

SAMPLE PAPER– 2026-27(SET–A)
CLASS - VIII
SUBJECT –Computer

TIME: 3 HOURS

M.M.: 80

General Instructions:

1. The question paper is divided into two sections: Section A (Objective) and Section B (Subjective).
2. All questions are compulsory.
3. Read all the questions carefully before attempting.

SECTION A: OBJECTIVE (30 Marks)

Q1. Multiple Choice Questions (MCQs)

[1 × 10 = 10 Marks]

a) Which chart is most suitable for showing monthly rainfall?

- i. Pie Chart ii. Line Chart iii. Column Chart

b) What is used to display exact numbers directly on a chart?

- i. Axis Title ii. Data Label iii. Legend

c) To filter data showing only students who scored more than 90, you would use:

- i. Text Filter ii. Number Filter iii. Chart Tools

d) A school named ABC has recorded the total marks of every student in the class. This is an example of:

- i. Qualitative data ii. Quantitative data iii. Both a and b

e) A food delivery app has asked for your feedback on the quality of the food. You have written paragraphs to describe the food. This is an example of:

- i. Qualitative data ii. Quantitative data iii. Both a and b

f) What does sorting data do?

- i. Hides unwanted rows ii. Changes cell colour iii. Arranges data in a specific order

g) Which of the following is NOT a benefit of using charts?

- i. Visualize trends ii. Confuse readers iii. Communicate ideas quickly

h) Which of the following is an example of machine learning?

- i. Writing code for a calculator ii. A computer identifying images of cats
iii. Creating a text document

i) Which of the following is NOT a characteristic of cloud computing?

- i. Rapid Elasticity ii. Resource Pooling iii. Limited Accessibility

j) Which protocol is used for secure communication over the internet?

- i. HTTP ii. HTTPS iii. FTP

Q2. Fill in the Blanks:

[1 × 10 = 10 Marks]

- a. Arranging data in alphabetical or numerical order is called _____.
- b. The tool used to display only selected data is known as _____.

- c. A chart that is best for showing changes over time is called a _____ chart.
- d. A chart that combines two different chart types is called a _____ chart.
- e. _____ data is descriptive in nature.
- f. The horizontal axis of a chart is also known as the _____ axis.
- g. "How is the weather like?" is an example of _____ of data.
- h. _____ refine the raw data and make it more organized so that finding insights from the raw data becomes easy.
- i. The branch of AI that focuses on learning from data without explicit programming is called _____.
- j. The main tool used in this chapter to teach machines to learn from examples is _____.

Q3. Write 'T' for True and 'F' for False statements:

[1 × 10 = 10 Marks]

- a. Sorting helps us find information quickly. ()
- b. Filtering permanently deletes unwanted data. ()
- c. Pie charts are best for showing trends over time. ()
- d. Formatting a chart improves clarity and appearance. ()
- e. Discrete data can take any value in a range. ()
- f. Chart titles help viewers understand what the chart is about. ()
- g. The main objective of AI is to make computers much more capable in regards to performing all intellectual and difficult tasks in comparison to human beings. ()
- h. The higher quality data provided, the better the machine can learn. ()
- i. Reinforcement Learning is when an algorithm learns from labeled data. ()
- j. Public cloud services are accessible only to a specific group of users. ()

SECTION B: SUBJECTIVE (50 Marks)

Q4. Answer the following questions in one word / short phrase. (DO ANY 5)

[3 × 5 = 15 Marks]

- a. Which format of data is easiest for analysis?
- b. Which visualization is best for representing a relation between two variables?
- c. What are the types of quantitative data?
- d. Why is sorting data useful in a student mark sheet?
- e. How does filtering help in large datasets?
- f. Name two ways you can make a chart easier to read.

Q5. Answer the following questions in brief. (DO ANY 6)

[5 × 6 = 30 Marks]

- a. Describe different types of charts available in Excel and their uses.
- b. What is a combo chart? Where is it useful?
- c. What is data? Explain the types of data categorized.
- d. How can analytics on text data be done? Give an example.
- e. What are the different sources of data? Explain their types.

- f. What are the different techniques involved in Data Visualization? Explain.
- g. What are the steps involved in training a model in Teachable Machine? Give an example.

Q6. Write the full forms of the following:

[1 × 5 = 5 Marks]

- a) SSD
- b) HDD
- c) WI-FI
- d) OTP
- e) DVD

General Instructions:

The question paper contains three sections:

Sec A: Reading

Sec B: Writing & Grammar

Sec C: Literature

Attempt questions based on specific instructions for each part.

Section A: Reading

Q1. Read the passage given below:

(10 Marks)

Armadillos are western mammals known for their unique armour-like shell and notorious for their digging habits.

Armadillos prefer warm, moist climates and thrive in forested areas and grasslands. Because they must dig for their food and shelter, they generally gravitate towards areas with loose, porous soil.

These animals use their strong claws to dig several burrows through...

Out their home range in which to live and seek refuge from extreme weather or predators. An armadillo burrow is about 7–8 inches wide and up to fifteen feet deep.

Armadillos are mainly insectivores, with over 90 percent of their diet consisting of animal matter, like insects and other invertebrates. They are also known to eat occasional reptiles or amphibians—especially in colder weather. The remainder of their diet consists of plant matter, although it's been found that most of the vegetation they eat has been consumed incidentally.

Based on your reading of the passage given above, answer the following questions in your own words:

Q1: What makes armadillos unique?

Q2: What kind of climate do armadillos prefer?

Q3: Why do armadillos gravitate towards loose porous soil?

Q4: What is an armadillo's main diet?

Q5: In which weather conditions do armadillos eat reptiles and amphibians?

Q2: Read the poem given below:

(10 marks)

I had for my winter evening walk—

No one at all with whom to talk,

But I had the cottages in a row

Up to their shining eyes in snow.

And I thought I had the folk within:

I had the sound of a violin;

I had a glimpse through curtain laces

Of youthful forms and youthful faces.

I had such company outward bound;

I went till there were no cottages found.

I turned and repented, but coming back

I saw no window but that was black.

Over the snow my creaking feet
Disturbed the slumbering village street,
Like profanation, by your leave,
At ten o'clock of a winter eve.

Based on your reading of the passage:

Q1: At what hour is the poet taking this walk?

Q2: What does the poet hear while taking the walk?

Q3: What do you understand by "slumbering street"? What disturbs the slumbering village street?

Q4: What did the poet see through the window curtains?

Q5: When did the poet see through the window? Write the name of the weather.

Section – B Grammar and Writing

Q3. Attempt any ten of the following:

(10 marks)

(i) Change the sentence as directed:

They had been taught by Mr. Ramesh. (Negative sentence)

(ii) They were waiting for her. (Interrogative)

(iii) Change into Passive Voice:

They have written many books.

(iv) She will finish this task very soon.

(v) Make sentences using the prepositions given below:

among, under, above, by

(vi) Change into Indirect Speech:

Ram said to his mother, "I have seen the Taj Mahal."

(vii) She said to her brother, _____

"I was not feeling better."

(viii) Give the name of 3 distributive determiners?

(ix) Give the example of a quantifier determiner?

(x) Give the example of a definite article?

Q.4: Write down a paragraph about 150 words.

(10 marks)

Mohit Mehta, the secretary of the sports club of Little Angels School, Lucknow, has been asked to draft a notice for an adventure trek to Nainital organized by the school for the students of Class VII and IX. Draft a notice for them, giving all the necessary details. (In 50 words)

Q.5: Read the following lines and give the answers of it?

(8 marks)

(i) The serene Kashmir Valley in the shadows of the majestic Himalayas witnessed a tale of extraordinary heroism to protect the Indian borders.

(Give the meaning and name the lesson from this extract)

(ii) "The woman was old and ragged and grey; and bent with the chill of the winter's day."

(Give the meaning of the lines, name of the lesson must be written.)

(iii) "In today's fast-paced world we have become so addicted to instant communication that we prefer to use a telephone."

(Give the meaning of the lines, give the name of the lesson also.)

(iv)“Yet I chose none of these because somewhere, deep down, I knew I could make a more meaningful contribution by working there in Anand, Gujarat.”

(Give the meaning of the lines, give the name of lesson also.)

Section -C

Q6: Answer the following questions

(8 marks):

(i)Major Somnath’s legacy of courage and devotion to the nation remains forever alive, forever alive...

What is the significance of the repetition in this line?

(ii)What were Major Somnath’s last words? What do they reflect about his sense of duty?

(iii) What event does Dr. Kurien refer to when he mentions receiving the Padma Vibhushan?

(iv) How did Dr. Kurien’s decision to join the cooperative in Anand affect his life?

Q7: Answer the following questions (30–40 words):

(10 marks)

(i) Why do you think Major Somnath’s leadership was critical during the Battle of Badgam?

(ii) What might have been the outcome of the Battle of Badgam if Major Somnath and his company had not held their ground?

(iii) What might be the old woman’s fears as she waited for a long time at the crossing?

(iv) Justify the appropriateness of the title of the poem?

Q8 (i) How can the values demonstrated by Major Somnath Sharma — courage, duty and sacrifice?

ii- why did Dr Kurien write the letter to his grandson?

(14 marks)

GENERAL INSTRUCTIONS TO CANDIDATES

1. This question paper is structured into three sections: Section A (40 Marks), Section B (20 Marks), and Section C (20 Marks).
2. All questions are mandatory. Marks allocated for each question are indicated against it.
3. Read each question carefully before writing down the final answers.
4. For objective items, ensure clarity. Overwriting or ticking multiple options will result in zero marks for that question.
5. For Section B (Question 5), identify the specific visual plates from your text chapters and write names legibly in the line provided.
6. Maintain neat, legible handwriting and tidy presentation across the answer scripts.

SECTION A: OBJECTIVE & RECALL (40 Marks)

Q1. Multiple Choice Questions (MCQs)

(5 × 2 = 10 Marks)

1. India's famous Mars Orbiter Mission is popularly known as:
a) Chandrayaan b) Mangalyaan c) Gaganyaan d) Aditya-L1
2. Which Indian scientist is famously known as the 'Missile Man of India'?
a) Dr. C.V. Raman b) Dr. A.P.J. Abdul Kalam c) Dr. HomiBhabha d) Dr. Vikram Sarabhai
3. Sundarbans National Park, famous for the Royal Bengal Tiger, is located in which Indian state?
a) Assam b) West Bengal c) Madhya Pradesh d) Uttarakhand
4. The sudden, violent shaking of the ground caused by movements within the earth's crust is called:
a) Tsunami b) Cyclone c) Earthquake d) Avalanche
5. Which animal uses its highly developed sense of 'echolocation' (sound waves) to navigate and hunt in the dark?
a) Eagle b) Bat c) Shark d) Elephant

Q2. Fill in the Blanks

(5 × 2 = 10 Marks)

1. Two or more atoms chemically bonded together form a/an _____.
2. „She was born in India and educated in England and US.This writers notable works include inheritance of loss and Hullabaloo in the guava Orchard.Inheritance of loss won the coveted 2006 Man Booker prize and National Book critics circle award for fiction. _____.
- 3.He is the Indian-origin steel tycoon . He is the chairman and CEO of arcelor Mittal, the world's largest steel making company, as of 2014 he has an estimated net worth of 16.3 million dollar, according to forbesmagazine_____,
4. A habitat that is extremely dry, receives very little rainfall, and features plants like cacti is called a _____ habitat.

5. In economic terms, when a country sends its locally produced goods to sell to another country, it is called an _____.

Q3. Match the Following

(5 × 2 = 10 Marks)

Match the items in Column A with their correct options in Column B:

Column A	Column B
1. MedhaPatkar	A. Flamenco (Spain)
2. Milkha Singh	B. Great Barrier Reef
3. Famous Global Indian	C. Narmada BachaoAndolan
4. Marine Life Wonder	D. SundarPichai (CEO, Alphabet)
5. Traditional Dance Form	E. The Flying Sikh

Q4. True or False

(5 × 2 = 10 Marks)

1. The headquarters of the United Nations (UN) is located in Geneva, Switzerland. (True / False)
2. SatyendraNath Bose collaborated with Albert Einstein to develop a concept in quantum mechanics known as Bose-Einstein statistics. (True / False)
3. Marine organisms like phytoplankton produce a significant portion of the world's oxygen supply. (True / False)
4. Deforestation increases the structural strength of soil and prevents dangerous landslides. (True / False)
5. The first-ever Asian Games were hosted in New Delhi, India, in 1951. (True / False)

SECTION B: VISUAL & CURRENT EVENTS (20 Marks)

Q5. Picture Identification

(5 × 2 = 10 Marks)

1. Identify the following image and write its correct name below:



Answer: _____

2. Identify the following image and write its correct name below:



Answer: _____

3. Identify the following image and write its correct name below:



Answer: _____

4. Identify the following image and write its correct name below:



Answer: _____

5. Identify the following image and write its correct name below:



Answer: _____

Q6. Current Affairs

(5 × 2 = 10 Marks)

1. Who is the current President of India? _____
2. Who is the current Prime Minister of India? _____
3. Which country is host to the latest global environmental conservation summits held this year?

4. Name the current chief/chairman of the Indian Space Research Organisation (ISRO).

5. Name any active Indian sports personality who has recently won an international medal or award for India.

SECTION C: SHORT ANSWER & LOGIC (20 Marks)

Q7. Answer the following questions in 1-2 sentences:

(5 × 4 = 20 Marks)

1. What was the primary scientific objective of India's Mangalyaan mission?
2. Briefly explain how animals living in the Polar region (like polar bears) are adapted to survive severe cold.
3. Define the economic term 'Inflation' in simple words.
4. Name any two essential functional organs or agencies of the United Nations (UN).
5. What is the basic difference between an element and a compound at an atomic level?

निर्देश:-

- प्रश्न-पत्र को ध्यानपूर्वक पढ़ें।
- प्रश्न -पत्र चार खण्डों में विभक्त है-खण्ड 'क', 'ख', 'ग' और 'घ'।
- सभी प्रश्नों के अंक उनके सम्मुख अंकित हैं।
- सभी प्रश्नों के उत्तर देने अनिवार्य हैं।
- उत्तर लिखने से पूर्व सही प्रश्न संख्या अवश्य डालें।
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“खण्ड” – “क”(अपठित अवबोध)

प्रश्न -1 दिए गए “अपठित गद्य खण्ड” को ध्यान पूर्वक पढ़ें और पूछे गए प्रश्नों के सही उत्तर दें:- (5x1=5)
“अपठित गद्यांश”

निस्स्वार्थ भाव से दूसरों की भलाई करना परोपकार है। यह एक महान भाव तथा एक सर्वश्रेष्ठ धर्म है। महर्षि दधीचि ने परोपकार हेतु अपनी हड्डियाँ वज्र बनाने के लिए देवताओं को दान कर दी थी ,ताकि असुर का नाश संभव हो सके। परोपकारी मनुष्य का यश सदैव रहता है। लोग उन्हें सदा याद रखते हैं। उनका मन शांत तथा पवित्र होता है। उनके मन में प्रेम ,सहयोग ,दया तथा करुणा के भाव विद्यमान रहते हैं। उनकी दृष्टि स्वार्थ से परमार्थ की ओर उठी हुई होती है। राजा शिवि एवं दानवीर कर्ण की गिनती भी महान परोपकारी व्यक्तियों में होती है।

प्रश्न

- (क) निस्स्वार्थ भाव से दूसरों की भलाई करना क्या कहलाता है?
 (ख) प्रस्तुत गद्यांश में किन परोपकारी व्यक्तियों की बात की गई है?
 (ग) परोपकारी व्यक्ति में कौन-कौन-से गुण होते हैं?
 (घ) निम्नांकित शब्दों के विलोम रूप गद्यांश में से छाँटकर लिखिए।
 १. बुराई २. असंभव
 (ङ) ' परोपकार एक सर्वश्रेष्ठ धर्म है ,इस वाक्य में सर्वश्रेष्ठ क्या है?
 (१) विशेषण
 (२) संज्ञा
 (३) क्रियाविशेषण

प्रश्न -2 दिए गए “अपठित काव्यांश” को ध्यान पूर्वक पढ़ें और पूछे गए प्रश्नों के सही उत्तर दें:- (5x1=5)
“अपठित काव्यांश”

मैं न चाहता हार बनूँ मैं
 या कि प्रेम उपहार बनूँ मैं
 या कि शीश-श्रृंगार बनूँ मैं
 मैं हूँ फूल मुझे जीवन की
 सरिता में ही तुम बहने दो
 मुझे अकेला ही रहने दो।

प्रश्न

- (क) पदयांश में किसकी इच्छा अभिव्यक्त हुई है?
 १) फूल की
 २) कवि की
 ३) सरिता की

(ख) फूल क्या नहीं बनना चाहता?

- १) हार
- २) प्रेम उपहार
- ३) इनमें दोनों

(ग) फूल क्या इच्छा कर रहा है?

- १) गंगा में बहने की
- २) श्रृंगार बनने की
- ३) अकेला रहने की

(घ) फूल जीवन सरिता में क्या करना चाहता है

- १) रहना
- २) बहना
- ३) सहना

(ड.) निम्नांकित शब्दों के दो-दो पर्यायवाची रूप लिखिए-

१. सरिता
२. फूल

“खण्ड” – “ख” (पठित अवबोध)

प्रश्न-3 दिए गए “पठित” गद्य-खण्ड को ध्यानपूर्वक पढ़ें और पूछे गए प्रश्नों के उत्तर दें:-

(5x1=5)

“पठित गद्यांश”

मन्थरक ने हिरन को घने जंगलों में भाग जाने की सलाह दी। किंतु लघुपतनक ने ऊपर से देखकर बतलाया कि व्याध दूसरी दिशा में चला गया है, इसलिए अब डर की कोई बात नहीं है। अब चित्रांग की भी लघुपतनक, हिरण्यक और मन्थरक से गाढ़ी मित्रता हो गई।

एक दिन हिरन घूमता हुआ जंगल में चला गया और शाम तक वापस नहीं लौटा। उसके तीनों मित्रों को संदेह होने लगा कि कहीं वह व्याध के जाल में न फँस गया हो; अथवा शेर, बाघ आदि ने उस पर हमला न कर दिया हो। घर में बैठे स्वजन अपने प्रवासी प्रियजनों के संबंध में सदा शंकित रहते हैं।

बहुत देर तक भी चित्रांग हिरन नहीं आया तो मन्थरक कछुए ने लघुपतनक कौवे को जंगल में जाकर हिरन को खोजने की सलाह दी। लघुपतनक ने कुछ दूर जाकर देखा कि वहाँ चित्रांग एक जाल में बँधा हुआ है। लघुपतनक उसके पास गया। उसे देखकर चित्रांग की आँखों में आँसू आ गए। वह बोला - अब मेरी मृत्यु निश्चित है। अन्तिम समय में तुम्हारे दर्शन कर के मुझे बड़ी प्रसन्नता हो रही है। प्राण विसर्जन के समय मित्र-दर्शन बड़ा सुखद होता है। मेरे अपराध क्षमा करना।”

प्रश्न

- (क) मन्थरक ने हिरन को क्या सलाह दी थी?
- (ख) लघुपतनक ने ऊपर से देखकर क्या बताया
- (ग) चित्रांग के देर तक वापस न आने पर उसके मित्रों को क्या संदेह हुआ?
- (घ) मन्थरक कछुए ने लघुपतनक कौवे को क्या करने के लिए कहा?
- (ड) जाल में फँसे चित्रांग ने लघुपतनक से क्या कहा?

काव्यांश

वह हृदय नहीं है पत्थर है ,
जिसमें स्वदेश का प्यार नहीं।
जो जीवित जोश जगा न सका ,
उस जीवन में कुछ सार नहीं।
जो चल न सका संसार-संग,
उसका होता संसार नहीं।।
जिसने साहस को छोड़ दिया,
वह पहुँच सकेगा पार नहीं।
जिससे न जाति-उद्धार हुआ,
होगा उसका उद्धार नहीं।।
जो भरा नहीं है भावों से,
बहती जिसमें रस-धार नहीं।
वह हृदय नहीं है पत्थर है,
जिसमें स्वदेश का प्यार नहीं।।

प्रश्न

- (क) कवि के अनुसार कैसा हृदय पत्थर के समान होता है?
(ख) जिस जीवन में जोश नहीं होता ,उसके बारे में कवि ने क्या कहा है?
(ग) संसार के साथ न चलने वाले व्यक्ति के बारे में कवि का क्या विचार है?
(घ) कवि के अनुसार सफलता प्राप्त करने के लिए कौन-सा गुण आवश्यक है?
(ङ) "जो भरा नहीं है भावों से "पंक्ति से कवि क्या कहना चाहता है?

प्रश्न5 - नीचे दी गई पंक्तियों में से किसी एक को ध्यानपूर्वक पढ़िए और विचार कीजिए कि आपको इनका क्या अर्थ समझ में आया है ?दोनों पंक्तियों पर अपने विचार लिखिए।

(5×1=5)

पंक्तियां

- (क) 'यहाँ की कुशा सबसे विलक्षण होती है जिसमें से दालचीनी ,जावित्री इत्यादि की अच्छी सुगंध आती है। भानो यह प्रत्यक्ष प्रगट होता है कि यह ऐसी पुण्यभूमि है कि यहाँ की घास भी ऐसी सुगंधमय है।'
(ख) ' अहा !इनके जन्म भी धन्य हैं जिनसे अधीं विमुख जाते ही नहीं। फल ,फूल ,गंध ,छाया ,पत्ते ,छाल ,बौज ,लकड़ी और जड़ ,यहाँ तक कि जले पर भी कोयले और राख से लोगों का मनोर्थ पूर्ण करते हैं।'

प्रश्न6 -दिए गए अति लघु उत्तरीयप्रश्नों में से किन्ही पांच प्रश्नों के उत्तर दें-

(5×1=5)

- (क) "सज्जन ऐसे की पत्थर मारने से फल देते हैं"का क्या अर्थ है?
- (ख) "वैराग्य और भक्ति का उदय होता था"इस कथन से लेखक का कौन सा भाव प्रकट होता है?
- (ग) "तेरे स्वप्न बड़े हो"पंक्ति में स्वप्न से क्या आशय है?
- (घ) पिताजी ने कहा कि घर सारी बना हुआ है, क्यों?
- (ङ) गौरैया के प्रति मन और पिताजी की प्रतिक्रियाएं कैसी थी?
- (च) कविता के अनुसार कौन सा हृदय पत्थर के समान है?

प्रश्न7 - दिए गए प्रश्न में से किन्हीं दो प्रश्नों के उत्तर दें।

(2× 4 = 8)

- (क) 'संसारसंग' चलने से आप क्या समझते हैं? जो व्यक्ति' संसार संग 'नहीं' चलता संसार क्यों नहीं पता है?
- (ख) मां बार-बार क्यों कह रही होगी की गौरैया घर छोड़कर नहीं जाएगी?
- (ग) कविता में सपनों के बड़े होने की बात की गई है। आपके अनुसार बड़े सपने कौन-कौन से हो सकते हैं और क्यों?
- (घ) दिए गए शब्दों में से किन्ही दोका संदर्भ स्पष्ट करें-
हरिद्वार, गंगा, भागवत, चंडिका

खंड' ग' (व्याकरण अवबोधन)

प्रश्न8 -निम्नलिखित शब्दों में संधि कीजिए और संधि का नाम लिखिए-
संधि-विच्छेद

(5×1 = 5)

- (क) सूर्य + उदय
- (ख) समुद्र + ऊर्मि
- (ग) कवि + इंद्र
- (घ) दिक् + गज
- (ङ) सम् + युक्त

प्रश्न9 - दिए गए रूढ़ शब्दों से योग शब्द बनाइए।

(5×1 = 5)

- (क) दूध
- (ख) पुस्तक
- (ग) घोड़ा
- (घ) घर
- (ङ) सब्जी

प्रश्न10 -उपसर्ग जोड़कर विलोम रूप लिखिए।

(5×1 = 5)

- (क) उत्साह
- (ख) होनी
- (ग) उपयुक्त
- (घ) उचित
- (ङ) उत्कर्ष

प्रश्न11 -दिए गए प्रश्नों में से किन्हीं तीन प्रश्नों के उत्तर दें।

(5×3 = 15)

- (क) उपसर्ग किसे कहते हैं? हिंदी में प्रचलित उपसर्ग कौन-कौन से हैं?
- (ख) बहुव्रीहि समास तथा कर्मधारय समास में क्या अंतर है ?
- (ग) द्रव्यवाचक संज्ञा तथा समूह वाचक संज्ञा में अंतर बताइए।

(घ) शब्दों के वर्गीकरण के मुख्य आधार कौन-कौन से हैं?

खंड-'घ' (रचनात्मक कार्य)

प्रश्न 12 -दिए गए विषय में से किसी एक विषय पर पत्रलगभग 100 शब्दों में पत्र लिखें। (6×1 = 6)

(क) ग्रीष्मावकाश में पर्वतीय यात्रा के दौरान आप अपने मित्र के घर ठहरे। वहाँ हुई आवभगत के लिए मित्र को आभार पत्र लिखिए।

अथवा

(ख) इंटरनेट के बढ़ते उपयोग के साथ ही ऑनलाइन धोखाधड़ी और साइबर क्राइम में भी बहुत वृद्धि हुई है। इस बारे में छोटी बहन/ छोटे भाई को सतर्क करने के लिए लगभग 100 शब्दों में एक पत्र लिखिए।

प्रश्न 13 -किसी एक विषय पर लगभग 80 शब्दों में अनुच्छेद लिखें। (6×1 = 6)

(क) नैतिक शिक्षा की आवश्यकता

अथवा

(ख) सादा जीवन उच्च विचार

General Instructions:

1. This question paper contains 38 questions divided into five sections: A, B, C, D, and E.
2. Section A comprises 20 MCQs (Q1 to Q20) of 1 mark each. Q19 and Q20 are Assertion-Reason questions.
3. Section B comprises 5 Very Short Answer questions of 2 marks each with 2 internal choices.
4. Section C comprises 6 Short Answer questions of 3 marks each with 2 internal choices.
5. Section D comprises 4 Long Answer questions of 5 marks each with 2 internal choices.
6. Section E comprises 3 Case-Based integrated units of assessment of 4 marks each.
7. All questions are compulsory. Internal choice has been provided in some questions.

SECTION A: MULTIPLE CHOICE QUESTIONS (20 × 1 = 20 Marks)

Q1. By what smallest whole number must 180 be multiplied to obtain a perfect square value?

- (a) 2 (b) 3 (c) 5 (d) 6

Q2. Find the value of the cube root of negative integer -216:

- (a) 6 (b) -6 (c) 16 (d) -16

Q3. Evaluate the value of the calculation statement: $(2/3)^{-3} \times (2/3)^5$.

- (a) 4/9 (b) 9/4 (c) 8/27 (d) 27/8

Q4. Express the structural decimal metric 0.000045 in scientific notation format:

- (a) 4.5×10^{-5} (b) 4.5×10^{-6} (c) 45×10^{-6} (d) 0.45×10^{-4}

Q5. How many continuous non-square natural numbers lie between 15^2 and 16^2 ?

- (a) 30 (b) 31 (c) 32 (d) 15

Q6. The cube of any odd natural integer will always result in an:

- (a) Even number (b) Odd number (c) Prime number (d) Perfect number

Q7. If a general two-digit number is written as $10a + b$, then reversing its digits yields:

- (a) $10b + a$ (b) ab (c) $10a - b$ (d) $b + a$

Q8. A regular convex polygon whose all interior angles measure 90 degrees each is a:

- (a) Rectangle (b) Square (c) Rhombus (d) Parallelogram

Q9. If the adjacent interior angles of a parallelogram are in the ratio 2:3, the smaller angle measures:

- (a) 36 degrees (b) 72 degrees (c) 108 degrees (d) 144 degrees

Q10. If a placeholder value number $31X5$ is completely divisible by 9, find digit X:

- (a) 0 (b) 3 (c) 6 (d) 9

Q11. Determine the highest degree of the algebraic expression $5x^3y^2 - 4x^2y + 7$:

- (a) 3 (b) 5 (c) 2 (d) 1

Q12. Multiply the monomials $(-3a^2b)$ and $(4ab^2)$ together. The product matches:

- (a) $12a^3b^3$ (b) $-12a^3b^3$ (c) $-12a^2b^2$ (d) $7a^3b^3$

Q13. If ratio $A:B = 2:3$ and ratio $B:C = 4:5$, calculate the compound ratio $A:C$:

- (a) 2:5 (b) 3:5 (c) 8:15 (d) 6:15

Q14. Six matching uniform pipes can fill a reservoir in 80 minutes. How long will 8 identical pipes take?

- (a) 100 mins (b) 60 mins (c) 50 mins (d) 40 mins

Q15. Divide the polynomial expression $(12x^2y - 8xy^2)$ by the monomial $(4xy)$:

- (a) $3x - 2y$ (b) $3x + 2y$ (c) $3 - 2$ (d) $4x - y$

Q16. Under basic number play rules, if an integer is divisible by both 2 and 3, it is always divisible by:

- (a) 5 (b) 6 (c) 9 (d) 12

Q17. Subtract $(3x^2 - 4xy)$ from $(7x^2 + 2xy)$. The resulting expression matches:

- (a) $4x^2 + 6xy$ (b) $4x^2 - 6xy$ (c) $10x^2 - 2xy$ (d) $4x^2 + 2xy$

Q18. If the sum of all interior angles of a convex polygon is 720 degrees, how many sides does it have?

- (a) 5 (b) 6 (c) 7 (d) 8

Direction for Q19 & Q20: 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.

Q19. Assertion (A): The square root of the decimal number 1.44 is 1.2.

Reason (R): Squaring a number with one decimal place will always yield a product containing two decimal places.

Q20. Assertion (A): Every rectangle is a parallelogram, but every parallelogram is not a rectangle.

Reason (R): A rectangle fulfills all base structural criteria of a parallelogram while additionally fixing all corner angles at 90 degrees.

SECTION B: VERY SHORT ANSWER QUESTIONS ($5 \times 2 = 10$ Marks)

Q21. Find the square root of 7.29 using the prime factorization layout method.

[2 Marks]

Q22. Simplify and express with a positive exponent format: $(3^{-5} \times 10^{-5} \times 5^3) / (5^{-7} \times 6^{-5})$.

[2 Marks]

OR

Find the value of variable x if: $(4/9)^4 \times (4/9)^{-7} = (4/9)^{(2x-1)}$.

[2 Marks]

Q23. If a three-digit integer expression $7X2$ is completely divisible by 3, find all unique single-digit options for X.

[2 Marks]

Q24. In a parallelogram ABCD, if angle A = 75 degrees, determine the measures of all remaining angles.

[2 Marks]

OR

The diagonals of a structural rhombus profile measure 16 cm and 12 cm. Find the length of each side of the rhombus.

[2 Marks]

Q25. Divide the polynomial expression: $(15a^3b^2 - 10a^2b^3)$ by the monomial term $(5a^2b^2)$.

[2 Marks]

SECTION C: SHORT ANSWER QUESTIONS (6 × 3 = 18 Marks)

Q26. Find the smallest whole number divisor by which 256 must be divided so that the quotient becomes a perfect cube. [3 Marks]

Q27. Find the square root of 4096 using the structural long division method layout. Show calculations. [3 Marks]

Q28. Simplify the following expression sequence by expanding brackets and gathering like terms: $(2x + 3)(x - 5) - (x^2 - 4x + 7)$. [3 Marks]

OR

Subtract the sum of $(3x^2 - 5xy + 2y^2)$ and $(-x^2 + 2xy - y^2)$ from the polynomial block $(5x^2 - 2xy + 3y^2)$. [3 Marks]

Q29. In a cryptarithm puzzle layout (Number Play), find the matching digits for values A, B, and C to solve: $3A5 + 4B2 = C07$. [3 Marks]

Q30. A garrison has provisions to feed 400 soldiers for 60 days. If 100 additional soldiers register at the barracks, find how many days the supplies will last. [3 Marks]

OR

A vehicle travels a distance of 180 km in 4 hours under uniform pacing.

(i) How far will it travel in 7 hours?

(ii) Calculate the time required to cover a distance of 450 km. [3 Marks]

Q31. Prove algebraically that for any general three-digit number sequence abc, the operational layout expression $(abc - cba)$ is always completely divisible by 99. [3 Marks]

SECTION D: LONG ANSWER QUESTIONS (4 × 5 = 20 Marks)

Q32. Find the square root of 18.49 using long division steps, and compute the total sum value of: $\sqrt{18.49} + \sqrt{1849}$. [5 Marks]

OR

Determine the smallest 6-digit natural number which forms a perfect square block. Show clear division layout steps. [5 Marks]

Q33. The boundaries of an isolated watershed field form an isosceles trapezium layout. The parallel boundary edges are in the ratio 4:7, and the perpendicular height distance separating them is 15 m. If the total grid surface area equals 660 m^2 , calculate the length of both parallel sides. [5 Marks]

Q34. Divide the polynomial expression statement $(x^2 - 7x + 12)$ by the binomial factor $(x - 3)$ using polynomial long division. Show checking. [5 Marks]

OR

Simplify the following multi-group polynomial operational layout sequence: $a(b - c) + b(c - a) + c(a - b) + (a + b)(a - b)$. [5 Marks]

Q35. A uniform metallic cable spool operates under direct proportional reasoning parameters. If a 15-metre segment of this cable tracks a mass weight of 6 kg, calculate:

(i) The weight of a 35-metre cut segment of the same cable.

(ii) The length of cable required if a project engineer orders a total mass of 20 kg. [5 Marks]

SECTION E: CASE-BASED INTEGRATED QUESTIONS (3 × 4 = 12 Marks)

Q36. Case Study 1: Modular Storage Box Engineering.

A shipping warehouse uses automated storage bins. An engineer designs a high-capacity cubical preservation chamber block whose internal storage space layout volume measures exactly $9.261 \times 10^3 \text{ cm}^3$.

1. Calculate the precise edge side length measurement of the internal preservation workspace. Write your answer as a regular decimal or whole value. **[2 Marks]**
2. Express the total outer surface area of one structural side wall of this cubical bin in standard exponential scientific notation format with base 10. **[2 Marks]**

Q37. Case Study 2: Airport Drone No-Fly Perimeter Mapping .

A radar tracking grid maps out a security zone around an airfield. The perimeter coordinates form a geometric kite shape PQRS where diagonal lines PR and QS intersect at a central checkpoint O. The length of diagonal PR = 24 m, QS = 18 m, and the intersection divides QS equally such that QO = OS.

1. What is the measure of the angle formed at the central junction intersection point O? State the geometric property that dictates this layout. **[2 Marks]**
2. If the length of side PQ = 15 m, calculate the length of the coordinate segment line PO. **[2 Marks]**

Q38. Case Study 3: Smart Farm Irrigation Hydraulics.

An automated drip irrigation manifold distributes liquid nutrients to orchard rows. A master pump runs under direct proportion rules. The system logs show that discharging 450 litres of nutrient fluid takes 18 minutes of continuous operation.

1. Find the rate of nutrient discharge in litres per minute. How many litres will be discharged if the pump runs continuously for an hour? **[2 Marks]**
2. If a specific crop block layout requires exactly 2,250 litres of nutrient mix to be saturated, for how many hours must the pump run to meet this requirement? **[2 Marks]**

निर्देशाः

- प्रश्नपत्रं चतुर्धा विभक्तम् अस्ति।
- सर्वेषां प्रश्नानाम् उत्तरं दातुं अनिवार्यम् अस्ति।
- प्रत्येकस्य प्रश्नस्य अङ्काः तेषां विरुद्धं सूचिताः सन्ति।
- प्रश्नपत्रं सम्यक् पठित्वा प्रश्नानां क्रमेण उत्तरं दत्तव्यम्।

खंड 'क'(अपठित अवबोधनम्)

प्रश्न 1-दत्तं खण्डं सम्यक् पठन्तुपृष्ठानां प्रश्नानाम् उत्तरं सम्यक् कुर्वन्तु। , (5)

वने एकः सिंहः निवसति स्म। सः प्रतिदिनं वन्यपशून् गृहीत्वा खादति स्म। एकदा सः व्याघ्रं दृष्ट्वा तं पृष्ठवान् –“त्वं किमर्थं मम क्षेत्रे आगतः?” व्याघ्रः उत्तरं दत्तवान् –“अहं मार्गं भ्रष्टःमम इच्छानुसारं न आगतः। ,”

सिंहः तस्य उत्तरं श्रुत्वा क्रोधितः अभवत्। परन्तु व्याघ्रः शान्त्या तं प्रसादयामास। ततः सिंहः तं त्यक्त्वा स्वमार्गे गतवान्।

प्रश्नाः

1. सिंहः कुत्र निवसति स्म?
2. सिंहः प्रतिदिनं किम् करोति स्म?
3. व्याघ्रः सिंहं किम् उत्तरं दत्तवान्?
4. सिंहः किमर्थं क्रोधितः अभवत्?
5. व्याघ्रः कथं सिंहं प्रसादयामास?

प्रश्न 2-दत्तं काव्यं सम्यक् पठित्वा पृष्ठप्रश्नानां उत्तरं ददातु। (5)

नित्यमेव उदयति सूर्यः, अस्तं यान्ति निशायाः।

कालः गच्छति शीघ्रं, न तिष्ठति कदाचन ॥

यः जीवनं सदा नयेत्, कर्तव्यम् अनुष्ठयन्।

स एव जीवनपथे, सिद्धिं प्राप्नोति निश्चितम् ॥

आलस्यम् आत्मनः शत्रुः, परिश्रमेण जयेत् तम्।

यः कर्मणि रतः सदा, तं न मोघं प्रयोजनम् ॥

- | | | |
|-------------------------------|-------------------------------|--------------------------------|
| 1. सूर्यः कदा उदयति? | 2. कालः किं करोति ? | |
| 3. सः कः सिद्धिं प्राप्नोति ? | 4. आलस्यं कस्य शत्रुः उच्यते? | 5. कस्य प्रयोजनं न मोघं भवति ? |

खंड 'ख'(पठित अवबोधनम्)

प्रश्न 3-दत्तं खण्डं सम्यक् पठित्वा पृष्ठप्रश्नानां उत्तरं ददातु। (5)

गृहे अस्माभिः स्नेहेन स्थातव्यम्, परस्परं विवादः न कर्तव्यः। मधुरं वक्तव्यं कर्कशं न। परस्परं सहायता कर्तव्या। अग्रजानाम् आज्ञा पालयितव्या तेषां च सम्मानः कर्तव्यः। अनुजेषु स्नेहः कर्तव्यः। सज्जनैः सह विवादः दुर्जनैः सह सङ्गतिः न कर्तव्या। सदा सज्जनानां सङ्गः कर्तव्यः। मित्रैः सह छलं न कर्तव्यम्। निजसमाजस्य राष्ट्रस्य चकल्याणाय प्रयत्नः कर्तव्यः। मातृदेवो भव।

पितृदेवो भव। आचार्यदेवो भव। अतिथिदेवो भव। यानि अनवद्यानि कर्माणि, तानि सेवितव्यानि, नो इतराणि। अध्ययनं निष्ठया कर्तव्यम्। अध्ययने प्रमादः नैव कर्तव्यः। परिवारे, विद्यालये, समाजे, वाचनालये, राजमार्गे, सभायां, क्रीडाक्षेत्रे, भोजन-शालायाम्, आपणे चापि अनुशासनम् आवश्यकम्। अनुशासनं विना अव्यवस्था भवति। यः कर्तव्यानि करोति, तं सर्वे प्रशंसन्ति। अतः कर्तव्यपालने प्रमादः न कर्तव्यः।

प्रश्नाः

- (क) केषु स्नेहः कर्तव्यः?
- (ख) केषां सम्मानः कर्तव्यः?
- (ग) कस्य कल्याणाय प्रयत्नः कर्तव्यः?
- (घ) कं सर्वे प्रशंसन्ति?
- (ङ) मित्रैः सह किं न कर्तव्यम् ?

प्रश्न 4-दत्तं खण्डं सम्यक् पठन्तुतदनन्तरं ये प्रश्नाः सन्ति तेषां उत्तरं ददतु। ,

(5)

प्रकृत्या सुरम्यं विशालं प्रकामम् सरित्तरहारैः ललामं निकामम्।
हिमाद्रिललाटे पदे चैव सिन्धुः प्रियं भारतं सर्वथा दर्शनीयम् ।।
धनानां निधानं धरायां प्रधानम् इदं भारतं देवलोकेन तुल्यम्।
यशो यस्य शुभ्रं विदेशेषु गीतम् प्रियं भारतं तत् सदा पूजनीयम् ।।
अनेके प्रदेशाः अनेके च वेषाः अनेकानि रूपाणि भाषा अनेकाः।
परं यत्र सर्वे वयं भारतीयाः प्रियं भारतं तत् सदा रक्षणीयम् ।।
वयं भारतीयाः स्वदेशं नमामः परं धर्ममेकं सदा मानयामः।
तदर्थं धनं जीवनं चार्पयामः प्रियं भारतं मे सदा वन्दनीयम्।।

प्रश्नाः —

- (क) भारतस्य ललाटे किम् अस्ति पदे च किम् अस्ति?
- (ख) इदं भारतं केन तुल्यम्?
- (ग) कस्य शुभ्रं यशः विदेशेषु गीतम्?
- (घ) भारते प्रदेशाः वेषाश्च कियन्तः सन्ति?
- (ङ) भारतार्थं वयं किम् अर्पयामः?

प्रश्न 5- पाठानुसारं रिक्तस्थानं पूरयत।

(5)

- (क) सिंहः तत्र _____ कूपे _____ अपश्यत्।
- (ख) एवं _____ सः शशकः _____ अपि सिंहं न्यपातयत्।
- (ग) बुद्धिर्यस्य _____ तस्य _____ तु कुतो बलम् ?
- (घ) गृहस्य च कीदृशः _____ वर्तते।
- (ङ) ईदोत्सवे ते _____ सम्बन्धिनां च परस्परम् _____ कुर्वन्ति।

प्रश्न 6- एकपदेन उत्तरं लिखत।

(5)

- (क) नाट्यशास्त्रस्य प्रवर्तकः कः?
- (ख) 'अभिज्ञानशाकुन्तलम्' इति नाटकस्य लेखकः कः?
- (ग) सर्वे पशवः मिलित्वा कस्य समीपम् अगच्छन्?
- (घ) सिंहस्य नाम किम्?

(ड) बुद्धिबलेन शशकः कं न्यपातयत्?

प्रश्न 7-पाठानुसारम् एकवाक्येन उत्तरं लिखत।

(10)

(क) के महाकाव्यकाराः सन्ति ?

(ख) विलक्षणप्रतिभासम्पन्नाः के काव्यशास्त्रिणः अभवन्?

(ग) वृद्धशशकः किम् अकथयत्?

(घ) कालान्तरे कस्य वारः समायातः?

(ङ) दीपावली-महोत्सवः कदा भवति?

खंड 'ग' (व्याकरण अवबोधनम्)

प्रश्न 8-शब्दान् निर्मायताम्।

(5)

(क) प्र + विशन्ति =

(ख) वि + कासः =

+ आ (ग) गच्छतु =

ऋद्धये + सम् (घ) =

अग्रतया + प्रति (ङ) =

प्रश्न 9-अधोलिखितानां परस्परं मेलनं कुरुत।

(5)

मधुरम्

प्रमादः नैव

अध्ययने

प्रक्षेप्यम्

अनुशासनं

विना

वक्तव्यम्

त्रिशूलम्मोहः

नष्टे

अव्यवस्था

प्रश्न 10-विभक्तिं वचनं च लिखत

(10)

(क) दुर्जनैः

(ख) सभायाम्

(ग) आधुनिकाः

(घ) जगति

(ङ.) समृद्धये

खंड 'घ' (रचनात्मक कार्यम्)

प्रश्न 11-कस्यचित् एकस्य शब्दस्य रूपं लिखत।

(10)

(क) 'पिता' शब्दस्य रूपं लिखत।

अथवा

(ख) 'नदी' शब्दस्य रूपं लिखत

प्रश्न 12-कस्यचित् एकस्य धातुस्य रूपं निर्देशानुसारं लिखत।

(10)

(क) 'पठ्' धातुरूपं लोट् लकारे।

अथवा

(ख) 'पा' धातुरूपम् विधिलिङ् लकारे।

General Instructions

- i-This question paper consists of 39 questions in 5 sections.
- ii. All questions are compulsory. However, an internal choice is provided in some questions. A student is expected to attempt only one of these questions.
- iii. Section A consists of 20 objective type questions carrying 1 mark each.
- iv. Section B consists of 6 Very Short questions carrying 02 marks each.
- v. Section C consists of 7 Short Answer type questions carrying 03 marks each.
- vi. Section D consists of 3 Long Answer type questions carrying 05 marks each.
- vii. Section E consists of 3 Questions case study-based Questions of 04 marks each

SECTION A: Multiple Choice Questions (MCQs)

(20 Questions × 1 Mark = 20 Marks)

Q1. The organelles which provide energy for all the activities of a cell are:

- (a) chloroplasts (b) mitochondria (c) golgi bodies (d) ribosomes

Q2. The cell wall in an onion peel cell is made up of:

- (a) starch (b) gelatin (c) cellulose (d) cell sap

Q3. Which of the following organelles is not found in the root cells of a plant?

- (a) nucleus (b) vacuole (c) mitochondria (d) chloroplasts

Q4. The living matter in a cell is called:

- (a) endoplasm (b) protoplasm (c) cytoplasm (d) cell sap

Q5. Which among the following will act as a vector for transmitting diseases?

- (a) mosquito (b) virus (c) protozoa (d) fungi

Q6. Which disease is spread through contaminated food and water?

- (a) pertussis (b) cholera (c) malaria (d) tuberculosis

Q7. The first antibiotic called 'penicillin' was extracted from:

- (a) a bacterium (b) a protozoan (c) a fungus (d) an alga

Q8. Which of the following diseases is transmitted by mosquitoes and can cause jaundice?

- (a) influenza (b) hepatitis A (c) malaria (d) yellow fever

Q9. The filament of an electric bulb is made of a thin wire of:

- (a) copper (b) aluminium (c) nichrome (d) tungsten

Q10. An electric fuse works on the principle of:

- (a) chemical effect of current (b) magnetic effect of current
(c) lighting effect of current (d) heating effect of current

Q11. The most suitable material for making the core of an electromagnet is:

- (a) iron (b) brass (c) aluminium (d) steel

Q12. The magnetic effect of electric current was discovered by:

- (a) Maxwell (b) Darwin (c) Oersted (d) Newton

Q13. Which of the following is not an example of muscular force?

- (a) a porter carrying a load on a wheel-barrow (b) an apple falling from a tree
(c) a child riding a bicycle (d) a person drawing water from a well

Q14. The SI unit of weight is:

- (a) kilogram (b) newton (c) newton metre (d) kilometre

Q15. If a person weighs 60 kg on Earth, what will be his approximate weight on the Moon?

- (a) 60 kg (b) 6 kg (c) 10 kg (d) 50 kg

Q16. In the circuit shown in, when the circuit is completed, the hammer strikes the gong. Which of the following forces is responsible for the movement of the hammer?



- (a) Gravitational force alone (b) Electrostatic force alone
(c) Magnetic force alone (d) Frictional force alone

Q17. The centre of a cyclonic storm called the 'eye of cyclone' is an area of:

- (a) Very low air pressure (b) Moderate air pressure
(c) Very high air pressure (d) Gradually rising air pressure

The questions below consist of an assertion and a reason. Use the following key to choose the appropriate answer.

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

18-Assertion: An electric iron becomes hot when current passes through it.

Reason: Electric current produces heating effects in conductors.

19-Assertion: A magnet attracts plastic objects.

Reason: Magnets attract magnetic materials like iron.

20-Assertion: Barometers are used to measure atmospheric pressure.

Reason: Atmospheric pressure changes with weather conditions.

SECTION B: Very Short Answer Type Questions

(6 Questions $\times$ 2 Marks = 12 Marks)

Q21. Classify the following diseases into **communicable** and **non-communicable** categories:

Diabetes, Typhoid, High blood pressure, Chickenpox.

Q22. A student observes that when curd is left out for a day, it becomes more sour. Give two possible reasons or explanations for this observation.

Q23. Name the carrier/vector responsible for causing malaria. To which category of microorganisms does the malaria-causing germ belong?

Q24. State two basic characteristics or properties that a substance must possess to be called **matter**.

Q25. Arrange the following substances in increasing order of the **force of attraction** between their particles:

Water, Sugar, Oxygen.

Q26. Why are holes made in big banners and hoardings left hanging in open public places?

SECTION C: Short Answer Type Questions

(7 Questions $\times$ 3 Marks = 21 Marks)

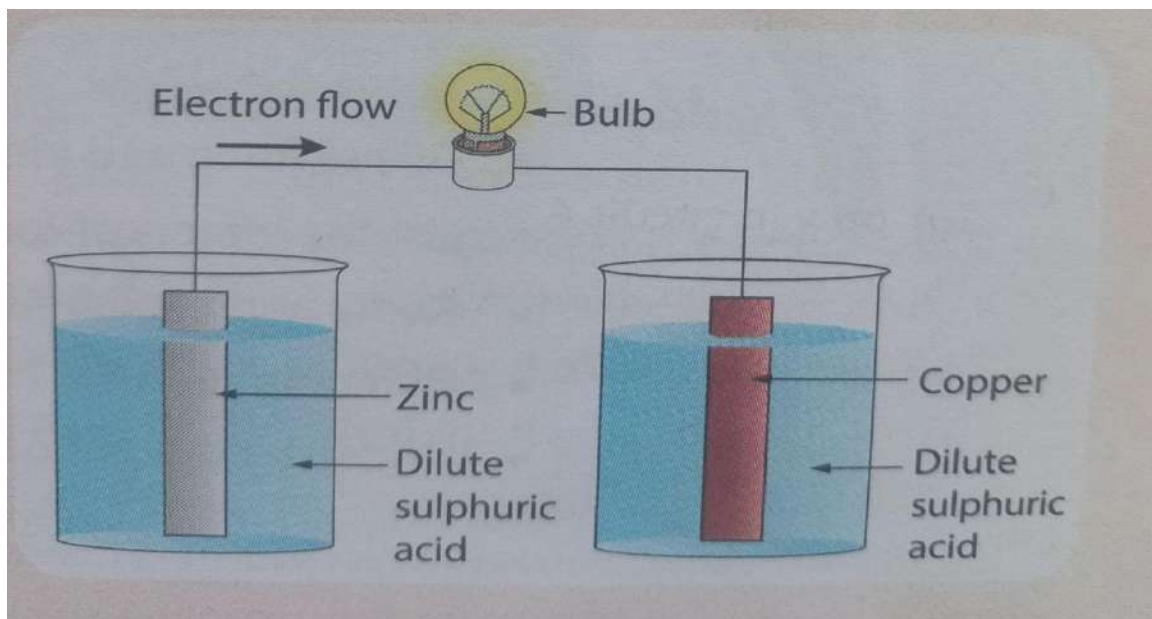
Q27. It is strongly recommended that we should not take antibiotics for a viral infection like a common cold or flu. Provide a scientific reason to justify this recommendation.

Q28. Write the differences between **communicable** and **non-communicable** diseases with at least one example for each.

Q29. A student sets up a simple voltaic cell by placing a strip of zinc in a beaker of dilute sulphuric acid and connecting it with a wire and bulb to strip copper placed in another Baker of dilute sulphuric acid. It was observed that the ball was glowing.

(a) Identify the cathode a note and the electro electrolyte

(b)What will happen if the sulphuric acid is replaced with vinegar solution?



Q30. Explain clearly why any ordinary metal wire or a simple metallic strip cannot be used in place of a proper **fuse wire** in household electrical circuits.

Q31. (a) What is meant by **gravitational force**?

(b) When a boatman stops rowing a boat which is moving in water, it slows down and eventually stops. Name and explain the force responsible for this.

Q32. Two balloons rubbed vigorously with a woollen cloth are brought near each other. What do you expect will happen, and why? Name the specific force involved here.

Q33. (a) Define **pressure** and state its standard SI unit.

(b) Explain why school bags are always provided with wide straps instead of thin strings to carry them.

SECTION D: Long Answer Type Questions

(3 Questions × Marks = 15 Marks)

Q34.(a) What is a vaccine? Describe in brief how a vaccine works inside the human body to build immunity.

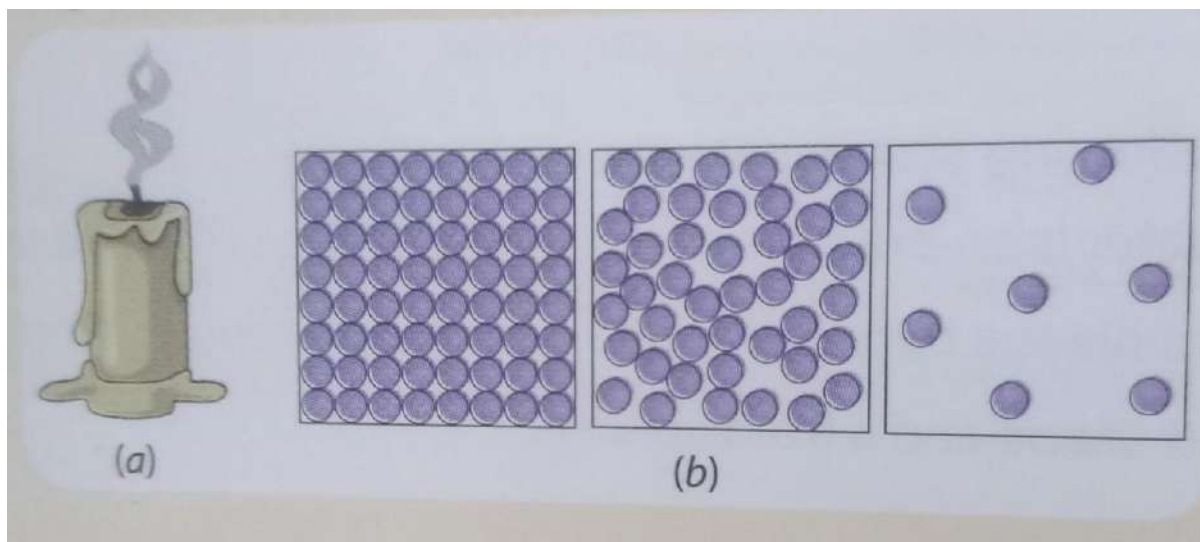
(b) Suppose there is a sudden flu outbreak in your school. Mention any two immediate actions the school administration should take to prevent its further spread, and two personal precautions you should take to protect yourself.

Q35. (a) On what factors does the **buoyant force** exerted by a liquid on an object depend? Explain briefly.

(b) A heavy elephant stands on all four feet. If the total area covered by one foot is 0.25 m^2 , calculate the total pressure exerted by the elephant on the ground if its total weight is 20000 N .

(c) A boy lies horizontally on a loose sand bed, and then stands vertically on it. In which case will he sink deeper into the sand? Give reasons based on pressure principles.

Q36. Observe figure (a) which shows the image of a candle that was just extinguished after burning for some time. Identify the different states of wax in the figure and match them with figure (b) showing arrangement of particles.



Section-E

Case based study type of question

3 questions X 4 Marks =12 Marks

37-During a storm, strong winds blew away roofs of weak houses and uprooted trees. Electric poles fell, and many areas lost electricity. After the storm, rescue teams helped people and restored services.

Questions:

- (a)What causes strong winds during a storm?
- (b)Why do weak structures get damaged easily during storms?
- (c)Which force mainly acts during strong winds?
 - (a) Magnetic force
 - (b) Muscular force
 - (c) Pressure force
 - (d) Frictional force
- (d)Suggest two ways to reduce storm damage.

38-Riya noticed that the electric iron becomes hot when switched on. Her teacher explained that the heating element inside the iron gets heated due to the flow of electric current. The iron helps in removing wrinkles from clothes.

Questions:

- (a)Which effect of electric current is used in an electric iron?
- (b)Name the material commonly used as a heating element in electric iron.
- (c)Why does the heating element become hot?
- (d)Which of the following devices works on the heating effect of electric current?
 - (a) Electric bell
 - (b) Fan
 - (c) Heater
 - (d) Compass

39-A blacksmith heated an iron rod in fire. After some time, the rod became red hot and slightly longer. This happened because the particles of iron gained energy on heating.

Questions:

- (a)Why did the iron rod expand on heating?
- (b)What happens to particles when heat is supplied?
- (c)Heating increases:
 - (a) Size of particles
 - (b) Movement of particles
 - (c) Colour of particles
 - (d) Weight of particles
- (d)What is this expansion due to heating called?

General Instructions

All questions are compulsory.

Read all the questions carefully before answering.

Write neat and clear answers.

Marks for each question are indicated against it.

Draw diagrams/maps wherever necessary.

Maintain proper question numbering.

Use blue/black pen only.

Attempt all sections.

1. Multiple Choice Questions.

10

1. Acting as caretakers of natural wealth rather than exploiters is known as:

- (a) Stewardship (b) Ownership (c) Domination (d) Competition

2. Switching to organic methods in Sikkim helped the state to:

- (a) Increase soil fertility and biodiversity (b) Depend on chemical fertilisers
(c) Reduce crop production (e) Ban tourism

3. The emblem of the Hoysala dynasty depicts:

- (a) A horse and rider (b) A bull and cow (c) An eagle (d) A man fighting a lion

4. What does the word Swarajya mean?

- (a) Rule by foreigners (b) Self-rule (c) Religious rule (d) Feudal system

Practice Paper

5. The bahmani saltanat emerge because of:

- (a) People moving from the north
(b) The weakening and breakup of the Delhi sultanate's control
(c) A Rajput revolt
(d) Europeans coming to India

6. Assertion (A): The policy of “free trade” introduced by the British benefited Indian industries.

Reason(R): IT allowed cheap British manufactured goods to enter India, destroying local crafts.

- (a) Both A and R are true and R is the correct explanation of A
(b) Both A and R are true R is not the correct explanation of A
(c) A is true but R is false
(d) A is false and R is true

7. The prime minister in Shivaji's council was known as-

- (a) Mantri (b) Amatya (c) Pradhan (d) Senapati

8. **Assertion(A):** India's coal reserves will last forever.

Reason(R): At the current rate of use, they may last only about 50 years.

- (a) Both A and R are true and R is the correct explanation of A
- (b) Both A and R are true R is not the correct explanation of A
- (c) A is true but R is false
- (d) A is false and R is true

9. What was the main purpose of the British policy of "Divide and Rule"?

- (a) To promote unity among Indian rulers
- (b) To encourage trade and commerce
- (c) To exploit regional and religious rivalries
- (d) To abolish caste divisions

10. Who among the following strengthened the Election Commission by enforcing strict rules and voter ID system?

- (a) B. R. Ambedkar
- (b) T. N. Seshan
- (c) Rajendra Prasad
- (d) S. Radhakrishnan

2. Fill in the blanks:

10

- 1. The _____ is the presiding officer of the Lok Sabha.
- 2. The _____ of India serves as the Chairperson of the Rajya Sabha.
- 3. The Parliament performs two main functions: _____ and _____.
- 4. The _____ carries out the laws made by Parliament.
- 5. The Council of Ministers is headed by the _____.
- 6. The _____ is one of Parliament's key tools to check the work of the government.
- 7. The _____ is a group of Members of Parliament formed to examine and review bills, reports and government policies in detail.
- 8. Industries: High import _____ on British goods and heavy export barriers on Indian fabric hurt artisans; famed _____ from Bengal collapsed as weavers lost work.
- 9. Governance: Traditional _____ and local customs were sidelined by a centralised _____ focused on revenue.
- 10. Education: _____'s 1835 Minutes promoted _____-medium schooling to produce a clerical elite.

3. True or false.

5

- 1. It began with European expansion in the 15th century.
- 2. All colonial rulers respected local customs and faiths.
- 3. The "civilising mission" was often used to justify exploitation.
- 4. The Dutch defeated the Portuguese in parts of Kerala.
- 5. The French never faced any military conflicts with the British.

4. Match the following.

5

	Column A		Column B
1.	Sambhaji	a.	Expanded Maratha power across India
2.	Rajaram	b.	Formed alliances against the British
3.	Mahadji Shinde	c.	Recaptured Delhi in 1771
4.	Bajirao I	d.	Executed by Aurangzeb
5.	Nana Phadnavis	e.	Shifted capital to Gingee fort

5. Very short answer type questions.

(2×5=10)

1. What role did the Bhakti saints play in the rise of Maratha culture?
2. Why is land considered a primary factor of production?
3. What is Vriksayurveda and why is it significant?
4. Why does India have two houses of parliament?
5. Why is technology described as an “Enabler” in production?

6. Short answer type questions.

(3×4=12)

1. Write a short note on the contribution of Ahilyabai Holkar.
2. How did the new British legal system affect Indian society?
3. Explain the three essential conditions that decide whether a material qualifies as a resource.
4. Why is human capital considered more valuable than physical capital?

7. Long answer type questions.

(4×4=16)

1. In what ways did the Marathas show the early seeds of Indian nationalism?
2. Explain how British economic policies lead to the decline of India's traditional industries.
3. Using the example of a mobile phone or any everyday product, explain how different countries, workers, machines and technologies cooperate to complete production. Discuss how disruption in supply chains can affect prices, availability and jobs.
4. Explain the three lists of law making powers in the Constitution.

8. Read the following passage and answer the question that follows.

4

Chhatrapati Shivaji Maharaj believed that the strength of his kingdom rested not merely on forts or swords, but on the people who served it with loyalty. Among them, the soldiers were his pride and protection. These brave warriors left their families behind and fought through mountains, forests, and fierce battles for the dream of Swarajya. Shivaji understood that their courage came with a price - the fear of leaving their families destitute if they fell in war. To remove that fear, he introduced a humane welfare policy. If a soldier died in battle, his widow would receive a regular pension from the royal treasury, and his son would be offered a post in the army to continue his father's service. This was not an act of charity but an act of justice. The soldiers fought more fearlessly knowing their loved ones were safe under their king's care. The policy built deep trust between ruler and soldier, turning the Maratha army into a brotherhood bound by duty and devotion rather than command and

fear. Shivaji's governance thus reflected the true spirit of peace and justice - a model of leadership where compassion and fairness were as powerful as courage and strength.

- (a) What welfare policy did Shivaji introduce for soldiers' families? (1)
- (b) How did this strengthen the Maratha army? (1)
- (c) How does such a welfare system reflect modern ideals of governance? (2)

9. Observe the image and answer the questions that follow.

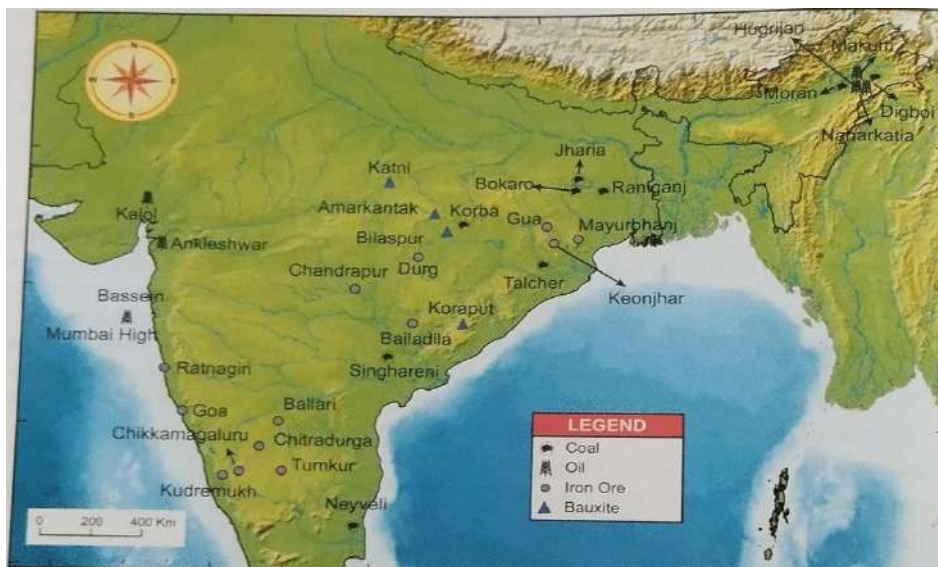
4

- 1. What hardship is shown here?
- 2. How did British revenue policies worsen this?



10. Look at the map given below and answer the following questions.

4



- 1. What does the map show about India's natural resources? 1
- 2. Name any two coal producing regions shown on the map? 1
- 3. In which part of India are oil fields mainly found? 1
- 4. Name one state rich in iron ore and one rich in bauxite? 1