APS

SR. SEC. SCHOOL

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APS

Builds Strong Minds ...

Message from School: - We at APS SR. SEC. SCHOOL have planned certain assignments, projects, and revision work for you to make the winter holidays productive, enjoyable, and meaningful.
The holiday homework is designed on the principle of learning by doing, keeping in mind your holistic development.

General Instructions

➢ Appreciate Nature (Winter Edition)

Enjoy morning sunlight, short walks, or time in open spaces to stay active and positive.

➢ Good Manners Matter

Respect your parents, grandparents, teachers, and elders. Always use the three magical words: Please, sorry, and Thank You.

➢ Stay Fit, Stay Warm

Engage in indoor or outdoor games suitable for winter. Keep yourself active and maintain a healthy routine.

➢ Learn About Our Heritage & Culture

Read books, watch educational programs or explore stories related to India's culture, festivals, and traditions.

➢ Care for Nature Save electricity, water, and fuel during winter. Switch off heaters, lights, and appliances when not in use.

Must Do

i) Eat healthy, warm food and drink enough water daily.

ii) Limit screen time and avoid excessive use of mobile phones and TV.

iii) Revise the syllabus already taught in class.

iv) Practice reading and writing daily (English and Hindi).

v) Help your parents in daily household activities (organizing books, arranging cupboards, watering plants, etc.).

vi) Maintain a regular sleep schedule and wake up early.

vii) Spend quality time with family members and share your thoughts.

Note to Students

Make this winter break a time to learn, reflect, improve habits, and stay healthy. Return to school refreshed, confident, and ready to learn.

Happy Winter Holidays! ❄️ 📚

WINTER HOLIDAYS HOMEWORK
SESSION - 2025-2026
CLASS - 7th
English

Section (A) Reading skills
Choose one story from the list and read it carefully:
The Happy Prince – Oscar Wilde
The Gift of the Magi – O. Henry
A Wise Old Owl (Short Moral Story)
The Thirsty Crow (Folk Tale)
The Elephant and the Tailor (Panchatantra)
After reading, write the following:
1. Title of the Story
2. Name of Author (if given)
3. Main Characters (list 3–5 characters)
4. Summary of the Story in 80–100 words
5. Moral / Message of the Story
Section (B) Writing skills
1) Winter Vocabulary
Write 10 new winter-related words and by using them make your own sentences.
2) Paragraph Writing (Choose any one of the following topics write a paragraph in about 100 - 120 words)

1) "How I Spent My Winter Vacation"
2) "My Dream City in Winter"
3) "The Best Winter Morning of My Life"

Section (C) Literature

Honeycomb

1) Learn chapter 5 to 8
2) Recite poem 5 to 8 and make 6 very short answer questions from each of the poem.

An Alien Hand

1) Learn lesson 5 to 7

Section (D) Grammar

1) Fill in the blanks with the correct form of the verb (Tenses)

1. She __ (go) to school every day.
2. They __ (play) cricket now.
3. I __ (finish) my work yesterday.
4. We __ (watch) a movie tomorrow.
5. The sun __ (rise) in the east
6. He __ (not/come) to the party last night.
7. My sister __ (study) when I called her.
8. I __ (live) in Delhi since 2018.
9. The children __ (make) noise when the teacher entered.
10. If it rains, we __ (stay) at home.

2) Change the voice.

1. She writes a letter.
2. The teacher praised the boy.
3. They will help you.
4. He is cooking the food.
5. The gardener waters the plants.
6. The police caught the thief.
7. Someone has stolen my bag.
8. The students are singing a song.
9. We finished the work.
10. Riya will paint the wall.

3) Identify the part of speech of the underlined words:

1. She is a smart girl.
2. I walked slowly to school.
3. Although my grandfather is very old he can run very fast.
4. He can swim very fast.
5. He is the man who can solve any problem.
6. Hurrah! we won the match.

7. We will go after lunch.
8. Gujarat is a famous city of India.
9. You can do it by yourself.
10. Someone is knocking at my door.

4) Read chapter- 22 from your grammar book thoroughly and fill its exercise.

Hindi

वसंत पाठ – वीर कुँवर सिंह पाठ पढ़कर **10** सर्वनाम शब्द **, 10** संज्ञा शब्द लिखो, **10** निपात के उदाहरण लिखो ।

* नीलकंठ कौन था और उसको कौन लेकर आया उसकी विशेषताओं के बारे में भी लिखो ।

* कलाप्रिय पक्षी किसे कहा जाता है**?** अपने विचार प्रकट कीजिए

* नीलाभ ग्रीवा किसकी थी और कुब्ज कौन थी**?** वह अन्य पक्षियों के साथ क्यों नहीं रह पाई**?** अपने अनुभव के आधार पर लिखें।

* आम के वृक्ष मंजरियों से कब लग जाते थे और उनको देखकर नीलकंठ को कैसा अनुभव होता था**?** सोच कर लिखें।

* कुब्जा की तरह अगर आपकी कक्षा में भी कोई ऐसे स्वभाव का हो तो तुम उनके साथ कैसा व्यवहार करोगे **40** से **50** शब्दों में लिखें।

* कोई भी प्राकृतिक दृश्य बनाओ व उसे अपने शब्दों में लिखो।

* पाठ भोर और बरखा

* कृष्ण को गिरिधर क्यों कहा जाता है**?** तार्किक क्षमता के आधार पर **60** से **120** शब्द लिखें।

* 'घर-घर खुले किवारे' पुनरुक्ति शब्दों का प्रयोग हुआ है ऐसे ही शब्द पद में से ढूंँढ़कर कोई **10** तुकांत शब्द लिखो।

* पर्यायवाची शब्द लिखें

* रजनी, ललना, दमकै, शीतल बरखा, आनंद,

* प्रभु

* भोर और बरखा पद के आधार पर हमें क्या संदेश मिलता है**?**

* यशोदा मैया ललना किसको कह रही है और क्यों**?**

* माखन रोटी शब्दों की तरह द्वंद समास के और पांँच उदाहरण लिखिए।

* कबीर दास के दो दोहे लिखें और उनके आधुनिक संदर्भ में अर्थ समझाकर लिखें।

* **6 - 10** पंक्तियों की कविता लिखें जिसमें तुकांत शब्दों का प्रयोग किया गया हो और रंगीन चित्रों के साथ सजाएँ।

* धनराज पिल्लै की प्रेरणा से प्रेरित होकर आप भी अपने जीवन में क्या बनना चाहते हैं? अपने विचार प्रकट करें।

* महाभारत पाठ **31** से **40** तक स्वयं पढ़ कर प्रत्येक पाठ में से **8 – 8** प्रश्नों के उत्तर लिखें।

* **व्याकरण**

* समास –अव्ययीभाव समास, तत्पुरुष समास, द्विगु समास के **10-10** उदाहरण लिखो व याद करो।

* अनेक शब्दों के लिए एक शब्द सारे याद करो।

* संबंध बोधक अव्यय विस्मयादिबोधक, समुच्चयबोधक, निपात, क्रिया विशेषण अविकारी शब्द के **10, 10** उदाहरण लिखिए।

* रचना के आधार पर क्रिया के कितने भेद होते हैं? भेद लिखते हुए एक-एक उदाहरण लिखो। (ए-**4** सीट पर)

* आप किसी पर्वतीय स्थल पर घूमने गए हैं एक अनुच्छेद लिखें। (अपने अनुभव के आधार पर)

* अनुच्छेद: परोपकार, श्रम का महत्त्व, करत –करत अभ्यास के जड़मति होत सुजान, अनुशासन **50** से **120** शब्द लिखें*व याद करें।

* सामान्य नागरिक की कठिनाइयों का उल्लेख करते हुए समाचार पत्र के संपादक को पत्र लिखिए।

* सर्दी की सुबह पर कविता लिखें व याद करें।

* आपके घर में आपकी दादी या माता जी ने सर्दी के मौसम में कौन –सा स्वादिष्ट व्यंजन बनाया, जिसे खाकर आपके शरीर को ऊर्जा मिली। अपने मित्र को एक पत्र के माध्यम से बताइए।

Mathematics
CHAPTER 8 — RATIONAL NUMBERS (20 Questions)
A. MCQs
1. Which of the following is a rational number?

(a) $\sqrt{2}$ (b) π (c) 1/3   (d) $\sqrt{5}$

2. Reciprocal of -7/9 is:

(a) -9/7   (b) 9/7   (c) 7/9   (d) -7/9

3. The rational number having numerator = denominator is:

(a) 0   (b) 1   (c) -1   (d) 2

4. Rational numbers are closed under:

(a) Addition   (b) Subtraction   (c) Multiplication   (d) All

5. Standard form of -18/24 is:
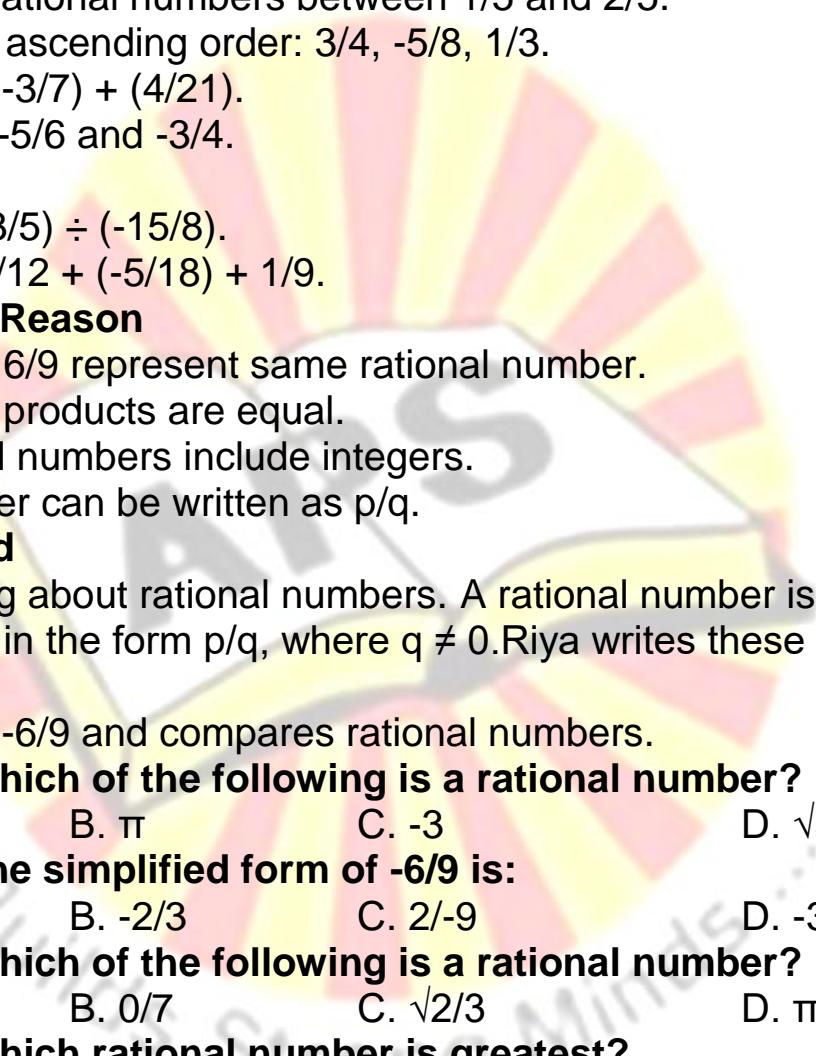
(a) -3/4   (b) -6/8   (c) -9/12   (d) 3/4

B. Fill in the blanks
6. A number of form p/q, q ≠ 0 is called a _____.
7. Reciprocal of 1 is _____.
8. Additive inverse of 4/7 is _____.
9. Two rational numbers are equal if their cross products are _____.
10. Rational numbers can be represented on a _____ line.

C. Short answer
11. Write two rational numbers between 1/5 and 2/5.
12. Arrange in ascending order: 3/4, -5/8, 1/3.
13. Evaluate: (-3/7) + (4/21).
14. Compare: -5/6 and -3/4.

D. Solve
15. Simplify: (3/5) ÷ (-15/8).
16. Simplify: 7/12 + (-5/18) + 1/9.

E. Assertion–Reason
17. A: 2/3 and 6/9 represent same rational number.
R: Their cross products are equal.
18. A: Rational numbers include integers.
R: Every integer can be written as p/q.

F. Case-based
Riya is learning about rational numbers. A rational number is a number that can be written in the form p/q, where q ≠ 0.Riya writes these numbers:
-3, 4/5, 0, -6/9
She simplifies -6/9 and compares rational numbers.

Question 1 Which of the following is a rational number?
A. √2   B. π   C. -3   D. √5
Question 2 The simplified form of -6/9 is:
A. 6/9   B. -2/3   C. 2/-9   D. -3/2
Question 3 Which of the following is a rational number?
A. 5/0   B. 0/7   C. √2/3   D. π/4
Question 4 Which rational number is greatest?
A. -2/3   B. -4/3   C. -1/3   D. -5/3

CHAPTER 9 — PERIMETER AND AREA
A. MCQs
1. Perimeter of square of side 8 cm:
(a) 16 cm   (b) 32 cm   (c) 24 cm   (d) 64 cm
2. Area of rectangle
(a) l + b   (b) 2(l+b)   (c) l × b   (d) 1/2(lb)
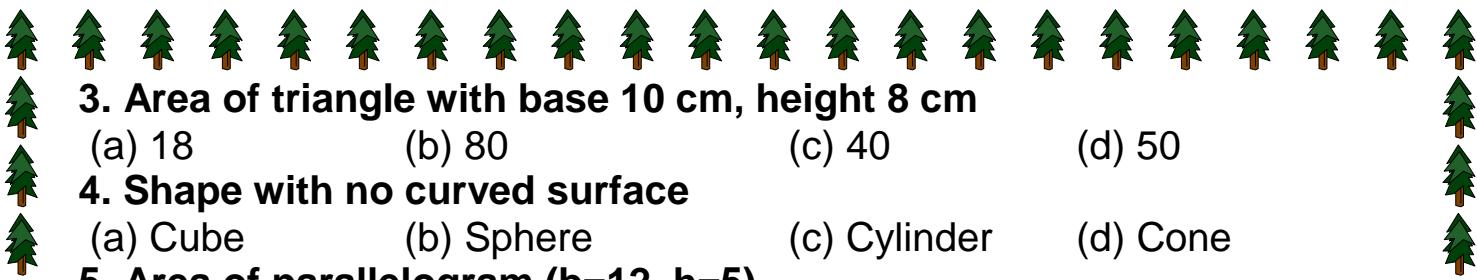
3. Area of triangle with base 10 cm, height 8 cm
 (a) 18   (b) 80   (c) 40   (d) 50
4. Shape with no curved surface
 (a) Cube   (b) Sphere   (c) Cylinder   (d) Cone
5. Area of parallelogram (b=12, h=5)
 (a) 60   (b) 24   (c) 17   (d) 30
B. Fill ups
6. Perimeter of triangle = sum of all _____.
7. A square has all sides _____.
8. Area of circle = π × r × _____.
9. Area is amount of _____ covered.
10. Area of parallelogram = base × _____.
C. Short answer
11. Find the area of a circle whose radius is 2.1 cm.
12. The area of a parallelogram is 144 cm² and its height is 18 cm. Find length of the corresponding base.
13. Find the base of the parallelogram, if the corresponding height is 6 cm and area is 18 cm².
14. If the radius of a circle is 7 cm, then find the circumference of the circle.
15. If the base of a triangle is 5 cm and its area is 20 cm², then find the height of the triangle.
16. The area of a parallelogram is 50 cm². If the base is 10 cm, then find its corresponding height.
Short Answer Type
17. What is the ratio of the heights of two triangles which have equal base side and their areas are in the ratio 9 : 16?
18. Four horses are tethered with ropes of same length at four corners of a square plot of side 14 m so that the adjacent horses can just reach one another. Find the ungrazed area.
Case based Question:
Naira went to a furniture shop where she found a circular mirror. The mirror has a diameter of 56 cm. Around the mirror, there is a circular frame that is 4 cm wide. The cost of polishing the frame is ₹3.50 per cm².
Use this information to answer the following questions:
1. What is the radius of the mirror?
(a) 24 cm   (b) 26 cm   (c) 28 cm   (d) 30 cm
2. What is the area of the mirror?
(a) 2464 cm²   (b) 2465 cm²   (c) 2466 cm²   (d) 2467 cm²
3. What is the area of the mirror along with its circular frame?
(a) 3200.28 cm²   (b) 3218.28 cm²

(c) 3812.28 cm²   (d) 3128.28 cm²

4. What is the area of the frame alone?

(a) 749.28 cm²   (b) 750.28 cm²

(c) 752.28 cm²   (d) 754.28 cm²

5. What will be the total cost of polishing the frame?

(a) ₹2239.98   (b) ₹2739.48   (c) ₹2639.98   (d) None of these

CHAPTER 10 — ALGEBRAIC EXPRESSIONS
A. MCQs
1. The terms in 5x + 3 are:

(a) 5 and 3   (b) 5x and 3   (c) x and 3   (d) None

2. Coefficient of x in 7x - 2 is:

(a) 7   (b) x   (c) -2   (d) 1

3. Like terms are:

(a) 2x, 3y   (b) 4x², 5x   (c) 6x, -2x   (d) 2, x

4. Value of 2x when x=3:

(a) 6   (b) 9   (c) 12   (d) 3

5. 3x + 5x =

(a) 8x   (b) 15x   (c) 2x   (d) 3x5x

B. Fill in the blanks
6. Terms having same variables are called _____ terms.

7. Coefficient of x in -9x is _____.

8. Expression: 4x - 7 has _____ terms.

9. Standard form contains _____ terms.

C. Short answer
10. Identify like and unlike terms: 3x, 9, -4x, 2.

11. Find value of 4x - 3 when x = 2.

12. Simplify: (5x + 7) - (2x + 3).

13. Add: 3a - 5b and -2a + 6b.

D. Solve
14. Subtract (5x - 2y) from (8x + 3y).

15. Add: 4x - 3y + 9 and 2x + y - 5.

16. Simplify this:

$9x^4 + (2x^3 - 5x^4) - 5x^3 - (x^4 - 3x^2)$

Then find its value for x = –2

17. Simplify this expression:

$(2x + 3y) - (3x + 4y) + (7x + 3y) + (x + 2y)$

Then find its value for x = 2 and y = 1.

Case based Question:

A quiz competition was held by the Maths Department for class VII students on the topic Algebraic Expressions. Students participated with enthusiasm and answered many questions. Some of the questions asked in the quiz are given below. Answer them.

1. If the side length of the top of a square table is a, then the expression for its perimeter is:

(a) 4 + a   (b) 2a   (c) 4a   (d) 8a

2. Coefficient of x in the expression $-7xyz^3$ is:

(a) $7z^3$ (b) $-7yz^3$ (c) $-7y$ (d) $7yz^3$

3. Number of terms in the expression $3x^2y - 2y^2z - zx + 3$ is:

(a) 2   (b) 3   (c) 4   (d) 5

4. Ram has 5xy pens and Shyam has 20yx pens. Shyam has how many more pens?

(a) 5xy   (b) 20xy   (c) 15xy   (d) 25xy

5. If m = 1, n = –1, and p = 2, then the value of $m^2 + n^2 + p^2$ is:

(a) 0   (b) 1   (c) 3   (d) 6

CHAPTER 11 — EXPONENTS AND POWERS

A. MCQs

1. 3^3 equals:

(a) 6   (b) 9   (c) 27   (d) 81

2. Value of 2^5:

(a) 32   (b) 16   (c) 64   (d) 8

3. $a^0 =$

(a) a   (b) 1   (c) 0   (d) -a

4. $(-2)^3 =$

(a) -8   (b) 8   (c) 2   (d) -4

5. Standard form is used for writing _____ numbers.

(a) Very large   (b) Very small   (c) Both   (d) None

B. Fill ups

6. $(10^2)^6 =$ _____.

7. $1^0 =$ _____.

8. $5^3 \times 5^4 =$ _____.

9. $a^n \times a^m = a^{n+m}$ (True/False?)

10. $2^4 \div 2^2 =$ _____.

C. Short answer

11. What is the value of $(-1)^{150}$?

12. If $3^6 = 3^{(x-2)}$, find the value of x.

13. Find the value of x if $2^{(x+5)} = 512$.

14. What is the value of y if $(10)^y = 10000000$?

15. Find the value of x such that 3^x is 5 more than 2^2.
16. Find x if $(64 / 27) = (4 / 3)^x$.
17. What is the value of $(1 / 99^0) \times (1 / 999^0)$?
18. Find x if $10^6 \div 100^2$
15. Evaluate: $(3^3 \times 3^2) \div 3^3$
16. Convert 0.00056 into standard form.
17. Convert 8.3×10^3 into usual form.

Case based Questions:
Akhilesh's little sister and his little cousin brother were born in the same hospital on 1st January. When the nurse checked their weights, she found that his sister weighed 3 kg and his cousin brother weighed 4 kg.
Based on this information, answer the following questions:
1. If the weight of Akhilesh's sister increases by a power of 2 in 3 years, what will be her weight after 3 years?
(a) 7 kg   (b) 9 kg   (c) 5 kg   (d) 4 kg
2. If the weight of Akhilesh's cousin brother increases by a power of 3 in 23 years, what will be his weight after 23 years?
(a) 15 kg   (b) 12 kg   (c) 25 kg   (d) 64 kg
3. If the weight of Akhilesh's sister becomes 81 kg in 38 years, then her weight increases at the rate of power of:
(a) 2   (b) 3   (c) 4   (d) 5
4. If the weight of Akhilesh's cousin brother becomes 64 kg in 25 years, then his weight increases at the rate of power of:
(a) 2   (b) 3   (c) 4   (d) 5
5. If the weight of Akhilesh's sister increases at the power of 3 in 4 years, and his cousin brother's weight increases at the power of 2 in 4 years, then what is the sum of their weights?
(a) 8 kg   (b) 16 kg   (c) 27 kg   (d) 43 kg

CHAPTER 12 — SYMMETRY
A. MCQs
1. A figure with two equal halves has _____.
(a) Rotation   (b) Reflection symmetry
(c) Translation   (d) None
2. A square has _____ lines of symmetry:
(a) 1   (b) 2   (c) 3   (d) 4
3. A circle has _____ lines of symmetry:
(a) 1   (b) 100   (c) Infinite   (d) 0
4. The turning movement of shape is called:
(a) Fold   (b) Rotation   (c) Reflection   (d) Shift

5. Order of rotational symmetry of an equilateral triangle is:
(a) 1 (b) 2 (c) 3 (d) 4

B. Fill ups

6. A figure identical to its mirror image has _____ symmetry.
7. A rectangle has _____ lines of symmetry.
8. Rotation of 180° gives _____ turn.
9. Symmetrical objects look same after _____.
10. A regular polygon has _____ lines of symmetry equal to its sides.

C. Short answer

11. How many lines of symmetry does a pentagon have?
12. Define line of symmetry.
13. What is rotational symmetry?
14. Give example of a figure having no symmetry.

D. Solve

15. Draw and name two symmetrical objects (only write names).
16. State order of rotational symmetry of letter H.

E. Assertion–Reason

17. A: A square has more symmetry than a rectangle.
R: All sides of square are equal.
18. A: A circle has infinite symmetry.
R: All points on circle are equidistant from centre.

F. Case-based

A rangoli design looks same when reflected and rotated.
19. Does it have reflection symmetry?
20. What is its rotational order if it repeats at every 90°?

CHAPTER 13 — VISUALISING SOLID SHAPES
MCQ

1. A solid having 6 rectangular faces:
(a) Cube (b) Cuboid (c) Cone (d) Sphere

2. A cylinder has _____ edges:
(a) 2 (b) 1 (c) 0 (d) None

3. A cube has _____ faces:
(a) 4 (b) 6 (c) 8 (d) 12

4. A pyramid has _____ apex:
(a) 1 (b) 2 (c) 3 (d) none

5. A net is a _____ shape:
(a) 3D (b) 2D (c) circular (d) none

B. Fill ups

6. A sphere has _____ faces.
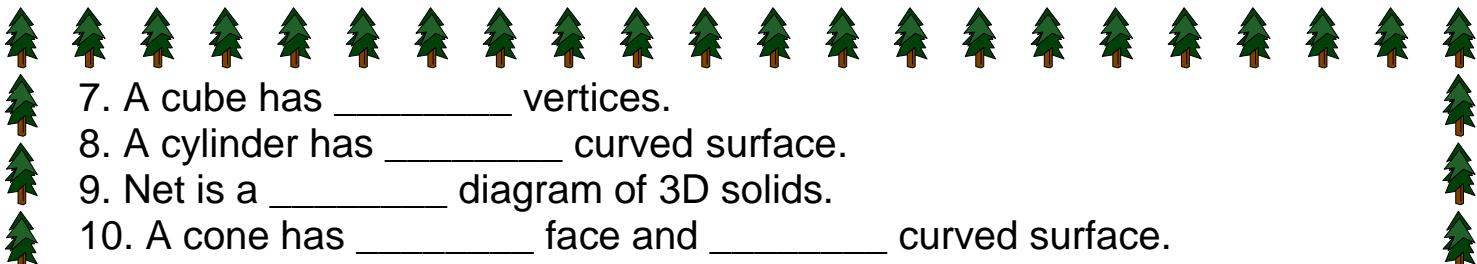
7. A cube has _____ vertices.

8. A cylinder has _____ curved surface.

9. Net is a _____ diagram of 3D solids.

10. A cone has _____ face and _____ curved surface.

C. Short answer

11. Name 3D shapes having curved surfaces.

12. What is a cross-section?

13. Draw (write name only) two objects of cube shape.

14. Write two examples of cylinder shape.

D. Solve.

15. Count faces, vertices, edges of cuboid and Draw it

16. Draw (write names) any two solid nets.

Solve all case based Questions for this chapter from MTG book.

Model 1 (Roll no 1 to 10)
Perimeter and Area

A. "My Dream Garden" Model

Students draw or make a 3D model of a small garden using cardboard.

Divide the garden into rectangles/squares/circles.

Calculate perimeter & area of each part (flower bed, walking path, pond).

Add labels and a small calculation sheet

Model 2 (Roll no 11 to 20)
Visualising Solid Shapes

A. "3D Solids Kit"

Make cube, cuboid, cylinder, cone using chart paper.

Label faces, edges, and vertices.

Attach a chart explaining nets of the shapes.

Project 3 (Roll no 21 to 30)
Rational numbers

"Recipes"

Take a recipe (like cake or lemonade).

Write down the ingredients in fractions.

Show addition, subtraction, multiplication, or division of these fractions.

Make a colorful chart showing the calculations.

Project 4 (Roll no 31 to 35)
Symmetry

"Symmetry Around Us"

Take pictures or draw symmetric objects (like butterfly, leaves, patterns).
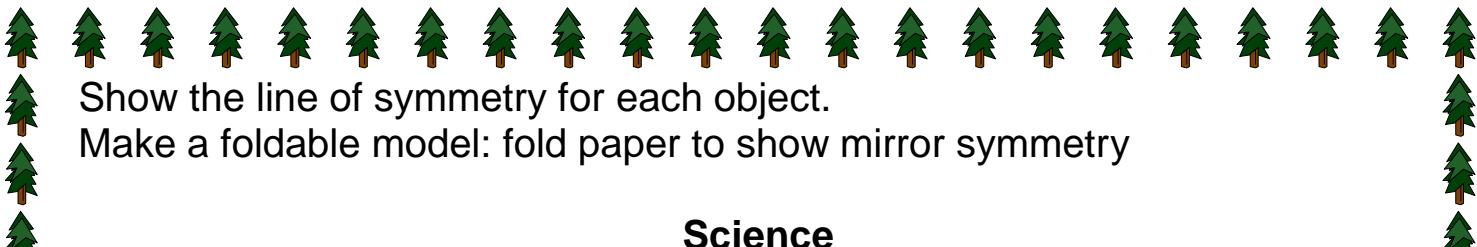
Show the line of symmetry for each object.
Make a foldable model: fold paper to show mirror symmetry

Science
Section I (Case Study questions and Reason & Assertion)

Chapter 3: Heat
Case Study – 1
In winter, we often wear woollen clothes to keep warm. Wool does not produce heat but helps in retaining body heat. Wool fibres trap air between them. Air is a poor conductor of heat, so it prevents heat loss from our body to the surroundings. This helps maintain our body temperature in cold weather.

Questions:
a) Why do woollen clothes keep us warm?
b) What role does air play in heat retention?
c) Is wool a good conductor of heat?
d) How does heat loss occur from our body?

Case Study – 2
When a metal spoon is placed in a cup of hot tea, the spoon gradually becomes hot. Heat flows from the hot tea to the cooler spoon. This transfer of heat occurs through conduction. Metals allow heat to pass through them easily, which is why they are called good conductors of heat.

Questions:
a) Name the mode of heat transfer shown here.
b) Why does the metal spoon become hot?
c) Why are metals called good conductors?
d) In which state of matter does conduction mainly occur?

Assertion–Reason Questions: Give answers as per following
A. If Both Assertion (A) and Reason (R) are true, and R is the correct explanation of A
B. If Both Assertion (A) and Reason (R) are true, but R is NOT the correct explanation of A
C. If Assertion (A) is true, but Reason (R) is false
D. If Assertion (A) is false, but Reason (R) is true
E. If both are False

1. A: Woollen clothes keep us warm in winter.
   R: Wool traps air, which is a poor conductor of heat.
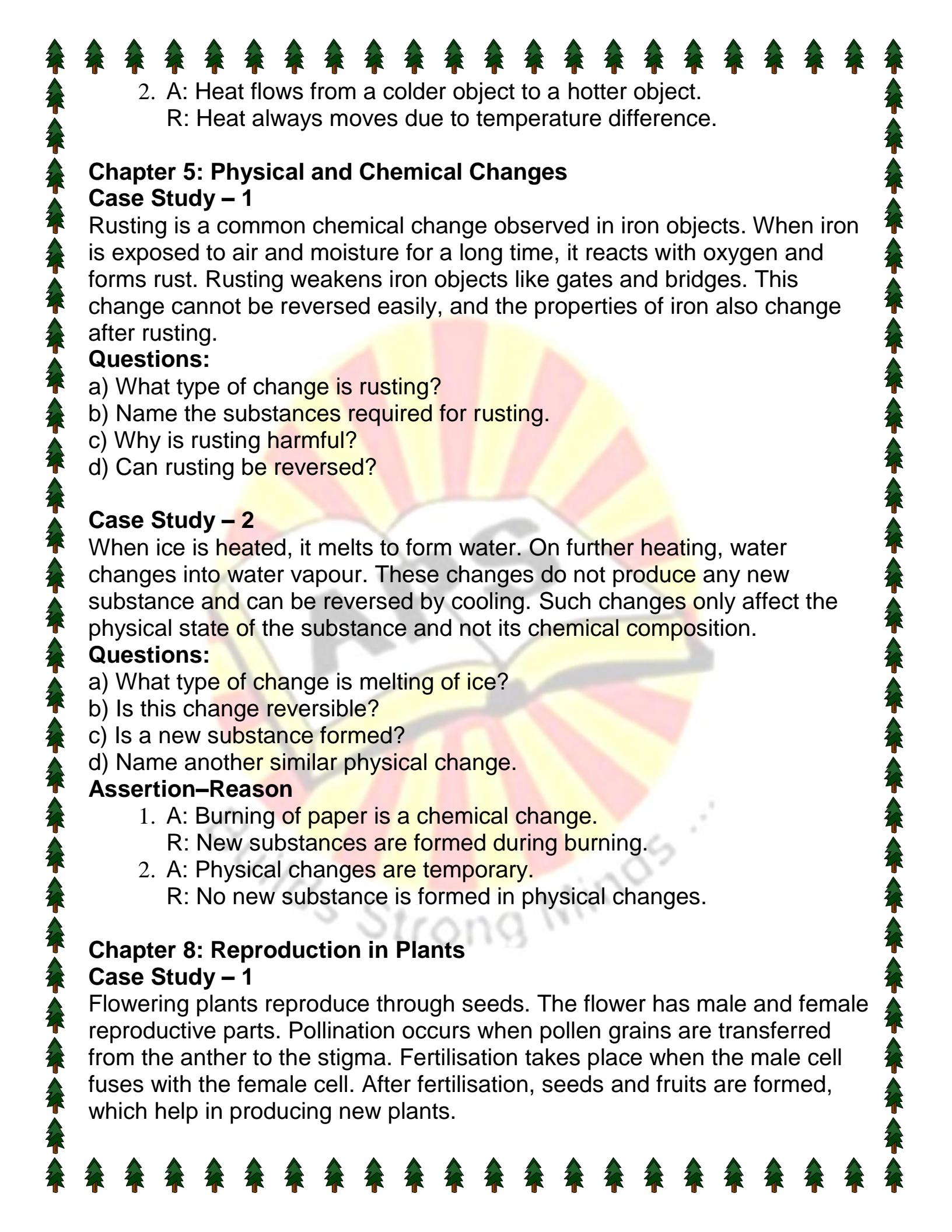
2. A: Heat flows from a colder object to a hotter object.
   R: Heat always moves due to temperature difference.

Chapter 5: Physical and Chemical Changes
Case Study – 1
Rusting is a common chemical change observed in iron objects. When iron is exposed to air and moisture for a long time, it reacts with oxygen and forms rust. Rusting weakens iron objects like gates and bridges. This change cannot be reversed easily, and the properties of iron also change after rusting.
Questions:
a) What type of change is rusting?
b) Name the substances required for rusting.
c) Why is rusting harmful?
d) Can rusting be reversed?

Case Study – 2
When ice is heated, it melts to form water. On further heating, water changes into water vapour. These changes do not produce any new substance and can be reversed by cooling. Such changes only affect the physical state of the substance and not its chemical composition.
Questions:
a) What type of change is melting of ice?
b) Is this change reversible?
c) Is a new substance formed?
d) Name another similar physical change.
Assertion–Reason
1. A: Burning of paper is a chemical change.
   R: New substances are formed during burning.
2. A: Physical changes are temporary.
   R: No new substance is formed in physical changes.

Chapter 8: Reproduction in Plants
Case Study – 1
Flowering plants reproduce through seeds. The flower has male and female reproductive parts. Pollination occurs when pollen grains are transferred from the anther to the stigma. Fertilisation takes place when the male cell fuses with the female cell. After fertilisation, seeds and fruits are formed, which help in producing new plants.
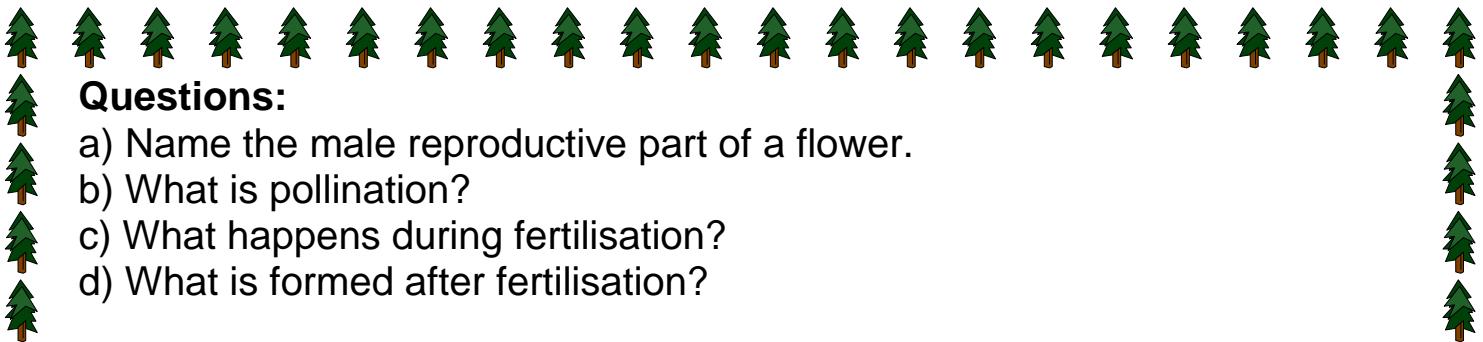
Questions:
a) Name the male reproductive part of a flower.
b) What is pollination?
c) What happens during fertilisation?
d) What is formed after fertilisation?

Case Study – 2
Some plants reproduce without seeds by vegetative reproduction. In this method, new plants grow from roots, stems, or leaves of the parent plant. Examples include potato, rose, and sugarcane. Plants produced this way are similar to the parent plant and grow faster than seed-grown plants.

Questions:
a) Name the method of reproduction described.
b) Which plant parts help in this process?
c) Give one example of such a plant.
d) Mention one advantage of vegetative reproduction.

Assertion–Reason
1. A: Seeds are formed after fertilisation.
   R: Fertilisation occurs inside the flower.
2. A: Vegetative reproduction produces plants identical to parents.
   R: New plants grow from plant parts.

Chapter 9: Motion and Time
Case Study – 1
A car moving on a straight road covers equal distances in equal intervals of time. Such motion is called uniform motion. Speed is the distance travelled per unit time. If the speed of an object does not change, the motion is said to be uniform.

Questions:
a) What type of motion is described?
b) Define speed.
c) What does uniform motion mean?
d) What happens when speed changes?

Case Study – 2
The pendulum of a wall clock moves to and fro at equal intervals of time. This motion is called periodic motion. Such regular motion helps in measuring time accurately. Many time-measuring devices depend on uniform and periodic motion for correct timekeeping.
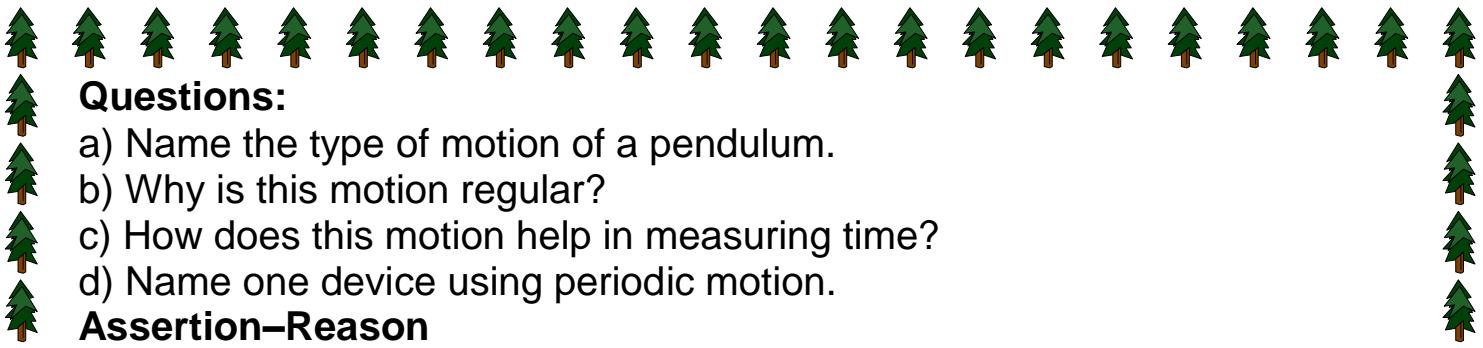
Questions:

a) Name the type of motion of a pendulum.

b) Why is this motion regular?

c) How does this motion help in measuring time?

d) Name one device using periodic motion.

Assertion–Reason

1. A: Speed depends on distance and time.

   R: Speed is distance travelled per unit time.

2. A: Uniform motion means changing speed.

   R: Equal distances are covered in equal time intervals.

Chapter 10: Electric Current and Its Effects

Case Study – 1

When electric current flows through a wire, it becomes hot due to the heating effect of current. This effect is used in appliances such as electric irons, heaters, and toasters. However, excessive heating can damage electrical appliances and cause short circuits.

Questions:

a) Name the effect of electric current mentioned.

b) Why does the wire become hot?

c) Name one appliance using this effect.

d) Why can overheating be dangerous?

Case Study – 2

An electric circuit consists of a cell, connecting wires, a switch, and a bulb. When the switch is closed, the circuit is completed and current flows through it, causing the bulb to glow. If the circuit is broken, the current stops flowing.

Questions:

a) What happens when the switch is closed?

b) Name two components of a circuit.

c) Why does the bulb glow?

d) What is an open circuit?

Assertion–Reason

1. A: Electric current can produce heat.

   R: Electrical energy changes into heat energy.

2. A: A broken circuit allows current to flow.

   R: The path of current becomes incomplete.

Chapter 11: Light

Case Study – 1
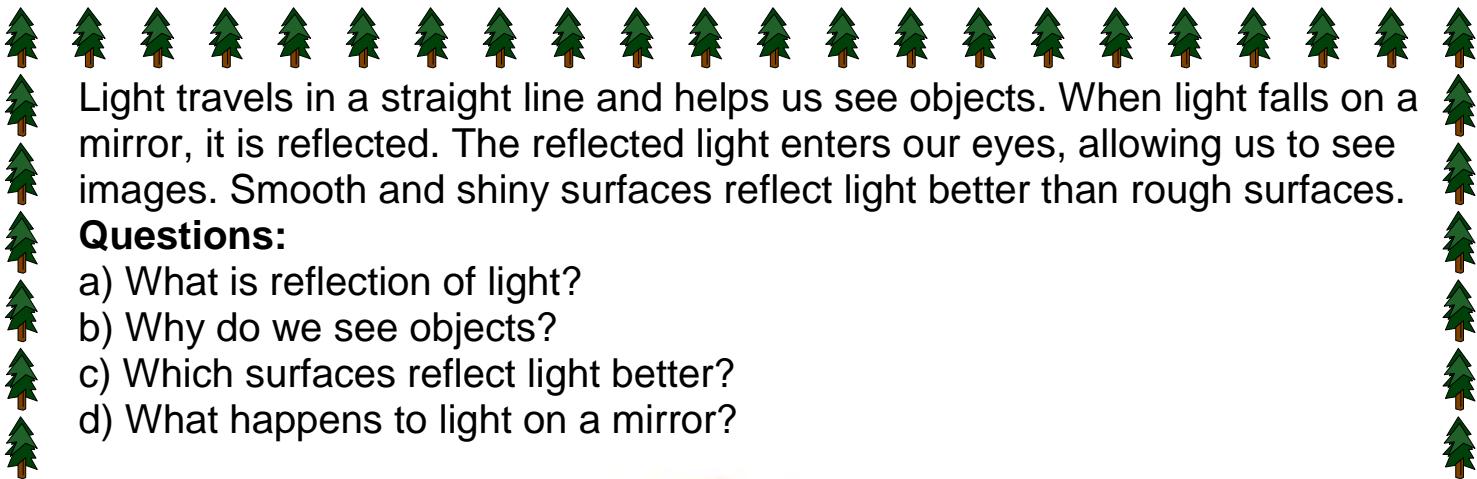
Light travels in a straight line and helps us see objects. When light falls on a mirror, it is reflected. The reflected light enters our eyes, allowing us to see images. Smooth and shiny surfaces reflect light better than rough surfaces.

Questions:
a) What is reflection of light?
b) Why do we see objects?
c) Which surfaces reflect light better?
d) What happens to light on a mirror?
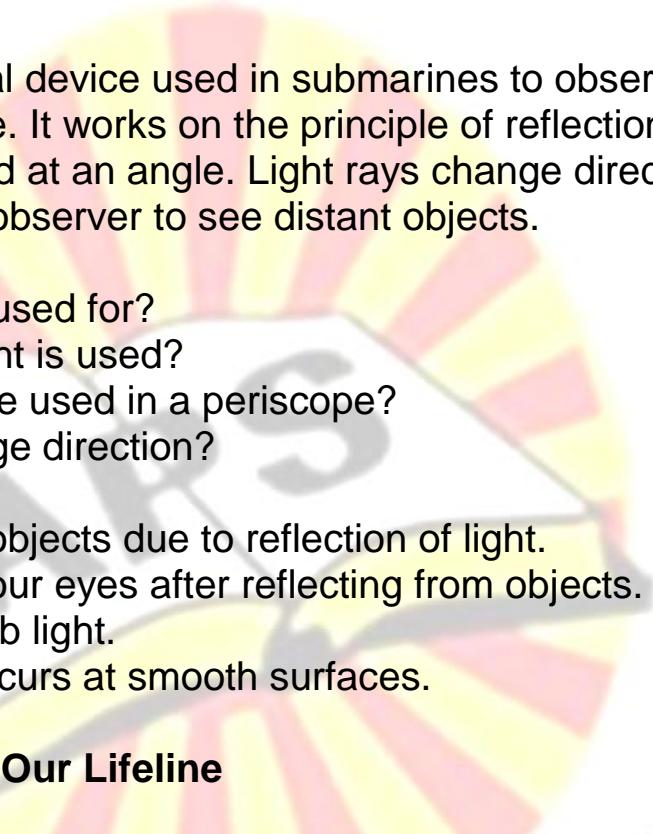
Case Study – 2

A periscope is an optical device used in submarines to observe objects above the water surface. It works on the principle of reflection of light using two plane mirrors placed at an angle. Light rays change direction after reflection, allowing the observer to see distant objects.

Questions:
a) What is a periscope used for?
b) Which property of light is used?
c) How many mirrors are used in a periscope?
d) Why does light change direction?

Assertion–Reason
1. A: We can see objects due to reflection of light.
   R: Light enters our eyes after reflecting from objects.
2. A: Mirrors absorb light.
   R: Reflection occurs at smooth surfaces.

Chapter 12: Forests – Our Lifeline
Case Study – 1

Forests are home to many plants and animals. They provide oxygen, prevent soil erosion, and help in maintaining the balance of gases in the atmosphere. Forests also supply food, wood, and medicines. Destruction of forests disturbs the natural balance and affects living organisms.

Questions:
a) Name two benefits of forests.
b) How do forests prevent soil erosion?
c) Why are forests called lifelines?
d) What happens due to deforestation?

Case Study – 2

In forests, plants and animals are connected through food chains and food webs. Plants are producers, while animals depend on plants or other

animals for food. Any imbalance in the forest ecosystem affects all living organisms.

Questions:

a) What is a food chain?

b) Who are producers in forests?

c) Why are animals dependent on plants?

d) Why is balance important in forests?

Assertion–Reason

1. A: Forests help maintain ecological balance.

    R: Living organisms in forests are interdependent.

2. A: Deforestation affects rainfall.

    R: Trees are part of the water cycle.

Chapter 13: Wastewater Story

Case Study – 1

Wastewater from homes contains human waste, food particles, soap, and chemicals. If released untreated into rivers, it causes water pollution and spreads diseases. Therefore, wastewater must be treated in sewage treatment plants before being released into the environment.

Questions:

a) What is wastewater?

b) Name two components of wastewater.

c) Why is untreated wastewater harmful?

d) Where is wastewater treated?

Case Study – 2

Sewage treatment plants clean wastewater using physical, biological, and chemical processes. This reduces harmful substances and germs. Treated water can be released into rivers safely, helping protect aquatic life and human health.

Questions:

a) What is the function of a sewage treatment plant?

b) Name one treatment method used.

c) Why is treated water safer?

d) How does treatment protect the environment?

Assertion–Reason

1. A: Untreated sewage is harmful to health.

    R: It contains harmful microorganisms.

2. A: Sewage treatment reduces water pollution.

    R: Harmful substances are removed during treatment.
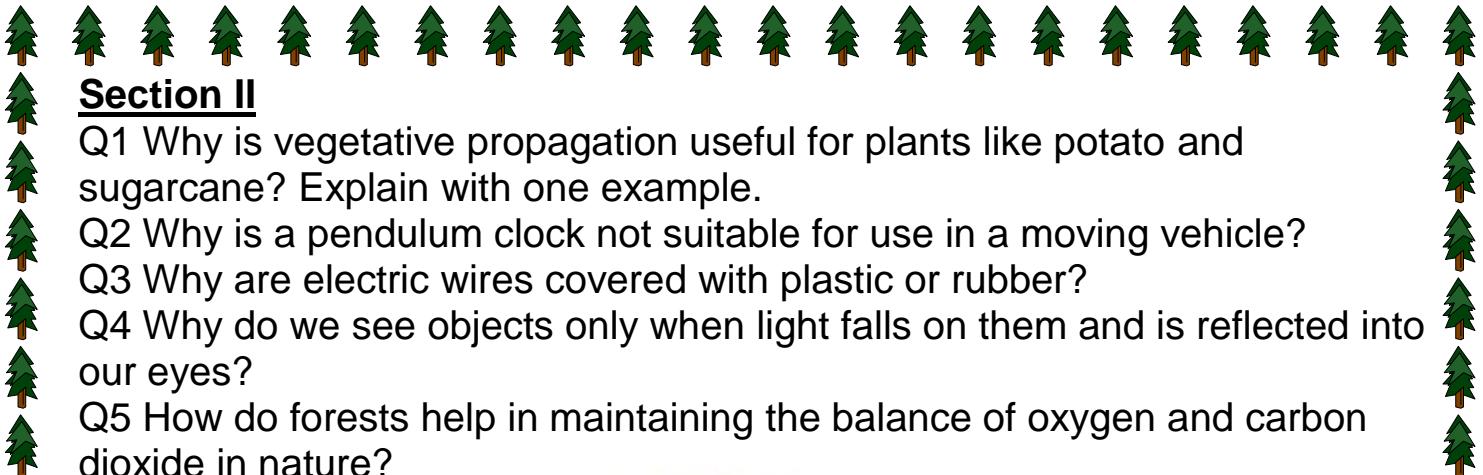
Section II

Q1 Why is vegetative propagation useful for plants like potato and sugarcane? Explain with one example.

Q2 Why is a pendulum clock not suitable for use in a moving vehicle?

Q3 Why are electric wires covered with plastic or rubber?

Q4 Why do we see objects only when light falls on them and is reflected into our eyes?

Q5 How do forests help in maintaining the balance of oxygen and carbon dioxide in nature?

Q6 Why is untreated sewage harmful to aquatic life?

Q7 Explain the difference between self-pollination and cross-pollination.

Q8 Salma takes 15 minutes from her house to reach her school on a bicycle. If the bicycle has a speed of 2 m/s, calculate the distance between her house and the school.

Q9 Draw the circuit diagram which contains a battery of 5 cells, one switch, one bulb, one electromagnet, one fan and connecting wires.

Q10 What is a virtual image? Give one situation where a virtual image is formed.

Section III

Read chapters 8,9,10,11,12 and 13; find out 3 short answer question from each chapter different from that written in book and notebook.

Social Science

Assignment (Chapter 5: - Tribes Nomads and Settled Communities)

1. *Book written by Abul Fazl* – Akbarnama
2. *Tribal people worship nature* – Animism
3. *People who move from place to place* – Nomads
4. *Shifting cultivation is also called* – Jhum
5. *A famous tribe of Punjab region* – Baloch
6. *The Ahom tribe lived in present-day* – Assam
7. *Tribes living in forests were called* – Adivasis
8. *People who lived by hunting and gathering* – Hunter-gatherers
9. *Nomads who reared animals* – Pastoralists
10. *The leader of a tribal group* – Chief
11. *The Gond kingdom was located in* – Central India
12. *British introduced forest laws in the* – 19th century
13. *The word 'tribe' refers to a group with common* – Culture
14. *The Santhals mainly lived in* – Jharkhand
15. *Settled farmers lived in* – Villages

16. *Tribal societies had no written* – Laws
17. *People dependent on animals for livelihood* – Pastoral nomads
18. *The Mughal emperor during Gond rule* – Akbar
19. *Tribal communities spoke their own* – Languages
20. *The main occupation of settled communities* – Agriculture

Chapter - "Eighteenth-Century Political Formations"

A. Assertion–Reason Questions (5)

Q1. Assertion (A): The Mughal Empire declined in the 18th century.

Reason (R): Weak successors of Aurangzeb could not control the empire.

Q2. Assertion (A): The Marathas became a powerful political force in India.

Reason (R): They followed a policy of expansion and collected Chauth.

Q3. Assertion (A): Hyderabad emerged as an independent state.

Reason (R): The Nizam declared independence from Mughal control.

Q4. Assertion (A): Bengal was a prosperous region in the 18th century.

Reason (R): It had rich agriculture and flourishing trade.

Q5. Assertion (A): The Sikh misls played an important role in Punjab.

Reason (R): They united under Maharaja Ranjit Singh later.

B. One-Word Question Answers (15)

1. The last powerful Mughal emperor – *Aurangzeb*
2. Tax collected by Marathas – *Chauth*
3. Founder of Hyderabad state – *Nizam-ul-Mulk*
4. Capital of Awadh – *Lucknow*
5. Founder of Awadh – *Saadat Khan*
6. Ruler of Bengal called – *Nawab*
7. Sikh military groups – *Misls*
8. Maratha administrative head – *Peshwa*
9. Capital of Maratha power – *Pune*
10. Founder of Sikh kingdom – *Maharaja Ranjit Singh*
11. Region ruled by Rajputs – *Rajasthan*
12. Mughal governor turned independent in Bengal – *Murshid Quli Khan*
13. Maratha tax on non-Maratha areas – *Chauth*
14. Powerful state in the Deccan – *Hyderabad*
15. Century discussed in this chapter – *Eighteenth*

Project work

Layers of atmosphere (using 3D model)

World Ozone Day

The Mughal Empire (timeline of Mughal rulers with pictures and key achievements)

Creative activity
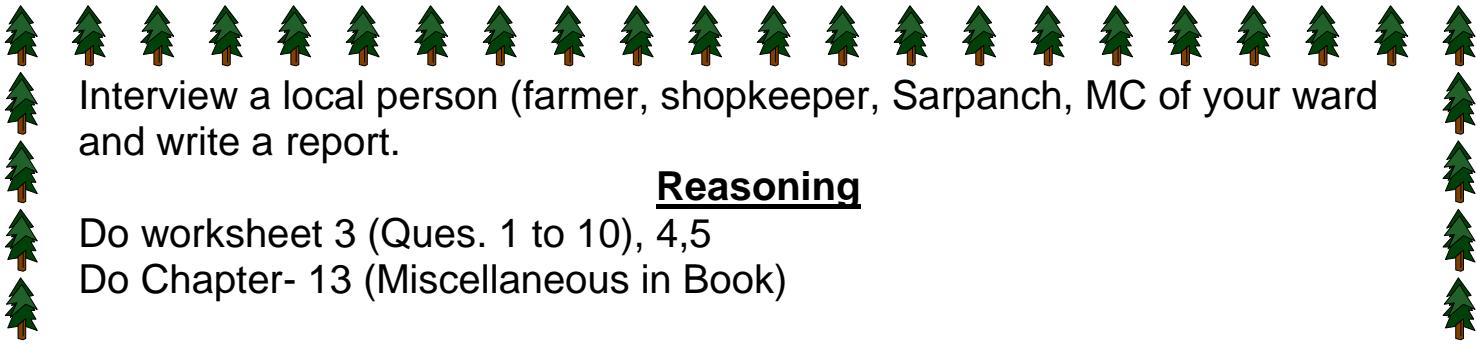
Interview a local person (farmer, shopkeeper, Sarpanch, MC of your ward and write a report.

Reasoning

Do worksheet 3 (Ques. 1 to 10), 4,5
Do Chapter- 13 (Miscellaneous in Book)

Sanskrit

पाठ –**7,9 ,10 ,11,12, 13** अभ्यास सहित याद करो और अभ्यास लिखकर देखें।
धातु –भू,लिख्,हस् लिखो और याद करो।
शब्द रूप –अस्मद्,युष्मद्, छात्र और पुष्प शब्द रूप लिखो।
प्रार्थना पत्र –**1** से **5** तक लिखो और याद करो।
सूर्य मंत्र और महामृत्युंजय मंत्र याद करे और अर्थ सहित लिखें (**A4** साइज पर लिखो)

Computer

Chapter- 5,6,7,8.
Write the 20 very short question/answer in the given Chapters.
Activity work: - Make a PPT on Computer which explains each part of it.