



**H M SENIOR SECONDARY SCHOOL
SHEETLA COLONY, GURUGRAM
CLASS - IX
SESSION - 2026 - 27**

SUMMER HOLIDAY HOMEWORK

**Success doesn't come from
what you do occasionally, it
comes from what you do
consistently.**

**The holiday homework has been thoughtfully designed
by our mentors to be engaging and enjoyable. It
serves as a meaningful step toward helping you fulfill
the spirit of our motto.**

PREPARE PRACTICE PROGRESS

**The activity based assignments will foster curiosity,
develop creativity, enhance knowledge and instill the
joy of learning among you all.**



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NOTE:
Revise the work done in all the subjects till now. Learn whole syllabus of Periodic Assessment-1.

ENGLISH

A) Read the given passage carefully and choose the correct option.

1. Nepal lies between India and Tibet, among the Himalayan Mountains. The tallest mountain in the world, Mount Everest, is in Nepal, and there are several mountains nearly as high. When mountaineers try to climb Mount Everest, they take the help of the Sherpas, the strong and hardy people who live in these mountains, to carry heavy loads and act as guides.

2. A long time ago, the Sherpas crossed over the mountains from Tibet and made their homes along the southern slopes of the Himalayas in Nepal. Some Sherpa families have three houses, one house in the lower hills, one a little higher, and one further up. The houses are in small village groups of about forty or fifty. Round each group of houses, there are cultivated fields, usually built in the shape of terraces right up the hillsides.

3. In the highest fields, the Sherpas grow potatoes; In the lower fields, they grow barley; and turnips, garlic and other vegetables in the lower ones. They also graze their yaks on the higher mountain slopes in the summer and on the lower slopes in the winter. Yaks are very hardy, large cattle with thick, hairy blackish-brown coats and long horns. The Sherpas use them for almost everything they need. They ride them, plough with them, and use them to carry their goods. The hairy wool of these animals is made into cloth, and their skins into leather boots and tents. The yaks also provide milk, fat and meat. Their dung is dried and used as fuel instead of wood or coal.

Choose the correct option.

Q1 What is the situation in Nepal?

- (a) between Mount Everest and Tibet (b) between Tibet and India
(c) between Tibet and Himalayas (d) between Tibet and Mount Everest

Q 2 Sherpas are not known for :

- (a) their strength and hardness (b) for cunningness
(c) their carrying heavy loads (d) acting as guides.

Q 3 Where do the Sherpas have their houses?

- (a) on the lower hills (b) on a little higher
(c) another a little higher up (d) All the three above are correct.

Q4 These things Sherpas do not grow on the lower fields:

- (a) potatoes (b) turnip and garlic
(c) other vegetables (d) barley

(B) Rearrange the following words in their right order.

1. It/ is / not /easy to/ play /a musical instrument / as /it /requires /great skill /and /dedication.
2. After /the /storm/ the / sky/ cleared /up/ revealing a / breathtaking/ sunset/ over / the/ horizon.

3. The / scientist/ conducted /a/ series/ of/ experiments /to /test/ the /hypothesis/ and/ gather/ meaningful /data.
4. In/ the/ ancient/ city/ the /ruins/ of /an/ old /temple/stood /as a/ testament/ to/ its/ rich/ history.

(C) Fill in the blanks with the correct form of the verb.

1. Each of the girls ____ her own dress. (has/have)
2. Five miles ____ long distance. (is/are)
3. Many a man ____ tried hard to climb the treacherous mountain range. (have/has)
4. The furniture of the house ____ quite impressive. (is/are)
5. Few students _____ coming to the party. (is, are)
6. Uma, my childhood friend ____ leaving for Delhi next month. (is/are)

(D) Answer the questions based on the extracts by selecting the correct options.

Many times, I rubbed my hands over the pages wishing to understand what was written. But I knew it was not possible. If only I was educated enough I waited eagerly for you to return. I felt you would come early and read for me. I could have asked somebody in this village but I was too embarrassed to do so. I felt so very dependent and helpless. We are well-off, but what use is money when I cannot be independent?

- i. What made the grandmother feel inadequate?
 - a. She was unable to read the story.
 - b. She was unable to stay attentive.
 - c. She was unable to buy the magazine.
 - d. She was unable to understand the story.
- ii. Select the relevant option that best supports the context of the given extract:
 1. Grandmother was elated to get the magazine
 2. Grandmother was embarrassed to ask for help
 3. Grandmother eagerly waited for her granddaughter's arrival
 4. Grandmother loved gazing at the pictures from the story
 - a. only 1 and 2
 - b. only 2 and 3
 - c. only 3 and 4
 - d. only 1 and 4

iii. Select the option that tracks the progression of emotions experienced by the grandmother in the given extract.

1. reassured – inquisitive – thankful – uncertain
2. surprised – grateful – perplexed – excited
3. yearning – uncertain – dejected – helpless
4. perplexed – uncertain – panic-stricken – appreciative

(E) Answer the following questions in 30-40 words.

1. "For a good cause, if you are determined, you can overcome any obstacle." How does this statement apply to the grandmother's journey?
(How I Taught My Grandmother to Read)
2. How does the poet describe the natural beauty of India in the poem "Bharat Our Land"?

(F) Answer the following questions in 50-60 words.

1. Describe the emotional moment when the grandmother finally read the novel 'Kashi Yatre' on her own.
2. How does the poet of "Bharat Our Land" describe the contributions of warriors and sages to the country?

(G) Answer the following questions in 70-80 words.

1. Describe the process of pot making followed by expert pot makers, as observed by Sentila.
(The Pot Maker)
2. Education is important for everyone, whether young or old'. Discuss, with reference to 'How I Taught My Grandmother to Read)

(H) PROJECT 1: Prepare a colourful comic strip in 6–8 panels on A 4 sheet based on the story "How I Taught My Grandmother to Read." Include important events, suitable dialogues, captions, and expressions to show the journey of the grandmother learning to read.

PROJECT 2: Explore the rich tradition of Indigenous Pottery of India by identifying different pottery styles, matching them with pictures, and complete creative and research-based activities to understand their cultural importance.

Tips to prepare the project:

- (i) Explore different types of pottery of India
- (ii) Draw or paste the pictures of different Pottery Styles of India
- (iii) Write a slogan to promote traditional Indian Pottery
- (iv) Choose any pottery tradition of your choice and write about its origin, materials used, famous design, uses of pottery and interesting facts.
- (v) Create a miniature pottery model using clay inspired by any indigenous pottery tradition of India and present it in a class pottery exhibition with a short description of its region, style, and cultural significance.

Collaborative Learning- After vacation, students will be categorized on the basis of pottery styles and organize a Pottery Exhibition in which they will introduce about its origin, materials used, market value, historical aspects (if any), usage and interesting facts.

(I) Read the given passage carefully and choose the correct option.

1. When the old town library reopened after months of renovation, most people expected brighter lights, faster computers, and rows of polished shelves. What they did not expect was silence — not the ordinary silence of people reading quietly, but a deep stillness that seemed to settle over the building like fog.

Aarav noticed it the first afternoon he visited. Even the sound of turning pages appeared softer inside the library walls. The librarian, Mrs. D’Souza, spoke in whispers although no sign instructed visitors to remain quiet. Aarav assumed the atmosphere was meant to encourage concentration, yet something about it unsettled him.

2. At the far end of the history section stood a locked wooden cabinet with frosted glass panels. Every evening, just before closing time, Mrs. D’Souza walked toward it carrying a small brass key attached to a blue ribbon. She would unlock the cabinet for a few minutes, remove a single book, dust it carefully, and place it back again.

3. Curiosity eventually overcame Aarav’s hesitation. One rainy evening, he stayed behind after the announcement for visitors to leave. Hidden between two tall shelves, he watched Mrs. D’Souza approach the cabinet. But instead of opening it, she simply rested her hand on the glass and sighed deeply. “You can come out now,” she said without turning around.

Embarrassed, Aarav stepped forward. To his surprise, the librarian did not appear angry.

4. “People think this library survived because of money,” she said quietly. “But during the storm twenty years ago, when half the town flooded, people formed a chain through the water to save these books. Some risked their lives.” She unlocked the cabinet and revealed an old, water-damaged book whose pages were swollen and stained.


5. “This was the first book carried out,” she explained. “The silence you feel here is respect. People remember what was protected.” Aarav looked around differently then. The library no longer felt strange. It felt alive — filled not with noise, but with memory.

Choose the correct option.

1. Why did Aarav initially feel uncomfortable in the library?

- A. The lights were too dim
- B. The silence felt unusual and unsettling
- C. The librarian treated him rudely
- D. The library was completely empty

2. What can be inferred about Mrs. D’Souza’s behaviour toward the cabinet?

- 
- A. She feared opening it
 - B. She wanted to hide expensive books
 - C. She considered the contents meaningful and valuable
 - D. She planned to remove the cabinet

3. Which detail BEST builds suspense in the passage?

- A. The rainy evening
- B. The polished shelves
- C. Aarav's interest in history
- D. The announcement before closing time

4. Why did the townspeople form a chain during the flood?

- A. To rescue trapped residents
- B. To protect the library books
- C. To repair the damaged building
- D. To stop water from entering the streets

5. What does the "silence" in the library SYMBOLIZE?

- A. Fear of punishment
- B. Lack of visitors
- C. Respect and remembrance
- D. Strict library rules

6. Which statement BEST describes Aarav's character?

- A. He is careless and impatient
- B. He is curious and thoughtful
- C. He is arrogant and dishonest
- D. He is fearful and weak

7. What is the main theme of the passage?

- A. Technology has improved libraries
- B. Old buildings should be renovated

C. Memories and sacrifices deserve respect

D. Curiosity often leads to trouble

8. Why does the author describe the book as “water-damaged”?

A. To show it was worthless

B. To connect it to the flood story

C. To explain why it was hidden

D. To suggest the library lacked care

9. Which literary device is used in the line: “The silence... settled over the building like fog”?

A. Metaphor

B. Simile

C. Personification

D. Hyperbole

10. What change occurs in Aarav by the end of the passage?

A. He becomes afraid of the library

B. He decides never to return

C. He understands the emotional value of the library

D. He learns that the librarian was dishonest

MATHS

Instructions:

1. Attempt all questions in notebook.

2. Show all necessary steps and diagrams.

3. Activity is compulsory and will be assessed.

Questions

1. Find a relation between x and y such that the point (x,y) is equidistant from the points $(7,1)$ and $(3,5)$.

2. Write two rational and two irrational numbers between 3 and 4.
3. Simplify: $(7 + \sqrt{2})(7 - \sqrt{2})$
4. Rationalize the denominator: $1 / (5 + \sqrt{3})$
5. Express 0.0073 as a rational number in the form p/q .
6. If $p(x) = 2x^2 - 2x + 4$, evaluate $p(2)$, $p(-1)$, and $p(0)$.
7. Find the value of k if $x - 2$ is a factor of $3x^2 + kx - 5$.
8. Check whether $(5,-2)$, $(6,4)$ and $(7,-2)$ are the vertices of an isosceles triangle.
9. Find the product: $(2x + 6)(2x - 6)$
10. Find relation between X and y such that the point (x,y) is equidistant from the point $(3,6)$ and $(-3,4)$.
11. Plot the points $A(2, 3)$, $B(-2, 3)$, $C(-2, -3)$, and $D(2, -3)$ on the Cartesian plane.
12. Identify the quadrant of the point $(-5, -4)$.
13. Write the coordinates of a point on the x -axis which is 4 units to the left of origin.
14. What are the coordinates of the origin?
15. Plot any 3 points lying on the line $y = x$ and check whether they are collinear.
16. Write the linear equation for: 'Twice a number added to 5 gives 11'.
17. Draw the graph of the equation: $x + y = 4$.
18. Find two solutions of the equation $2x - 3y = 6$.
19. The cost of a pen is $\text{₹}x$ and a pencil is $\text{₹}y$. Write the equation if total cost is $\text{₹}50$.
20. Write an equation of a line which is parallel to y -axis and passes through $(3, -2)$.
21. Find a number whose square is 18 more than the number itself.
22. Find a polynomial of degree 3 with one root as 2 and remaining as 0.

Case Study- 1

23. A school is building a new rectangular stadium. The length is given by polynomial $p(x) = 2x^2 + 5x + 3$ meters and breadth is $q(x) = x + 2$ meters, where $x > 0$.

- Q1. Find the area of the stadium in terms of x .
- Q2. If $x = 5$ meters, what is the actual area?
- Q3. What type of polynomial is $p(x)$? Also state its degree.
- Q4. If the school decides to increase the breadth by 1 meter, what will be the new area polynomial.

Case Study-2

24. Class 9 students went on a trip. The total cost of the trip was Rs 6000. If there were 5 more students, each would pay Rs 40 less. Let the number of students be $\$x$ and cost per student be $\$y$.

- Q1. Form the two linear equations from the given conditions.

Q2.Solve to find number of students and cost per student.

Q3. If 3 teachers also join and school pays Rs 500 for them, what is the new cost per student?

Q4.Represent the first equation graphically. What does the slope represent.

Assertion and Reason

A: Both A and R are true and R is correct explanation of A

B: Both A and R are true but R is not correct explanation of A

C: A is true but R is false

D: A is false but R is true

25.Assertion (A): Degree of zero polynomial is 0.

Reason (R): Degree of a polynomial is the highest power of variable with non-zero coefficient.

26. Assertion (A): $x=2,y=3$ is the only solution of $x+y =5$

Reason (R):A linear equation in two variables has infinite solution.

□ Activity – Real Life Coordinate Geometry

Create a map of your home or classroom on a Cartesian plane.

Mark the positions of at least 5 objects (like table, chair, board, bed, etc.) with coordinates.

Explain why each item lies in a particular quadrant. Add a title and use colors to make it attractive!

ARTIFICIAL INTELLIGENCE

Instructions:

- Complete all tasks in a neat notebook or on A4 sheets.
- Write with proper headings and subheadings.
- Use pictures, charts or diagrams where possible.
- Submit your work on the first day after vacation.

Holiday Homework Tasks:

Task 1. AI Reflection Activity (Creative Thinking)

Q: Choose any 2 real-life tasks where humans use intelligence (like recognizing a face, or deciding what to eat).

- Explain how humans perform them.
- Reflect how AI could do the same task.

- Write in 5–6 lines each with pictures if possible.

2. AI Project Cycle Activity (Understanding Process)

Q: Imagine you want to make an AI system that recommends songs to users.

- Identify the 4 stages of the AI Project Cycle.
- Briefly explain what you would do in each stage. Write in tabular format or draw a flowchart.

3. AI Ethics Case Study (Critical Thinking)

Q: Suppose an AI robot in a hospital gives wrong medicine to a patient.

- Is AI responsible? Is the company responsible?
- What should be done to avoid such issues? Write your thoughts in 7–8 lines. Be honest and logical.

4. Worksheet Practice (Knowledge Check)

Section A: Multiple Choice Questions (MCQs)

1. What is the first stage of the AI Project Cycle?

- a) Data Acquisition b) Modelling c) Problem Scoping d) Evaluation

2. Which of these is an ethical concern in AI?

- a) Fast performance b) Bias c) Accurate results d) None of these

3. Which of the following is a real-life example of AI Reflection?

- a) Solving a math problem b) Voice assistant choosing a song for you c) Writing in notebook d) None of these

4. Which stage of the AI Project Cycle focuses on gathering the required dataset?

- a) Problem Scoping b) Data Acquisition c) Evaluation d) Deployment

5. Which tool is commonly used for data visualization?

- a) MS Word b) Google Chrome c) MS Excel d) VLC Player

Section B: Very Short Answer Questions

6. Define AI Reflection in simple words.

7. What is meant by bias in AI?

8. List any two stages of the AI Project Cycle.

9. What is the importance of data in AI?

10. Give one example of AI in healthcare.

Section C: Short Answer Questions

11. How can AI help in daily decision-making?

12. Explain the term “Data Acquisition” with one example.

13. What is the role of modeling in the AI Project Cycle?

14. How is ethics important while designing AI systems?

15. List any two problems that arise when AI is biased.

Section D: Long Answer Questions

16. Explain all four stages of the AI Project Cycle with suitable examples.

17. What do you understand by AI Reflection? Explain with an example comparing human and machine intelligence.

18. Describe how data visualization helps in understanding patterns.

19. Why should AI follow ethical principles? Give any 3 reasons.

20. How can an AI system be trained to detect spam emails? Explain using the project cycle approach.

Section E: Creative / Case-based Questions

21. You are building an AI that recommends books to students.

- Define the problem clearly.
- What kind of data will you need?
- What ethical factors must be considered?

22. A facial recognition AI is unable to recognize people of certain skin tones.

- What is the problem here?
- Which stage of the AI cycle should be improved?
- What are the ethical implications?

23. Design a simple bar chart to show how students in your class use AI (e.g., Google Assistant, Alexa, ChatGPT). Write 2 conclusions from your chart.

24. Imagine an AI robot that helps elders at home. List 3 ethical responsibilities of the company making this robot.

25. Write a reflection comparing how a human and an AI would choose clothes for different weather conditions.

Chart Work

- Computer Vision – How AI Sees the World

2. Why is centrifugation used in dairies?
3. Explain the process of evaporation with one daily life example.

Section D: Long Answer Questions

1. Explain any four methods used for the separation of mixtures with suitable examples.
2. Describe the process of distillation with a neat labelled diagram and mention its applications.
3. Explain chromatography and its uses in daily life and scientific fields.

HOTS Questions:

1. Why can't filtration separate salt dissolved in water?
2. Why is chromatography considered important in medical and forensic laboratories?



Conceptual Questions

1. Define speed and velocity.
2. Difference between uniform and non-uniform motion.
3. What is acceleration?
4. Can displacement be zero even when distance is not zero? Explain.

Case Based Questions:

5. A car moves 15 m/s for 5 s and then stops.

- a) Distance travelled before stopping?
- b) What type of motion is shown? Name the type of acceleration during stopping.

6. A car moves on a circular track of radius 70 m.

- a) Distance after half round
- b) Displacement after half round
- c) Is motion uniform? Explain.

7. Draw and interpret:

- distance–time graph for rest

- velocity–time graph for uniform acceleration
 - velocity–time graph for retardation
-

□ Numerical Questions

A train travels 180 m in 12 s. Find speed.

8. A body accelerates from 10 m/s to 30 m/s in 5 s. Find acceleration.
 9. A body starts from rest and accelerates at 3 m/s^2 for 4 s. Find final velocity.
-

□ Logical / HOTS Questions

A car moves in a circular track at constant speed. Is it accelerated motion? Justify logically.

11. Two students walk from home to school. One walks straight, another takes a longer curved path. Who has greater distance and displacement? Explain.
 12. A ball is thrown vertically upward with velocity 20 m/s.
Find:
 - time to reach maximum height
 - maximum height
(Take $g = 10 \text{ m/s}^2$)
-

□ Assertion Reason Questions

Choose correct option:

- (A) Both A & R true and R correct explanation
- (B) Both true but R not correct explanation
- (C) A true, R false
- (D) A false, R true

13. Assertion: Velocity is a vector quantity.
Reason: It has magnitude and direction.
 14. Assertion: Uniform circular motion is accelerated motion.
Reason: Direction of velocity continuously changes
 15. Assertion: Distance is always greater than or equal to displacement.
Reason: Displacement is shortest distance between two points.
-

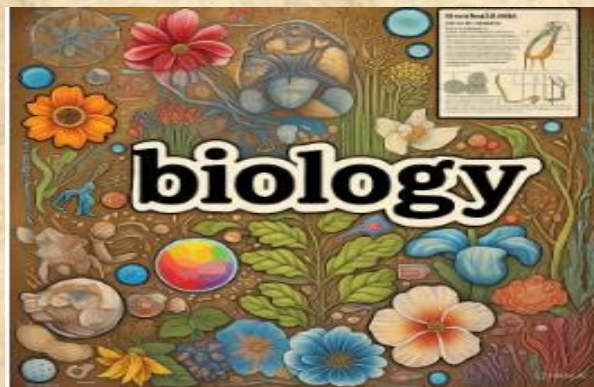
□ Motion Model Making

Make one working/simple model:

- *Moving car using balloon air*
- *Circular motion model*
- *Rotational motion using fan blades*
- *Pendulum model*

Write:

- *Principle used*
 - *Type of motion*
-



1. What is the cell theory?
2. Describe the structure and function of the cell membrane.
3. Explain the role of mitochondria in cell.
4. Draw a labeled diagram of a plant cell and animal cell.
5. What is the function of the cell wall in plant cells?
6. Describe the role of lysosomes in cells.
7. What is the difference between a cell and a tissue?
8. What is the function of the Golgi apparatus?
9. Describe the role of the endoplasmic reticulum in cells?
10. Define mitosis? Explain its significance.
11. Who discovered cells and how?
12. What is the significance of cells in living organisms?

LAB MANUAL WORK;

Ex-1; Preparation of stained temporary mount of (a) onion peel, (b) human cheek cells and to record observations and draw their labelled diagrams.

Ex-2; Identification of Parenchyma, Collenchyma and Sclerenchyma tissues in plants, striped smooth and cardiac muscles fibres and nervous cells in animals, from prepared slides. Draw their labelled diagrams.

SOCIAL SCIENCE

1. What is the primary focus of Social Science?
2. Why is Social Science considered important in modern times?
3. How does Social Science promote guiding values like equity and inclusivity?
4. "Social Science turns students into responsible citizens." Elaborate on this statement.
5. How does Social Science promote guiding values like equity and inclusivity?
6. Explain how the interdisciplinary approach of Social Science helps in addressing contemporary issues, such as environmental sustainability.
7. "Social Science is not merely the study of man; it is the study of man in society." Justify this statement with reference to the scope of human relationships and shared resources.
8. Social Science studies human relationships and societal development. How does understanding the scope of subjects like History and Economics help you become a more responsible citizen in your daily life?
9. It is often said that Social Science acts as a foundation for democratic values and social justice. In a diverse society, how can the knowledge of this subject help you resolve conflicts and promote equality in your local neighborhood?
10. PRACTICAL APPLICATION BASED: Read this scenario: Two children in your local area come from different economic backgrounds; one has easy access to quality schooling and resources, while the other struggles to complete basic education.
 - (1) How does Social Science help us understand the root causes of such societal inequalities?
 - (2) What values and actions can you demonstrate to support the less privileged child?
12. Landforms are not just passive features on a map; they interact constantly with weather and human life. How do mountains act as a protective barrier for a country, and what is our moral responsibility toward conserving these fragile ecosystems?
13. Dynamic Earth processes (like earthquakes or glacial lake outburst floods—GLOFs) are inevitable. Instead of viewing these as mere tragedies, how can communities build resilience, and what is the role of empathy in disaster management and recovery?
14. If the Earth's exogenic forces (agents of gradation) were to suddenly stop working, how would the physical landscape of the Earth transform over the next 1000 years?
15. Imagine you are an urban planner tasked with establishing a new settlement in an area prone to dust storms and avalanches. What physical characteristics of the local landforms and climate must you consider before finalizing the layout of the town?

(क) जुलाई माह में होने वाली इकाई परीक्षा - प्रथम का पाठ्यक्रम याद करें।

DRAWING

1. Social Issues Poster - Choose a theme like Say No to Drugs, Save the Girl Child, or Stop Pollution and create a strong, eye-catching poster.
2. Abstract Art - Explore emotions and imagination using shapes, colors, and lines.
3. Perspective Drawing - Draw a street scene, railway track, or hallway using one-point or two-point perspective.
4. Portrait Drawing - Sketch a self-portrait or a famous personality using pencil shading.
5. Famous Paintings Recreation - Recreate a classic painting (like a Madhubani, Warli, or Van Gogh piece) with your own twist.
6. Creative Doodle Art - Fill a page with meaningful doodles that represent your hobbies, thoughts, or dreams.
7. Mixed Media Artwork - Combine pencil, pen, and color in a single artwork to show creativity.

MUSIC

1. Paste all the musical instruments in a scrap book.
2. Learn "Hanuman Chalisa" by heart, you would be asked to recite it
3. Also, practise any two patriotic song
4. Make model project on any of the two musical instruments
5. Revise all the class work done
6. Listen to different musical instruments from YouTube

Also, don't forget to:

- . Brush your teeth twice a day
- . Trim your nails often
- . Don't waste water & electricity.
- . Always obey your parents & elders