynomial <math>p(x) = x^2 - 4x + k</math> is 3, find the value of <math>k</math>.</p>	2	
<p style="text-align: center;"><b>Section — C</b></p> <p style="text-align: center;"><b>This section comprises of Short Answer (SA-II) type questions of 3 marks each</b></p>			
26	<p>Prove that: <math>\sec\theta (1 - \sin\theta) (\sec\theta + \tan\theta) = 1</math></p> <p style="text-align: center;"><b>OR</b></p>	3	

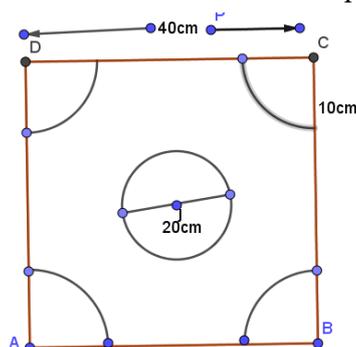
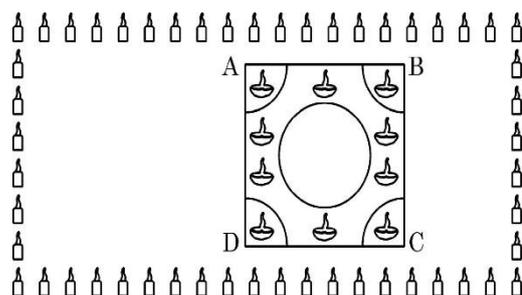
	Prove that: $\frac{1+\sec\theta}{\sec\theta} = \frac{\sin^2\theta}{1-\cos\theta}$															
27	Find the value of $k$ , will the following pair of linear equations have no solutions? $3x + y = 1$ $(2k - 1)x + (k - 1)y = 2k + 1$	3														
28	Prove that the tangents drawn from an external point to a circle are equal in length.	3														
29	Find the sum of first 40 positive integers divisible by 6. <b>OR</b> Find the 20 <sup>th</sup> term from the last of the A.P: 3, 8, 13, ... 253?															
30	Prove that $3+7\sqrt{2}$ is an irrational number given that $\sqrt{2}$ is an irrational number.	3														
31	The following data gives the information on the observed lifetimes (in hours) of 225 electrical components. Determine the modal lifetime of the components.	3														
	<table border="1"> <tbody> <tr> <td>Lifetime (in hours)</td> <td>0 – 20</td> <td>20 – 40</td> <td>40 – 60</td> <td>60 – 80</td> <td>80 – 100</td> <td>100 – 120</td> </tr> <tr> <td>Frequency</td> <td>10</td> <td>35</td> <td>52</td> <td>61</td> <td>38</td> <td>29</td> </tr> </tbody> </table>	Lifetime (in hours)	0 – 20	20 – 40	40 – 60	60 – 80	80 – 100	100 – 120	Frequency	10	35	52	61	38	29	
Lifetime (in hours)	0 – 20	20 – 40	40 – 60	60 – 80	80 – 100	100 – 120										
Frequency	10	35	52	61	38	29										
	<b>Section — D</b> <b>This section consists of questions of Long Answer type, of 5 marks each.</b>															
32	<p>“If a line is drawn parallel to one side of a triangle and intersects the other two sides, then it divides those two sides in the same ratio.” Prove the statement.</p> <p><b>OR</b></p> <p>The diagonals of a quadrilateral ABCD intersect each other at the point O, such that <math>\frac{AO}{OB} = \frac{OC}{OD}</math>. Show that the quadrilateral ABCD is a trapezium.</p>	3														
																
33	<p>The diagonal of a rectangular field is 60 m more than the shorter side. If the longer side is 30 m more than the shorter side, find the length of the sides of the field.</p> <p><b>OR</b></p> <p>The sum of the ages of a father and his son is 45 years. Five years ago, the product of their ages (in years) was 124. Determine their present age.</p>	5														
34	A vessel is in the form of a hemispherical bowl surmounted by a hollow cylinder of same diameter. The diameter of the hemispherical bowl is 14 cm and the total height of the vessel is 13 cm. Find the inner surface area of the vessel. Also, find the volume of the vessel.	5														
35	<p>A TV tower stands vertically on the bank of a canal. From a point on the other bank directly opposite the tower, the angle of elevation of the top of the tower is <math>60^\circ</math>. From another point 20 m away from the point on the line joining this point to the foot of the tower, the angle of elevation of the top of the tower is <math>30^\circ</math>. Find the height of the tower. (Use <math>\sqrt{3} = 1.73</math>)</p> <p><b>OR</b></p> <p>An aeroplane when flying at a height of 4000 m from the ground passes vertically above another aeroplane at an instant when the angles of elevation of the two planes from the same point on the ground are <math>60^\circ</math> and <math>45^\circ</math> respectively. Find the vertical distance between the aeroplanes at that instant. (Use <math>\sqrt{3} = 1.73</math>)</p>															

**SECTION E**

**This section comprises of 3 Case Study questions, each of 4 marks**

36 Interschool Rangoli Competition was organized by one of the reputed schools of Odissa. The theme of the Rangoli Competition was Diwali celebrations where students were supposed to make mathematical designs. Students from various schools participated and made beautiful Rangoli designs. One such design is given below.

Rangoli is in the shape of square marked as ABCD, side of square being 40 cm. At each corner of a square, a quadrant of circle of radius 10 cm is drawn (in which diyas are kept). Also, a circle of diameter 20 cm is drawn inside the square.



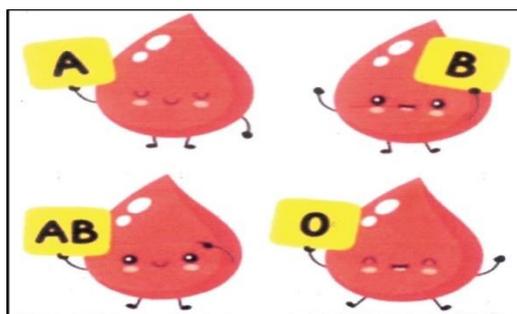
- (i) What is the area of square ABCD?
- (ii) Find the area of the circle.
- (iii) If the circle and the four quadrants are cut off from the square ABCD and removed, then find the area of remaining portion of square ABCD

**OR**

Find the Area of the figure if only the 4 quadrants of the square are removed.

37 Blood group describes the type of blood a person has. It is a classification of blood based on the presence or absence of inherited antigenic substances on the surface of red blood cells. Blood types predict whether a serious reaction will occur in a

In a sample blood, 22 had type O and rest had



blood transfusion.

of 50 people, 21 had type O had type A, 5 had type B type AB blood group.

Based on the above, answer the following questions :

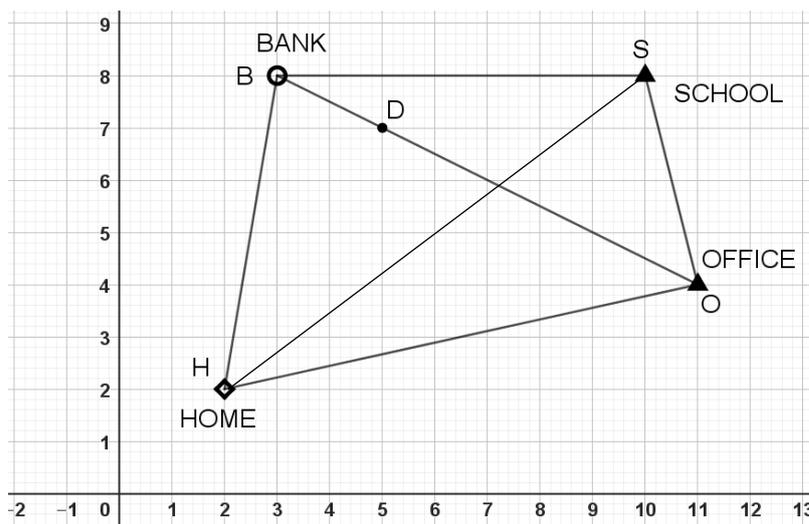
- (i) What is the probability that a person chosen at random had type O blood?
- (ii) What is the probability that a person chosen at random had type AB blood group?
- (iii) What is the probability that a person chosen at random had neither

type A nor type B blood group?

**OR**

What is the probability that person chosen at random had either type A or type B or type O blood group?

- 38 Ayush starts walking from his house to his office instead of going to the office directly, he goes to a bank first, from there to his daughter's school and then reaches his office.



- (i) Write the Coordinates for Home, Bank, School and Office
- (ii) What is the distance between the home and bank.
- (iii) There is a point D on the straight road between the Bank and Office whose coordinates are (5,7), Find the ratio in which point D divides BO (**BD:DO**)

**OR**

Find the coordinates of the point on road HS which lies midway between home and school.

**KENDRIYA VIDYALAYA SANGATHAN, RAIPUR REGION**  
**SECOND PRE-BOARD EXAM (2025-26)**  
**Subject: SCIENCE (086)**  
**Class: X**

**Max. Marks: 80**

**Time: 3 hours**

**General Instructions:**

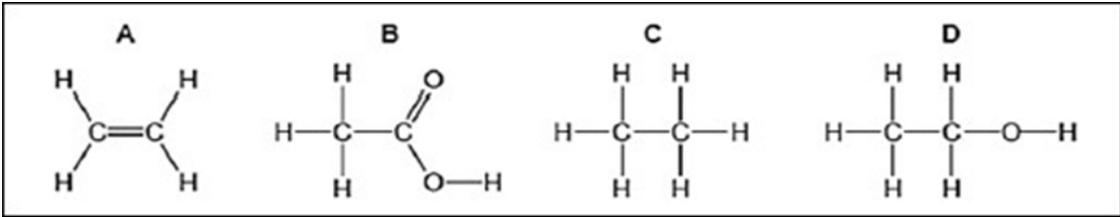
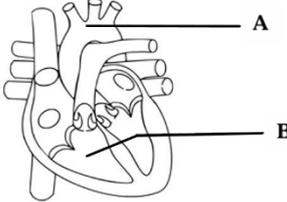
1. All questions would be compulsory. However, an internal choice of approximately 33% would be provided. 50% marks are to be allotted to competency-based questions.
2. Section A would have 16 MCQs and 04 Assertion-Reasoning type questions carrying 1 mark each.
3. Section B would have 6 Short Answer (SA) type questions carrying 02 marks each.
4. Section C would have 7 Short Answer (SA) type questions carrying 03 marks each.
5. Section D would have 3 Long Answer (LA) type questions carrying 05 marks each.
6. Section E would have 3 source based/case based/passage based/integrated units of assessment (04 marks each) with sub-parts of the values of 1/2/3 marks.

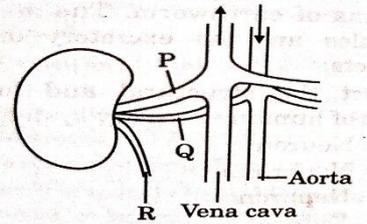
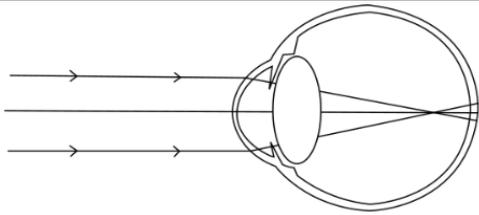
**Section- A**

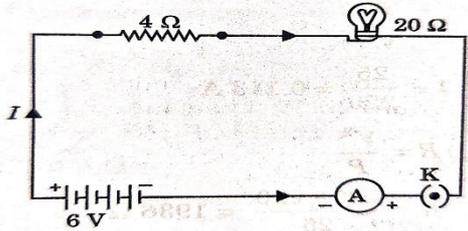
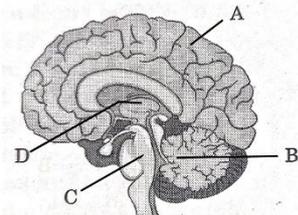
**Question 1 to 16 are multiple choice questions. Only one of the choices is correct. Select and write the correct choice as well as the answer to these questions.**

1.	Which of the following are combination reactions? (i) $2\text{KClO}_3 + \text{Heat} \rightarrow 2\text{KCl} + 3\text{O}_2$ (ii) $\text{MgO} + \text{H}_2\text{O} \rightarrow \text{Mg}(\text{OH})_2$ (iii) $4\text{Al} + 3\text{O}_2 \rightarrow 2\text{Al}_2\text{O}_3$ (iv) $\text{Zn} + \text{FeSO}_4 \rightarrow \text{ZnSO}_4 + \text{Fe}$ (a) (i) and (iii) (b) (iii) and (iv) (c) (ii) and (iv) (d) (ii) and (iii)	1
2.	The correct statement with reference to single celled organisms are- (i) Complex substances are not broken down into simpler substances (ii) Simple diffusion is sufficient to meet the requirement of exchange of gases (iii) Specialised tissue performs different functions in the organism (iv) Entire surface of the organism is in contact with the environment for taking in food. (a) (i) and (iii) (b) (ii) and (iii) (c) (ii) and (iv) (d) (i) and (iv)	1
3.	The danger signals installed at the top of tall buildings are red in colour. These can be easily seen from a distance because among all other colours, the red light (a) is scattered the most by smoke or fog (b) is scattered the least by smoke or fog (c) is absorbed the most by smoke or fog (d) moves fastest in air	1
4.	The F1 generation from a cross between a homozygous tall plant (TT) and a homozygous dwarf plant (tt) will consist of: (a) Homozygous tall plants (b) Homozygous dwarf plants (c) Heterozygous tall plants (d) A mixture of homozygous and heterozygous plants	1
5.	Which of the given gases can be used for the storage of fresh samples of oil for a long time? (a) Carbon dioxide or oxygen (b) Nitrogen or helium (c) Helium or oxygen (d) Nitrogen or oxygen	1
6.	Which of the following is an example of genetic variation? (a) Reeta eats meat, but her sister Geeta is a vegetarian. (b) One person is older than another. (c) Two children have different eye colours. (d) One person has a scar, but his friend does not.	1
7.	Mirror 'X' is used to concentrate sunlight in solar furnace and Mirror 'Y' is fitted on the side	1

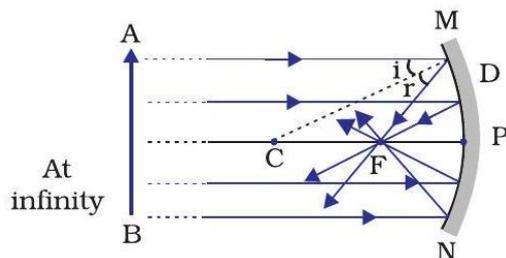


	(a) Blue (c) Dirty green	(b) Colourless (d) Reddish Brown	
15.	Which of the following belongs to homologous series of alkynes? C <sub>6</sub> H <sub>6</sub> , C <sub>2</sub> H <sub>6</sub> , C <sub>2</sub> H <sub>4</sub> , C <sub>3</sub> H <sub>4</sub> .		1
	(a) C <sub>6</sub> H <sub>6</sub>	(b) C <sub>2</sub> H <sub>4</sub>	(c) C <sub>2</sub> H <sub>6</sub> (d) C <sub>3</sub> H <sub>4</sub>
16.	The reaction of ethanol with concentrated sulphuric acid produces which of the following compound?		1
			
	(a) B	(b) C	(c) D (d) A
<p><b>Q.no 17 to 20 are Assertion and Reason based questions.</b>  <b>These consist of two statements – Assertion (A) and Reason (R).</b>  <b>Answer these questions selecting the appropriate option given below:</b>  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</p>			
17.	<b>Assertion(A):</b> Testes lie in scrotum outside the body. <b>Reason (R):</b> Sperms require temperature higher than the body temperature for development		1
18.	<b>Assertion (A):</b> In plants there is no need of specialised respiratory organs. <b>Reason (R):</b> Plants do not have great demands of gaseous exchange		1
19.	<b>Assertion(A):</b> Ozone is both beneficial and harmful <b>Reason(R):</b> Stop the release of chlorofluorocarbons to protect the ozone layer		1
20.	<b>Assertion(A):</b> A white washed wall develops a coating of calcium sulphate after a few days. <b>Reason(R):</b> Calcium oxide on the wall reacts slowly with carbon dioxide in the air.		1
<b>Section-B</b>			
<b>Question No. 21 to 26 are very short answer questions</b>			
21.	Two identical resistors, each of resistance 50 Ω are connected (i) in series (ii) in parallel, in turn, to a battery of 10 V. Calculate the ratio of power consumed in the combination of resistors in the two cases OR What is the function of fuse in an electric circuit? Which material is generally used in fuse wire?		2
22.	a) Write the essential condition for the following reaction. $2\text{AgCl} \rightarrow 2\text{Ag} + \text{Cl}_2$ And write one use of this reaction. b) Complete the following reaction: $2\text{FeSO}_4 \rightarrow \text{Fe}_2\text{O}_3 + \dots + \dots$		2
23.	a) What are the benefits of having a four-chambered heart in birds and mammals? b) State whether oxygenated or deoxygenated blood flows in parts A and B in the given picture-		2
			
24.	With the help of a flow chart, explain sex determination in a human baby, if the sperm carrying the X chromosome fertilizes the egg.		2

25.	a) A patient whose gallbladder is removed is recommended to eat less oily food. Why? b) What will happen if mucus is not secreted by the gastric glands? OR Draw a well-labelled diagram of steps of nutrition in amoeba	2	
26.	Define Absolute refractive index. Determine the speed of light in diamond if the refractive index of diamond with respect to vacuum is 2.42. Speed of light in vacuum is $3 \times 10^8$ m/s.	2	
<b>Section-C</b>			
<b>Question No. 27 to 33 are short answer questions</b>			
27.	Zinc granules were taken in a bottle and dil. HCl was added into it. A balloon covered the mouth of the bottle to collect the gas 'X'. When the end was tied the balloon started floating up in air. Identify 'X'. Write the reaction occurring during the formation of gas 'X'. How can we test this gas? OR Give reason: a) Dry HCl gas does not change the colour of dry blue litmus paper. b) Acidified water is considered to be a good conductor of electricity.	3 (1.5+1.5)	
28.	In the figure below, the structures associated with the human kidneys are marked (P, Q and R). a) Identify P, Q and R. b) What can you say about relative concentration of urea in these structures?		3 (1.5+1.5)
29.	(a) State Joule's law of heating. (b) An electric lamp is marked 100 W, 220 V. It is used for 5 hours daily. Calculate: (i) Its resistance while glowing (ii) Energy consumed in kWh per day.	3	
30.	A student fixes a white sheet of paper on a drawing board. He places a bar magnet in the centre and sprinkles some iron filings uniformly around the bar magnet. Then he taps gently and observes that iron filings arrange themselves in a certain pattern. a) Why do iron filings arrange themselves in a particular pattern? b) Which physical quantity is indicated by the pattern of field lines around the bar magnet? c) State any two properties of magnetic field lines.	3	
31.	Why are bacteria and fungi called decomposers? List any two advantages of decomposers to the environment.	3	
32.	 <p>Observe the diagram and answer the following questions: -</p>	3	
33.	(a) Give reasons: i) Pickles are not stored in tin metal container. ii) Ionic compounds are poor conductor of electricity in solid state. iii) Carbonate and sulphide ores are usually converted into oxides during the process of extraction.	3	
<b>Section - D</b>			
<b>Question No. 34 to 36 are long answer questions</b>			
34.	a) Suggest three contraceptive methods that can be practiced to control the size of human population which is essential for the health and prosperity of the country. State the basic	5	

	<p>principle involved in each.</p> <p>b) The placenta develops shortly after conception and attaches to the wall of the uterus. What is placenta? Mention its role during pregnancy.</p> <p style="text-align: center;">OR</p> <p>a) Why is fertilization not possible without pollination?</p> <p>b) Write any two advantages of vegetative propagation.</p> <p>c) Describe post pollination changes with the help of a neat labelled diagram showing germination of pollen on the stigma.</p>	
35.	<div style="text-align: center;">  </div> <p>An electric lamp of resistance <math>20\ \Omega</math> and a conductor of resistance <math>4\ \Omega</math> are connected to a <math>6\ \text{V}</math> battery as shown in the circuit. Calculate:</p> <p>(a) the total resistance of the circuit,</p> <p>(b) the current through the circuit,</p> <p>(c) the potential difference across the (i) electric lamp and (ii) conductor, and</p> <p>(d) power of the lamp.</p> <p style="text-align: center;">OR</p> <p>a) Define Power and state its SI unit.</p> <p>b) A torch bulb is rated <math>6\ \text{V}</math> and <math>600\ \text{mA}</math>. Calculate its</p> <p>i) Power</p> <p>ii) Resistance</p> <p>iii) Energy consumed when it is lighted for 3.5 hours</p>	5
36.	<p>A compound A (<math>\text{C}_2\text{H}_4\text{O}_2</math>) reacts with Na metal to form a compound 'B' and evolves a gas which burns with a pop sound. Compound 'A' on treatment with an alcohol 'C' in presence of an acid forms a sweet-smelling compound 'D' (<math>\text{C}_4\text{H}_8\text{O}_2</math>). Addition of NaOH to 'D' gives back B and C. Identify A, B, and D and write the reactions involved.</p> <p style="text-align: center;">OR</p> <p>(a) What are soaps? Explain the mechanism of cleansing action of soap with the help of a labelled diagram.</p> <p>(b) Detergents are better than soaps. Justify.</p>	5
<p><b>Section – E</b></p> <p><b>Question No. 37 to 39 are Case Study based questions with 2 to 3 short sub-parts. Internal Choice is provided in one of these sub-parts.</b></p>		
37.	<p>The diagram shows a section of the human brain labelled as A, B, C and D. Observe the diagram carefully and answer the questions.</p> <div style="text-align: center;">  </div> <p>a) Identify A, B, C and D.</p> <p>b) What are nerves and their function in body?</p> <p>c) List two body functions that will be affected if cerebellum gets damaged.</p> <p style="text-align: center;">OR</p> <p>Name two specialised tissue that provide control and coordination in multicellular organisms.</p>	4 (1+ 1+ 2)
38.	<p>Hold a concave mirror in your hand and direct its reflecting surface towards the sun. Direct the light reflected by the mirror on to a white card-board held close to the mirror. Move the</p>	4

cardboard back and forth gradually until you find a bright, sharp spot of light on the board. This spot of light is the image of the sun on the sheet of paper; which is also termed as "Principal Focus" of the concave mirror.



- List two applications of concave mirror
- If the distance between the mirror and the principal focus is 15 cm, find the radius of curvature of the mirror.
- Draw a ray diagram to show the type of image formed when an object is placed between pole and focus of a concave mirror.

OR

- An object 10 cm in size is placed at 100 cm in front of a concave mirror. If its image is formed at the same point where the object is located, find:
  - focal length of the mirror, and
  - magnification

39. A student took four metals P, Q, R and S and carried out different experiments to study the properties of metals. Some of the observations were:  
 All metals could not be cut with knife except metal R.  
 Metal P combined with oxygen to form an oxide  $M_2O_3$  which reacted with both acids and bases.  
 Reaction with water.  
 P - Did not react either with cold or hot water but reacted with steam  
 Q - Reacted with hot water and the metal started floating  
 R - Reacted violently with cold water  
 S - Did not react with water at all  
 Based on the above observations answer the following:  
 (a) Out of the given metals, which metal is need to be stored in the kerosene?  
 (b) Name the metal P and Q.  
 (c) What are amphoteric oxides? Out of the given metal which one forms amphoteric oxides?
- OR
- Write the increasing order of the reactivity of the given four metals. Also explain it.

4

**KENDRIYA VIDYALAYA SANGATHAN, RAIPUR REGION**  
**SECOND PRE-BOARD EXAM (2025-26)**

Class - 10  
MM:80 Marks

Subject:- Social Science  
Time: 3Hours

**General Instruction:- ( सामान्य निर्देश):-**

1. There are 38 questions in the Question paper. All questions are compulsory.
2. The question paper has Four Sections - A-History, B-Geography C- Political Science, and D-Economics.
3. Each Section is of 20 Marks and has MCQS, VSA, SA, LAs and CBQ.
4. Very Short Answer Type Questions (VSA), carry 2 marks each. Answers to each question should not exceed 40 words.
5. Short Answer Type Questions (SA), carry 3 marks each. Answers to each question should not exceed 60 words.
6. Long answer type questions (LA), carry 5 marks each. Answers to each question should not exceed 120 words.
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.
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)
9. There is no overall choice in the question paper. However, an internal choice has been provided in a few questions. Only one of the choices in such questions must be attempted.
10. In addition to this, NOTE that a separate question has been provided for Visually Impaired candidates in lieu of questions having visual inputs, map etc. Such questions are to be attempted by Visually Impaired candidates only.

**सामान्य निर्देश:-**

1. प्रश्न पत्र में 38 प्रश्न हैं। सभी प्रश्न अनिवार्य हैं।
2. प्रश्न पत्र में चार खंड हैं - A- इतिहास, B- भूगोल, C- राजनीति विज्ञान और D- अर्थशास्त्र।
3. प्रत्येक खंड 20 अंकों का है और इसमें MCQS, VSA, SA, LAs और CBQ हैं।
4. अति लघु उत्तरीय प्रश्न (VSA), प्रत्येक 2 अंक का है। प्रत्येक प्रश्न का उत्तर 40 शब्दों से अधिक नहीं होना चाहिए।
5. लघु उत्तरीय प्रश्न (SA), प्रत्येक 3 अंक का है। प्रत्येक प्रश्न का उत्तर 60 शब्दों से अधिक नहीं होना चाहिए।
6. दीर्घ उत्तरीय प्रश्न (LA), प्रत्येक 5 अंक का होगा। प्रत्येक प्रश्न का उत्तर 120 शब्दों से अधिक नहीं होना चाहिए।
7. केस आधारित प्रश्न (CBQ) होंगे जिनमें तीन उप-प्रश्न होंगे और प्रत्येक 4 अंकों का होगा। प्रत्येक प्रश्न का उत्तर 100 शब्दों से अधिक नहीं होना चाहिए।
8. मानचित्र-आधारित प्रश्न, 5 अंकों के होंगे और दो भागों में होंगे- खंड A में प्रश्न 9- इतिहास (2 अंक) और खंड B में प्रश्न 19- भूगोल (3 अंक)।
9. प्रश्न पत्र में कोई समग्र विकल्प नहीं है। हालाँकि, कुछ प्रश्नों में आंतरिक विकल्प दिया गया है। ऐसे प्रश्नों में से केवल एक विकल्प का ही प्रयास करना होगा।
10. इसके अतिरिक्त, कृपया ध्यान दें कि दृश्य इनपुट, मानचित्र आदि वाले प्रश्नों के स्थान पर दृष्टिबाधित उम्मीदवारों के लिए एक अलग प्रश्न दिया गया है। ऐसे प्रश्न केवल दृष्टिबाधित उम्मीदवारों द्वारा ही हल किए जाने हैं।

## SECTION A - HISTORY (20MARKS)

Q1	<p>अभिकथन (A): नेपोलियन एक लोकतांत्रिक सरकार की स्थापना के पक्ष में था। कारण (R): नेपोलियन के शासन के अंत के कारण यूरोप में रूढ़िवादिता का उदय हुआ। सही विकल्प चुनें:</p> <p>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</p> <p>Assertion(A): Napoleon was in support of the establishment of a democratic government. Reason(R): The end of the rule of Napoleon led to the rise in the conservatism regimes in Europe. <b>Choose the correct option:</b></p> <p>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.</p>	1
Q2	<p>निम्नलिखित को सही क्रम में व्यवस्थित कीजिए:</p> <p>(i) रौलट अधिनियम पारित हुआ। (ii) बंगाल का विभाजन आधिकारिक रूप से अस्तित्व में आया। (iii) अहमदाबाद में सत्याग्रह आंदोलन। (iv) खेड़ा जिले (गुजरात) में सत्याग्रह आंदोलन।</p> <p>Arrange the following in the correct sequence:</p> <p>(i) Rowlatt Act was passed. (ii) The Partition of Bengal officially came into existence. (iii) Satyagraha Movement in Ahmedabad. (iv) Satyagraha Movement in Kheda District (Gujarat).</p> <p><b>Options:</b></p> <p>(A) (iv) - (ii) - (i) - (iii)                      (B) (ii) - (iii) - (iv) - (i) (C) (ii) - (iv) - (iii) - (i)                      (D) (i) - (iii) - (ii) - (iv)</p>	1
Q3	<p>गांधीजी के बारे में निम्नलिखित में से कौन सा कथन गलत है?</p> <p>(A) उन्होंने पृथक निर्वाचिका का समर्थन किया। (B) उन्होंने दांडी मार्च का नेतृत्व किया। (C) उन्होंने असहयोग आंदोलन शुरू किया। (D) उन्होंने गोलमेज सम्मेलन में भाग लिया।</p> <p>Which among the following statements is incorrect about Gandhiji? (A) He supported separate electorates. (B) He led the Dandi March.</p>	1

	(C) He started the Non-Cooperation Movement. (D) He attended the Round Table Conference.	
Q4	वर्नाक्यूलर प्रेस अधिनियम कब पारित हुआ? (A) 1858 (B) 1868 (C) 1878 (D) 1898  When was the Vernacular Press Act passed? (A) 1858. (B) 1868 (C) 1878. (D) 1898	1
5A 5B.	सोलहवीं शताब्दी के मध्य में 'चेचक' स्पेनिश विजेताओं का सबसे शक्तिशाली हथियार कैसे साबित हुआ? व्याख्या कीजिए। How did 'small pox' prove to be the most powerful weapon of the Spanish conquerors in the mid-sixteenth century? Explain.  OR पूर्व-आधुनिक व्यापार में रेशम मार्ग के किन्हीं दो लाभों का उल्लेख कीजिए। Mention any two advantages of the Silk route in the pre-modern trade.	2
6A 6B	राष्ट्रीय आंदोलनों में महिलाओं की भागीदारी पर महात्मा गांधी के क्या विचार थे? What were Mahatma Gandhi's views on women's participation in the national movements?  OR 1920 के दशक के दौरान आंध्र प्रदेश में अल्लूरी सीताराम राजू की भूमिका का वर्णन करें। Describe the role of Alluri Sitarama Raju in Andhra Pradesh during the 1920s.	3
7A 7B	"नेपोलियन ने फ्रांस में लोकतंत्र को नष्ट कर दिया था, लेकिन प्रशासनिक क्षेत्र में, उसने पूरी व्यवस्था को अधिक तर्कसंगत और कुशल बनाने के लिए क्रांतिकारी सिद्धांतों को शामिल किया था।" तर्कों सहित इस कथन का विश्लेषण कीजिए। "Napoleon had destroyed democracy in France, but in the administrative field, he had incorporated revolutionary principles in order to make the whole system more rational and efficient". Analyse the statement with arguments.  OR 'यूनाइटेड किंगडम ऑफ ग्रेट ब्रिटेन' के गठन की प्रक्रिया की व्याख्या करें। Explain the process of formation of the 'United Kingdom of Great Britain'.	5 5
Q8.	दिए गए पाठ को पढ़ें और निम्नलिखित प्रश्नों के उत्तर दें:-  <b>प्रिंट और सेंसरशिप</b> मुद्रित शब्द की शक्ति अक्सर सरकारों द्वारा मुद्रण को नियंत्रित और दबाने के तरीकों में देखी जाती है। औपनिवेशिक सरकार भारत में प्रकाशित सभी पुस्तकों और समाचार पत्रों पर निरंतर नज़र रखती थी और प्रेस को नियंत्रित करने के लिए कई कानून पारित करती थी। प्रथम विश्व युद्ध के दौरान, भारत रक्षा नियमों के तहत, 22 समाचार पत्रों को प्रतिभूतियाँ देनी पड़ीं। इनमें से 18 सरकारी आदेशों का पालन करने के बजाय बंद हो गए। (1919 में रॉलेट के अधीन राजद्रोह समिति की रिपोर्ट ने नियंत्रणों को और कड़ा कर दिया जिसके परिणामस्वरूप विभिन्न समाचार पत्रों पर जुर्माना लगाया गया। द्वितीय विश्व युद्ध के छिड़ने पर, भारत रक्षा अधिनियम पारित किया गया, जिससे युद्ध से संबंधित विषयों की रिपोर्टों को सेंसर करने की अनुमति मिल गई। भारत छोड़ो आंदोलन से संबंधित सभी रिपोर्टें इसके दायरे में आ गईं। अगस्त	1 1

	<p>1942 में, लगभग 90 समाचार पत्रों का दमन किया गया।</p> <p><b>प्रश्न :-</b></p> <p>8(i) भारतीय समाचार पत्रों पर नज़र रखने के लिए औपनिवेशिक सरकार ने कौन-सा तरीका अपनाया?</p> <p>8(ii) औपनिवेशिक सरकार के कानूनों का प्रेस पर क्या प्रभाव पड़ा?</p> <p>8(iii) समाचार पत्रों पर 'राजद्रोह समिति' के प्रभाव का विश्लेषण कीजिए।</p> <p>Read the given text and answer the following questions:-</p> <p style="text-align: center;"><b>Print and Censorship</b></p> <p>The power of the printed word is most often seen in the way governments seek to regulate and suppress print. The colonial government kept continuous track of all books and newspapers published in India and passed numerous laws to control the press. During the First World War, under the Defence of India Rules, 22 newspapers had to furnish securities. Of these, 18 shut down rather than comply with government orders. (The Sedition Committee Report under Rowlatt in 1919 further strengthened controls that led to imposition of penalties on various newspapers. At the outbreak of the Second World War, the Defence of India Act was passed, allowing censoring of reports of war-related topics. All reports about the Quit India Movement came under its purview. In August 1942, about 90 newspapers were suppressed.</p> <p>Questions</p> <p>8(i) What method did the colonial government employ to keep track of Indian newspapers?</p> <p>8(ii) How did the colonial government's laws affect the press?</p> <p>8(iii) Analyse the impact of the 'Sedition Committee' on newspapers.</p>	2
<b>MAP SKILL- BASED QUESTIONS (2 MARKS)</b>		
Q9.	<p>भारत के दिए गए रेखा मानचित्र पर दो स्थानों को अंकित कीजिए :-</p> <p>A. सितंबर 1920 में हुए भारतीय राष्ट्रीय कांग्रेस आंदोलन से संबंधित स्थान।</p> <p>B. यह स्थान नील उत्पादक आंदोलन के लिए जाना जाता है।</p> <p>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.</p> <p>A. A Place associated with the Indian National Congress took place in September 1920.</p> <p>B. The place is known for the indigo planters Movement.</p>	1+ 1= 2
9B	<p><b>नोट: निम्नलिखित प्रश्न केवल दृष्टिबाधित अभ्यर्थियों के लिए है।</b></p> <p><b>Note: The following question is for Visually Impaired Candidates only in lieu of question 9.</b></p> <p>A. The place where the Civil Disobedience Movement was launched</p> <p>B. The city where Indian National Congress session was held in December 1920</p>	
<b>SECTION B - GEOGRAPHY (20 MARKS)</b>		
10.	<p>निम्नलिखित मिट्टी की विशेषताओं को पढ़ें और दिए गए विकल्पों में से मिट्टी की पहचान करें।</p> <ul style="list-style-type: none"> <li>● यह एक व्यापक रूप से फैली हुई और महत्वपूर्ण मिट्टी है।</li> <li>● उत्तरी मैदान इससे बने हैं।</li> <li>● यह रेत, गाद और चिकनी मिट्टी से बनी है।</li> </ul> <p><b>विकल्प:</b> (A) पीली मिट्टी                      (B) लैटेराइट मिट्टी</p> <p>(C) काली मिट्टी।                              (D) जलोढ़ मिट्टी</p>	1

	<p><b>Read the following characteristics of a soil and identify the soil from the given options.</b></p> <ul style="list-style-type: none"> <li>● It is a widely spread and important soil.</li> <li>● Northern plains are made of it.</li> <li>● It consists of sand, silt and clay.</li> </ul> <p><b>Options:</b></p> <p>(A) Yellow soil                      (B) Laterite soil (C) Black soil                      (D) Alluvial soil</p>	
11.	<p>निम्नलिखित में से कौन संसाधन विकास की समस्या नहीं है?</p> <p>(A) कुछ व्यक्तियों की लालच की पूर्ति के लिए संसाधनों का हास। (B) कुछ ही हाथों में संसाधनों का संचय। (C) संसाधनों का अंधाधुंध दोहन। (D) संसाधनों का समतापूर्ण वितरण।</p> <p>Which among the following is not a problem of Resource development?</p> <p>(A) Depletion of resources for satisfying the greed of few individuals. (B) Accumulation of resources in a few hands. (C) Indiscriminate exploitation of resources. (D) An equitable distribution of resources.</p>	1
12	<p>निम्नलिखित में से कौन सा कथन इस घोषणा को सबसे अच्छी तरह समझाता है कि बाँध भारत के 'आधुनिक मंदिर' हैं?</p> <p>(A) बाँध स्थानीय समुदायों के लिए आध्यात्मिक निवास स्थान के रूप में कार्य करेंगे। (B) बाँध धार्मिक महत्व के स्थल होंगे जहाँ नदियों की पूजा की जाती है। (C) बाँध कृषि अर्थव्यवस्था के विकास को शहरी अर्थव्यवस्था के साथ एकीकृत करेंगे। (D) बाँध स्थानीय जलीय जीव-जंतुओं और वनस्पतियों के समृद्ध जैव विविधता के साथ एकीकरण के स्थान के रूप में कार्य करेंगे।</p> <p>Which of the following BEST explains the proclamation that dams are the 'modern temples' of India?</p> <p>(A) Dams will act as a spiritual place for the local communities to settle down. (B) Dams will be the site of religious significance where the rivers are prayed to. (C) Dams will integrate the development of the agricultural economy with the urban economy. (D) Dams will act as a place of integration of the local aquatic fauna and vegetation with a flourishing biodiversity.</p>	1
13	<p>दुर्ग-बस्तर-चंद्रपुर बेल्ट ..... और ..... में स्थित है।</p> <p>(ए) राजस्थान और उत्तर प्रदेश (बी) छत्तीसगढ़ और महाराष्ट्र (सी) गुजरात और मध्य प्रदेश (डी) मध्य प्रदेश और ओडिशा</p> <p>Durg-Bastar-Chandrapur belt lies in ..... and .....</p> <p>(A) Rajasthan and Uttar Pradesh (B) Chhattisgarh and Maharashtra (C) Gujarat and Madhya Pradesh (D) Madhya Pradesh and Odisha</p>	1

14	<p>अभिकथन (A): भारत अपनी वाणिज्यिक ऊर्जा आवश्यकताओं की पूर्ति के लिए कोयले पर अत्यधिक निर्भर है। कारण (R): यह देश की ऊर्जा आवश्यकताओं का एक बड़ा हिस्सा प्रदान करता 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।</p> <p>Assertion (A): India is highly dependent on coal for meeting its commercial energy requirements. Reason (R): It provides a substantial part of the nation's energy needs.</p> <p>Choose the correct option: 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.</p>	1
15	<p>निम्नलिखित में से वन का कौन सा विवरण सही नहीं है? (A) आरक्षित वन: आधे से अधिक वनों का आरक्षण (B) संरक्षित वन: वनों के एक तिहाई भाग का आरक्षण (C) अवर्गीकृत वन: सरकारी और निजी व्यक्तियों के अधीन वनों का आरक्षण (D) स्थायी वन: लकड़ी के उत्पादन के लिए आरक्षित और अवर्गीकृत वन</p> <p>Which of the following descriptions of the forest is NOT correct? (A) Reserved Forest: Reservation of more than half of forests (B) Protected Forest: Reservation of 1/3rd of the forests (C) Unclassed Forest: Reservation of forest under govt. and private individuals (D) Permanent Forest: Reserved and unclassified forest for the production of timber</p>	1
16	<p>आदिम निर्वाह और वाणिज्यिक खेती के बीच अंतर बताइए Differentiate between Primitive Subsistence and Commercial Farming.</p>	2
17A 17B	<p>सतत विकास की चुनौती के लिए औद्योगिक प्रदूषण पर नियंत्रण आवश्यक है।' उदाहरणों सहित इस कथन की पुष्टि कीजिए। The challenge of sustainable development requires control over industrial pollution.' Substantiate the statement with examples.. <b>OR</b> औद्योगिक स्थान निर्धारण के लिए उत्तरदायी किन्हीं पाँच कारकों को उदाहरण सहित समझाइए। Explain with examples any five factors that are responsible for industrial location.</p>	5
18.	<p>दिए गए पाठ को पढ़ें और निम्नलिखित प्रश्नों के उत्तर दें: <b>ऊर्जा संसाधनों का संरक्षण</b> आर्थिक विकास के लिए ऊर्जा एक मूलभूत आवश्यकता है। राष्ट्रीय अर्थव्यवस्था के प्रत्येक क्षेत्र - कृषि, उद्योग, परिवहन, वाणिज्यिक और घरेलू - को ऊर्जा की आवश्यकता होती है। स्वतंत्रता के बाद से लागू की गई आर्थिक</p>	

	<p>विकास योजनाओं को क्रियान्वित रहने के लिए ऊर्जा की बढ़ती मात्रा की आवश्यकता थी। परिणामस्वरूप, देश भर में सभी रूपों में ऊर्जा की खपत लगातार बढ़ रही है। इस पृष्ठभूमि में, ऊर्जा विकास का एक सतत मार्ग विकसित करने की तत्काल आवश्यकता है। ऊर्जा संरक्षण को बढ़ावा देना और नवीकरणीय ऊर्जा स्रोतों का बढ़ता उपयोग सतत ऊर्जा के दो आधार हैं। भारत वर्तमान में दुनिया के सबसे कम ऊर्जा कुशल देशों में से एक है। हमें अपने सीमित ऊर्जा संसाधनों के विवेकपूर्ण उपयोग के लिए सतर्क दृष्टिकोण अपनाना होगा। उदाहरण के लिए, जागरूक नागरिक होने के नाते, हम व्यक्तिगत वाहनों के बजाय सार्वजनिक परिवहन प्रणालियों का उपयोग करके; उपयोग में न होने पर बिजली बंद करके, बिजली बचाने वाले उपकरणों का उपयोग करके और गैर-पारंपरिक स्रोतों का उपयोग करके अपना योगदान दे सकते हैं। अंत में, "बचाई गई ऊर्जा ही उत्पादित ऊर्जा है"</p> <p>18.1) सतत ऊर्जा सतत विकास की कुंजी क्यों है?</p> <p>18.2) पूरे भारत में ऊर्जा की खपत क्यों बढ़ रही है?</p> <p>18.3) 'बचाई गई ऊर्जा ही उत्पादित ऊर्जा है' की व्याख्या कीजिए।</p> <p>Read the given text and answer the following questions</p> <p style="text-align: center;"><b>Conservation of Energy Resources</b></p> <p>Energy is a basic requirement for economic development. Every sector of the national economy- agriculture, industry, transport, commercial and domestic -needs inputs of energy. The economic development plans implemented since independence necessarily required increasing amounts of energy to remain operational. As a result, consumption of energy in all forms has been steadily rising all over the country. In this background, there is an urgent need to develop a sustainable path of energy development. Promotion of energy conservation and increased use of renewable energy sources are the twin planks of sustainable energy. India is presently one of the least energy efficient countries in the world. We have to adopt a cautious approach for the judicious use of our limited energy resources. For example, as concerned citizens we can do our bit by using public transport systems instead of individual vehicles; switching off electricity when not in use, using power-saving devices and using non- conventional sources At last "Energy saved is energy produced"</p> <p>18.1) Why is sustainable energy a key to sustainable development?</p> <p>18.2) Why is consumption of energy rising all over India?</p> <p>18.3) Explain 'Energy saved is energy produced'.</p>	<p>1</p> <p>1</p> <p>2</p>
<b>MAP SKILL - BASED QUESTIONS (3Marks)</b>		
19.	<p>भारत के उसी रेखा मानचित्र पर निम्नलिखित को उपयुक्त चिहनों से चिह्नित करें:</p> <p>(p) महाराष्ट्र में एक प्रमुख खोज बंदरगाह</p> <p style="text-align: center;"><b>अथवा</b></p> <p>(q) सुभाषचंद्र बोस अंतर्राष्ट्रीय हवाई अड्डा</p> <p>निम्नलिखित में से <b>कोई दो</b>:-</p> <ul style="list-style-type: none"> <li>● तारापुर परमाणु ऊर्जा संयंत्र</li> <li>● सरदार सरोवर बांध</li> <li>● सॉफ्टवेयर प्रौद्योगिकी पार्क - बेंगलुरु</li> <li>● भिलाई इस्पात संयंत्र</li> </ul> <p>On the same outline map of India locate and label the following with suitable symbols:</p>	<p>1</p> <p>1+</p> <p>1=</p> <p>2</p>



	<table border="1"> <tr> <td>(A)</td> <td>E- programming ई-प्रोग्रामिंग</td> <td>(i)</td> <td>Concurrent list समवर्ती सूची</td> </tr> <tr> <td>(B)</td> <td>Police पुलिस</td> <td>(ii)</td> <td>Union list केंद्र सूची</td> </tr> <tr> <td>©</td> <td>Education शिक्षा</td> <td>(iii)</td> <td>State list राज्य सूची</td> </tr> <tr> <td>(D)</td> <td>Defence रक्षा</td> <td>(iv)</td> <td>Residuary subjects अवशिष्ट विषय</td> </tr> </table> <p>(A) a-iv, b-iii, c-i, d-ii (B) a-iii, b-i, c-iii, d-ii</p> <p>(C) a-iv, b-i, c-iii, d-ii. (D) a-iv, b-ii, c-i,</p>	(A)	E- programming ई-प्रोग्रामिंग	(i)	Concurrent list समवर्ती सूची	(B)	Police पुलिस	(ii)	Union list केंद्र सूची	©	Education शिक्षा	(iii)	State list राज्य सूची	(D)	Defence रक्षा	(iv)	Residuary subjects अवशिष्ट विषय	
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23.	<p>केंद्र और राज्य सरकारों से सत्ता छीनकर स्थानीय सरकारों को सौंपने की प्रथा को विकेंद्रीकरण कहा जाता है। 1992 में विकेंद्रीकरण की दिशा में उठाए गए प्रमुख कदमों का चयन कीजिए।</p> <p>(A) स्थानीय सरकारी निकायों के नियमित चुनाव कराना।</p> <p>(B) सभी पदों में से कम से कम एक-तिहाई महिलाओं के लिए आरक्षित हैं</p> <p>(C) प्रत्येक राज्य में राज्य चुनाव आयोग का गठन किया गया है।</p> <p>(D) उपरोक्त सभी।</p> <p>The practice of taking power away from the union and state governments and giving it to local governments is called decentralisation.</p> <p>Pick the major steps that were taken towards decentralisation in 1992.</p> <p>(A) To hold regular elections of Local Government Bodies.</p> <p>(B) At least one-third of all positions are reserved for women.</p> <p>(C) State Election Commission has been created in each State.</p> <p>(D) All of the above.</p>	1																
24.	<p>भारतीय संघवाद की किन्हीं दो विशेषताओं का वर्णन कीजिए।</p> <p>Describe any two features of Indian Federalism.</p>	2																
25	<p>भारतीय लोकतंत्र पर जाति व्यवस्था के प्रभाव की व्याख्या कीजिए।</p> <p>Explain the impact of the caste system on Indian democracy.</p>	2																
26	<p>"लोकतांत्रिक सरकारें व्यवहार में जवाबदेह मानी जाती हैं।" तर्कों के साथ इस कथन का समर्थन कीजिए।</p> <p>"Democratic governments in practice are known as accountable." Support the statement with arguments</p>	3																
27 A	<p>राजनीतिक दल लोकतंत्र के लिए एक आवश्यक शर्त हैं।' प्रासंगिक बिंदुओं के साथ कथन का विश्लेषण करें</p> <p>Political parties are a necessary condition for a democracy.' Analyse the statement with relevant points.</p>	5																
27B	<p><b>अथवा OR</b></p> <p>आज राजनीतिक दलों को कई चुनौतियों का सामना करना पड़ रहा है जो उनके लोकतांत्रिक कामकाज को प्रभावित करती हैं।" इस कथन को उचित ठहराएँ।</p> <p>"Political parties today face several challenges that impact their democratic functioning." Justify this statement.</p>																	

28	<p>निम्नलिखित गद्यांश को ध्यानपूर्वक पढ़ें और नीचे दिए गए प्रश्नों के उत्तर दें:-</p> <p>“बेल्जियम यूरोप का एक छोटा सा देश है, जो क्षेत्रफल में हरियाणा राज्य से भी छोटा है। इसकी सीमाएँ फ्रांस, नीदरलैंड, जर्मनी और लक्ज़मबर्ग से लगती हैं। इसकी जनसंख्या एक करोड़ से थोड़ी अधिक है, जो हरियाणा की लगभग आधी जनसंख्या है। इस छोटे से देश की जातीय संरचना अत्यंत जटिल है। देश की कुल जनसंख्या का 59 प्रतिशत फ्लेमिश क्षेत्र में रहता है और डच भाषा बोलता है। अन्य 40 प्रतिशत लोग वालोनिया क्षेत्र में रहते हैं और फ्रेंच भाषा बोलते हैं। शेष एक प्रतिशत बेल्जियमवासी जर्मन भाषा बोलते हैं। राजधानी ब्रुसेल्स में 80 प्रतिशत लोग फ्रेंच भाषा बोलते हैं जबकि 20 प्रतिशत डच भाषा बोलते हैं।</p> <p>28(i) बेल्जियम की जातीय संरचना की व्याख्या कीजिए।  28(ii) 'जातीय' शब्द की व्याख्या कीजिए।  28(iii) बेल्जियम सरकार ने अपनी जातीय समस्या का समाधान कैसे किया? व्याख्या कीजिए।</p> <p>Read the following passage carefully and answer the questions that follow:-</p> <p>Belgium is a small country in Europe, smaller in area than the state of Haryana. It has borders with France, the Netherlands, Germany and Luxembourg. It has a population of a little over one crore, about half the population of Haryana. The ethnic composition of this small country is very complex. Of the country's total population, 59 percent live in the Flemish region and speak Dutch language. Another 40 percent people live in the Wallonia region and speak French. The remaining one percent of the Belgians speak German. In the capital city Brussels, 80 percent of the people speak French while 20 percent are Dutch-speaking.</p> <p>28(i) Explain the ethnic composition of Belgium.  28(ii) Explain the term 'ethnic'.  28(iii) How did the Belgian Government solve its ethnic problem? Explain.</p>	1 1 2
<b>SECTION - D (ECONOMICS -20 MARKS)</b>		
29	<p>मान लीजिए आपके इलाके में चार परिवार हैं, जिनकी औसत प्रति व्यक्ति आय ₹10,000 है। यदि तीनों परिवारों की आय क्रमशः ₹6,000, ₹8,000 और ₹14,000 है, तो चौथे परिवार की आय क्या होगी?</p> <p>(A) ₹5,000 (B) ₹10,000  (C) 12,000 (D) ₹15,000</p> <p>Suppose there are four families in your locality, the average per capita income of whom is ₹10,000. If the income of three families is ₹6,000, ₹8000 and 14,000 respectively, what would be the income of the fourth family?</p> <p>(A) ₹5,000 (B) ₹10,000  (C) 12,000 (D) ₹15,000</p>	1
30	<p>निम्नलिखित को सही क्रम में व्यवस्थित करें:</p> <p>(i) कपड़े को कार्यशालाओं तक पहुँचाना (ii) दुकानों और शोरूम में बेचना  (iii) सूत कातना  (iv) कपड़े की बुनाई</p> <p>Arrange the following in the correct sequence:</p> <p>(i) Transporting cloth to the workshops  (ii) Sale in shops and showrooms</p>	1

	<p>(iii) Spinning the yarn  (iv) Weaving of the fabric  (A) (i) - (iv) - (iii) - (ii)    (C) (iv) - (i) - (ii) - (iii)  (B) (iii)- (iv) - (i) - (ii).    (D) (iii) - (iv) - (ii) - (i)</p>	
31	<p>नीना एक बेकर है। वह अपने केक में अंडे इस्तेमाल करती है। क्या इन अंडों का y एजेंसी मूल्य कुल घरेलू उत्पाद की गणना में शामिल किया जाएगा?</p> <p>(A) हाँ, क्योंकि अंडे अपने आप में एक अंतिम उत्पाद हैं।  (B) हाँ, क्योंकि वे प्राथमिक क्षेत्र में शामिल हैं।  (C) नहीं, क्योंकि वे केक के मूल्य में शामिल हैं।  (D) नहीं, क्योंकि केक के बिना अंडों का अपना कोई मूल्य नहीं है।</p> <p>Nina is a baker. She uses eggs in her cakes. Will the y agency value of these eggs be included in the calculation of the total domestic product?</p> <p>(A) Yes, because eggs are a final product in themselves.  (B) Yes, because they are included in the primary sector.  (C) No, because they are included in the value of the cakes.  (D) No, because eggs have no value of their own without the cake.</p>	1
32	<p>ऋणदाता अक्सर ऋण देने से पहले संपार्श्विक की माँग क्यों करते हैं? निम्नलिखित में से सबसे उपयुक्त विकल्प चुनिए।</p> <p>(A) उधारकर्ताओं के लिए ब्याज दरें कम करने के लिए।  (B) व्यक्तिगत संबंध स्थापित करने के लिए।  (C) उनके लाभ मार्जिन को बढ़ाने के लिए।  (D) ऋण चूक के जोखिम को कम करने के लिए।</p> <p>Why do lenders often require collateral before lending a loan? Choose the most suitable option from the following.</p> <p>(A) To lower interest rates for borrowers.  (B) To establish personal relations.  (C) To increase their profit margins.  (D) To mitigate the risk of loan default.</p>	1
33	<p>स्वयं सहायता समूहों (एसएचजी) में बचत और ऋण गतिविधियों के संबंध में निर्णय निम्नलिखित में से कौन लेता है?</p> <p>(A) बैंक प्रबंधक  (B) गैर-सरकारी संगठन (एनजीओ) के सदस्य  (C) स्थानीय साहूकार  (D) स्वयं सहायता समूह (एसएचजी) के सदस्य</p> <p>Who among the following takes the decision regarding saving and loan activities in the Self-Help Groups (SHGs)?</p> <p>(A) Manager of a Bank  (B) Members of Non-Governmental Organization (NGO)  (C) Local Money Lenders  (D) Members of Self-Help Group (SHG)</p>	1
34	<p>वैश्वीकरण के निम्नलिखित पहलुओं को उनके विवरण के साथ सुमेलित करें और सही विकल्प चुनें।</p>	

Match the following aspects of globalization with their descriptions and choose the correct option.

1

List 1 ( Global Aspect)		List 2 (Description)	
(i)	तकनीकी उन्नति Technological Advancement	(A)	विचारों, मूल्यों और परंपराओं का परस्पर संबंध Interaction of ideas, values and traditions
(ii)	व्यापार का उदारीकरण Liberalization of Trade	(B)	Companies operating in many countries
(iii)	सांस्कृतिक विनियमन Cultural Exchange	©	Innovation in manu-facturing, communica-tion and information
(iv)	बहुराष्ट्रीय निगम Multinational Corporations	(D)	The removal of restric-tion on trade

- |     |    |     |      |    |
|-----|----|-----|------|----|
|     | i  | ii. | iii. | iv |
| (A) | A. | B.  | C.   | D  |
| (B) | C. | D.  | A.   | B  |
| (C) | D. | C.  | B.   | A  |
| (D) | B. | A.  | D.   | C  |

35 विकास के लिए, लोग विभिन्न लक्ष्यों पर विचार करते हैं। इस कथन का समर्थन तीन उपयुक्त उदाहरणों से कीजिए।  
"For development, people look at a mix of goals". Support the statement with three suitable examples.

3

36. डेटा आधारित प्रश्न)  
निम्नलिखित तालिका का अध्ययन करें और प्रश्नों के उत्तर दें:-

Year	Share of Primary sector (%)	Share of secondary sectors (%)	Share of Tertiary Sector(%)
1973	45	23	32
2018	27	25	48

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

36.2 1973 में कौन सा क्षेत्र सबसे बड़ा बनकर उभरा है?

36.3 तृतीयक क्षेत्र के उदय का एक कारण बताइए।

(Data Based Questions)

Study the following table and answer the questions:-

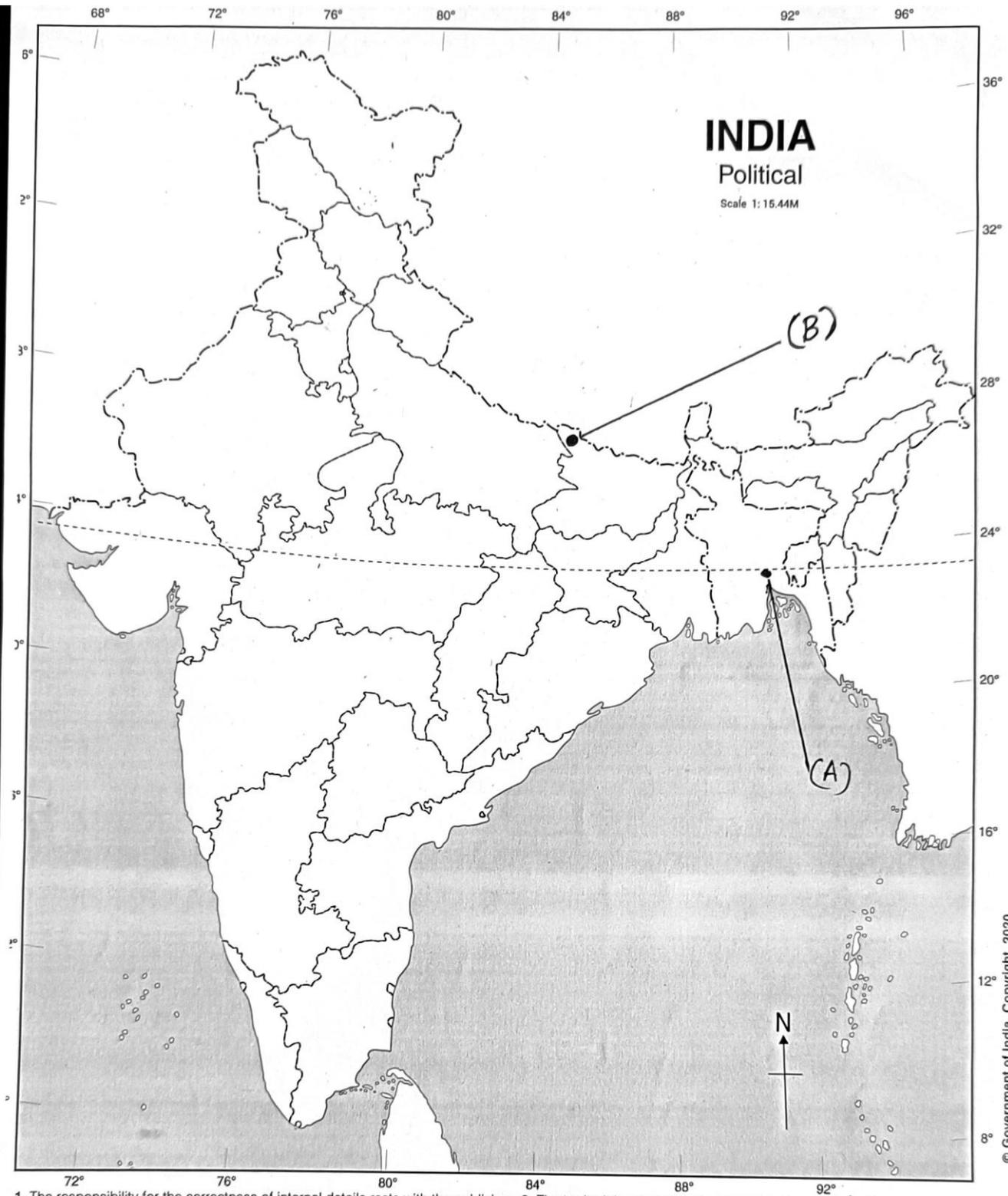
Year	Share of Primary sector (%)	Share of secondary sectors (%)	Share of Tertiary Sector(%)
1973	45	23	32
2018	27	25	48

**36.1** What change is observed in the share of the secondary sector from 1973 to 2018?

**36.2** Which sector has emerged as the largest in 1973?

1  
1  
1

	<b>36.3</b> Give one reason for the rise of the Tertiary Sector.	
37	वैश्वीकरण ने भारतीयों के जीवन को किस प्रकार प्रभावित किया है? उदाहरण सहित समझाइए। How has globalization affected the life of Indians? Explain with examples.	3
38A	कुमारी 'एक्स' अपने गाँव में नमकीन खाने की एक दुकान खोलना चाहती हैं। वह अपने परिवार के जीवन स्तर को बेहतर बनाने के लिए अपनी आय बढ़ाना चाहती हैं। आपके विचार से स्वयं सहायता समूह किस प्रकार मदद कर सकते हैं? अपने उत्तर की पुष्टि कारण सहित कीजिए।  Miss X wants to start a savoury food store in her village. She wants to supplement her income to raise the standard of living of her family. How, do you think, self-help groups can help, support your answer with reasons?	5
38B	<b>OR</b>	5
	असंगठित क्षेत्र में मजदूरों का शोषण होता है। क्या आप इस कथन से सहमत हैं? अपने उत्तर की पुष्टि पाँच प्रासंगिक बिंदुओं से कीजिए। Workers are exploited in an unorganised sector. Do you agree with this statement? Justify your answer with five relevant points.	



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product

1. The responsibility for the correctness of internal details rests with the publisher. 2. The territorial waters of India extend into the sea to a distance of twelve nautical miles measured from the appropriate base line. 3. The administrative headquarters of Chandigarh, Haryana and Punjab are at Chandigarh. 4. The interstate boundaries amongst Arunachal Pradesh, Assam and Meghalaya shown on this map are as interpreted from the "North-Eastern Areas (Reorganisation) Act, 1971," but have yet to be verified. 5. The external boundaries and coastlines of India agree with the Record/Master Copy certified by Survey of India. 6. The state boundaries between Uttarakhand & Uttar Pradesh, Bihar & Jharkhand and Chattisgarh & Madhya Pradesh have not been verified by the Governments concerned. 7. The spellings of names in this map have been taken from the

**KENDRIYA VIDYALAYA SANGATHAN, RAIPUR REGION**  
**SECOND PRE-BOARD EXAM (2025-26)**  
**SUBJECT – ARTIFICIAL INTELLIGENCE (417)**  
**CLASS-X**

**M.M. 50**

**TIME – 2Hrs.**

**General Instruction:**

1. Please read the Instruction carefully.
2. This Question paper consists of 21 questions in two 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 instruction given
  - iv. iv. Marks allotted are mentioned against each question/part.

**SECTION - A : OBJECTIVE TYPE QUESTIONS**

Q.No.	QUESTIONS	MARKS
Q.1	<b>Answer any 4 out of the given 6 questions on Employability Skills (1x4=4 marks)</b>	
i.	<p>Ramesh talks very freely with his colleagues, but when he tries to speak with his boss, he feels restricted and cannot communicate in the same manner. This is an example of:</p> <p>(a) Linguistic barrier  (b) Physical barrier  (c) Organizational barrier  (d) Interpersonal barrier</p>	1
ii.	<p>The shortcut key for re-do is _____.</p> <p>(a) Ctrl + A  (b) Ctrl + R  (c) Ctrl + Z  (d) Ctrl + Y</p>	1
iii.	<p>Ritika is preparing for her board exams. She often feels stressed and anxious due to the heavy workload. Her teacher advised her to adopt an activity that would effectively help her manage stress and improve focus. Which of the following should she choose?</p> <p>(a) Meditation  (b) Watching TV  (c) Arguing with friends  (d) Sleeping for long hours</p>	1
iv.	<p>Anjali left her job and started her own online clothing business. She is an:</p> <p>(a) Consultant  (b) Manager  (c) Employee  (d) Entrepreneur</p>	1
v.	<p>Neha sets a study timetable for herself and follows it regularly. She finishes her homework and projects before the deadline without needing reminders from her parents or teachers. This behavior reflects her:</p> <p>(a) Discipline  (b) Self-awareness  (c) Self-motivation  (d) Time Management</p>	1
vi.	<p>Which of the following best describes green skills?</p> <p>(a) Skills related to digital marketing and IT development  (b) Skills that help in promoting environmental sustainability and reducing ecological impact  (c) Skills needed for traditional industrial jobs  (d) Skills focused only on financial management</p>	1
Q.2	<b>Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)</b>	

i.	In a grayscale image what does a pixel value of 255 represent? (a) Complete darkness (black) (b) Complete brightness (white) (c) Medium gray (d) Transparent pixel	1
ii.	Which of the following is a key concern of AI ethics? (a) Ensuring algorithms are transparent and fair (b) Increasing the speed of AI computations (c) Reducing hardware costs for AI systems (d) Maximizing social media engagement	1
iii.	What is the main purpose of a sensor in a data acquisition system? (a) To store data (b) To measure physical quantities and convert them into signals (c) To process digital signals (d) To display the data on a screen	1
iv.	Which of the following is an example of structured data? (a) Database tables (b) Social media posts (c) Images (d) Voice recordings	1
v.	When data is divided into training and testing sets, the purpose of testing data is to: (a) Train the algorithm (b) Evaluate model performance (c) Store backup (d) Increase dataset size	1
vi.	Which of the following approaches is primarily used by computers to make predictions from data? (a) Visual Learning (b) Auditory Learning (c) Machine Learning (d) Memorization	1
<b>Q.3</b>	<b>Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)</b>	
i.	Aman is designing an AI system to automate tasks in his lab. To ensure it functions correctly, he needs to understand the components that make up an AI machine. Which of the following shows his understanding of AI systems? (a) He knows AI systems need only software. (b) He knows AI systems need only hardware. (c) He thinks only machines/devices are enough for AI. (d) He knows AI systems require software, hardware, and machines/devices to work together.	1

ii.	A data scientist wants to evaluate how close the predictions of a model are to the actual outcomes. Which metric should they primarily consider? (a) Recall (b) Accuracy (c) F1 Score (d) Reliability	1
iii.	Why is text often converted to lowercase during text normalization? (a) To make the text look simpler (b) To treat words like “Data” and “data” as the same (c) To reduce the number of characters (d) To remove punctuation	1
iv.	In digital imaging, a color image is typically stored as a combination of: (a) Single brightness values for each pixel (b) Three values representing red, green, and blue for each pixel (c) Only black and white pixels (d) Indexed numbers without color information	1
v	For tasks like data cleaning, visualization, and predictive modeling, data scientists often use: (a) Python (b) C++ (c) Assembly (d) HTML	1
vi.	In problem-solving, understanding who is impacted by a challenge helps in prioritizing actions. Which element specifically focuses on this? (a) Where (b) Who (c) Why (d) What	1
<b>Q.4</b>	<b>Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)</b>	
i.	In Natural Language Processing (NLP), breaking a sentence like "AI is powerful" into separate words — ["AI", "is", "powerful"] — is known as: (a) Segmentation (b) Tokenization (c) Normalization (d) Stemming	1
ii.	In the context of Artificial Intelligence, which of the following can be considered as data? (a) Numbers (b) Text (c) Images (d) All of the above	1

iii.	<p>Full form of CNN in AI is:</p> <p>(a) Convolutional Neural Network  (b) Central Neural Node  (c) Computer Network Node  (d) Clustered Neural Network</p>	1
iv.	<p>Which of the following is not a common application of Natural Language Processing (NLP)?</p> <p>(a) Speech recognition  (b) Machine translation  (c) Image classification  (d) Sentiment analysis</p>	1
v.	<p>Rita is worried that with the introduction of AI-powered customer service chatbots, her job as a call center employee may be replaced. This situation is an example of:</p> <p>(a) AI Bias  (b) Data Security  (c) AI creating Unemployment  (d) AI Access</p>	1
vi.	<p>Which evaluation metric does not take True Negatives into account?</p> <p>(a) Accuracy  (b) Recall  (c) Specificity  (d) Precision</p>	1
<b>Q.5</b>	<b>Answer any 5 out of the given 6 questions (1 x 5 = 5 marks)</b>	
i.	<p>Which of the following does NOT lead to bias in AI models?</p> <p>(a) Improper assumptions  (b) Uneven data collection  (c) Proper testing on data  (d) Lack of diversity in data</p>	1
ii.	<p>Statement 1: F1 score combines precision and recall to evaluate a model.  Statement 2: A low F1 score indicates a poorly performing model in terms of positive class prediction.</p> <p>(a) Both statements are correct  (b) Both statements are incorrect  (c) Statement 1 is correct but statement 2 is incorrect  (d) Statement 1 is incorrect but statement 2 is correct</p>	1
iii.	<p>In Natural Language Processing, which technique represents text as a collection of individual words without considering grammar or word order?</p> <p>(a) Bag of Words  (b) Term Frequency  (c) Word Embedding  (d) Stop Words Removal</p>	1

iv.	Which of the following NLP processes reduces words to their base or root form without necessarily being a valid word? (a) Lemmatization (b) Stemming (c) Tokenization (d) POS Tagging	1
v.	A system that predicts future weather conditions like temperature, humidity, and rainfall uses which type of technology? (a) Robotics (b) Artificial Intelligence (c) Natural Language Processing (d) Cloud Computing	1
vi.	In a classification model, if the model fails to predict an event that actually occurs, this situation is called: (a) True Negative (TN) (b) False Negative (FN) (c) False Positive (FP) (d) True Positive (TP)	1

**SECTION – B : SUBJECTIVE TYPE QUESTIONS**

	<b>Answer any 3 out of the given 5 questions on Employability Skills (2 x 3 = 6 marks) Answer each question in 20 – 30 words.</b>	
Q.6	Name any two physical or emotional signs that indicate a person is under stress.	2
Q.7	Ayesha successfully starts a small business by arranging resources and making important business decisions. Which two functions of an entrepreneur is she demonstrating?	2
Q.8	What do you understand by visual communication? Give two reasons why it is important in daily life.	2
Q.9	How can you recover a file that was accidentally deleted from the Recycle Bin?	2
Q.10	What are Sustainable Development Goals (SDGs)?	2
	<b>Answer any 4 out of the given 6 questions in 20 – 30 words each (2 x 4 = 8 marks)</b>	
Q.11	Differentiate between Machine Learning and Deep Learning.	2
Q.12	Which learning model is best for categorizing labeled data, and why?	2
Q.13	What is target advertisement, and how does it benefit businesses?	2
Q.14	Differentiate between greyscale images and rgb images.	2
Q.15	What are Stop Words?	2
Q.16	Draw a confusion matrix for the following values: True Positives = 250 True Negatives = 120 False Positives = 30 False Negatives = 50	2
	<b>Answer any 3 out of the given 5 questions in 50– 80 words each (4 x 3 = 12 marks)</b>	

Q.17	Your younger sibling asked how a ride-hailing app(uber/ola/rapido) knows the fastest route to reach a destination. Explain how GPS and AI work together to help the app suggest the best route.	4													
Q.18	Design a 4W Problem Canvas to address the issue of plastic waste management in your locality.	4													
Q.19	Definae Reinforcement and Unsupervised learning.	4													
Q.20	Define the following with examples: a) Sentence segmentation. b) Tokenisation.	4													
Q.21	<p>A machine learning model has been developed to detect whether emails are “Spam” or “Not Spam.” The model was tested on a dataset of 400 emails, and the resulting confusion matrix is as follows:</p> <table border="1" data-bbox="500 869 1182 1318"> <thead> <tr> <th colspan="2" rowspan="2"></th> <th colspan="2">REALITY</th> </tr> <tr> <th>POSITIVE/YES</th> <th>NEGATIVE/NO</th> </tr> </thead> <tbody> <tr> <th rowspan="2">P R E D I C T I O N</th> <th>POSITIVE/YES</th> <td>150</td> <td>40</td> </tr> <tr> <th>NEGATIVE/NO</th> <td>50</td> <td>60</td> </tr> </tbody> </table> <p>Calculate the Accuracy, Precision, Recall, and F1 Score for this model.</p>			REALITY		POSITIVE/YES	NEGATIVE/NO	P R E D I C T I O N	POSITIVE/YES	150	40	NEGATIVE/NO	50	60	4
				REALITY											
		POSITIVE/YES	NEGATIVE/NO												
P R E D I C T I O N	POSITIVE/YES	150	40												
	NEGATIVE/NO	50	60												