

APS

Aff. No. - 531572
Aff. to C.B.S.E. New Delhi
Delhi Road, Near Flyover, Ch. Dadri
Mob.8708451933, 9991038930 | apsdadri@gmail.com
SR. SEC. SCHOOL



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

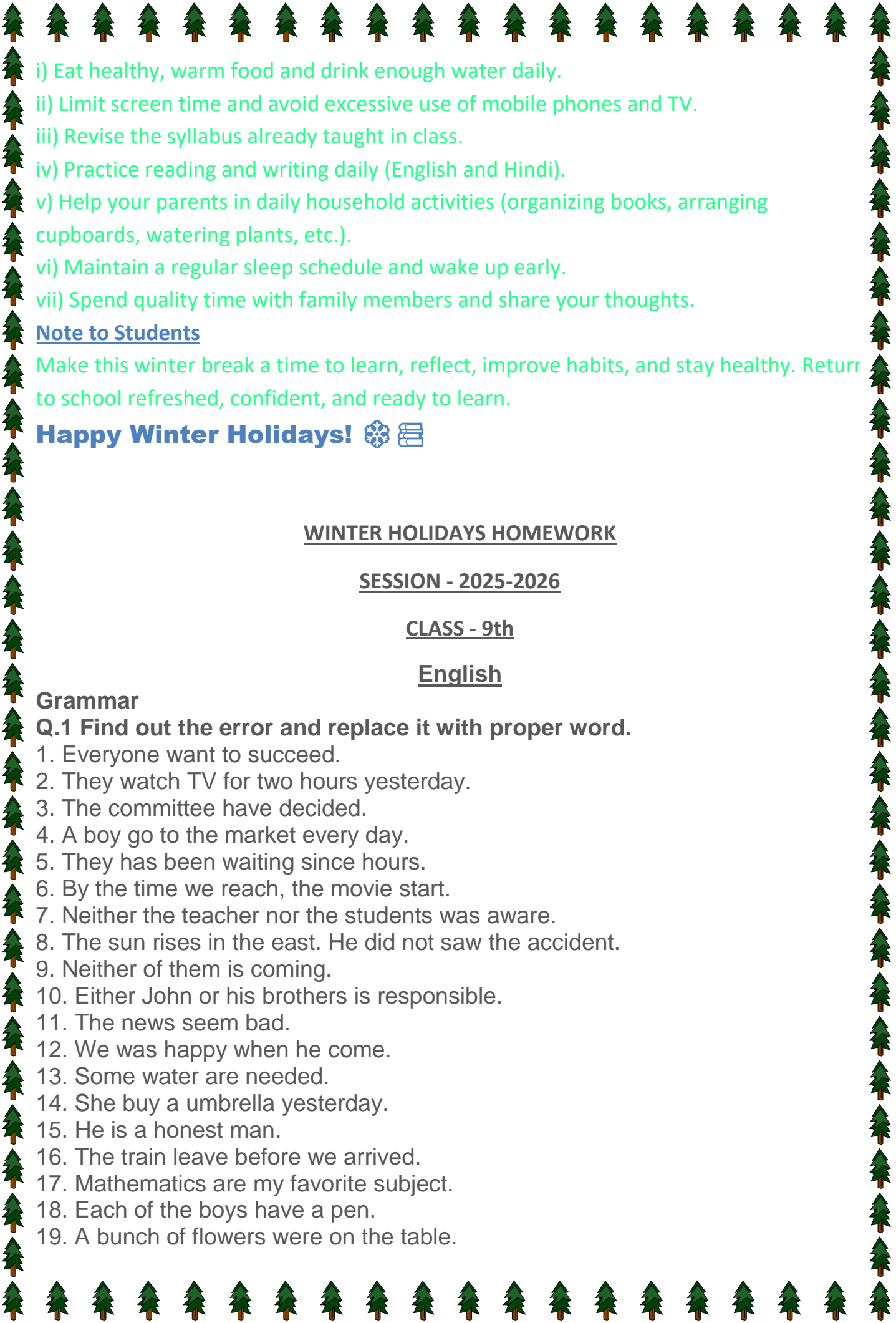
Engage in indoor or outdoor games suitable for winter. Keep yourself active and maintain healthy routine.

➤ 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

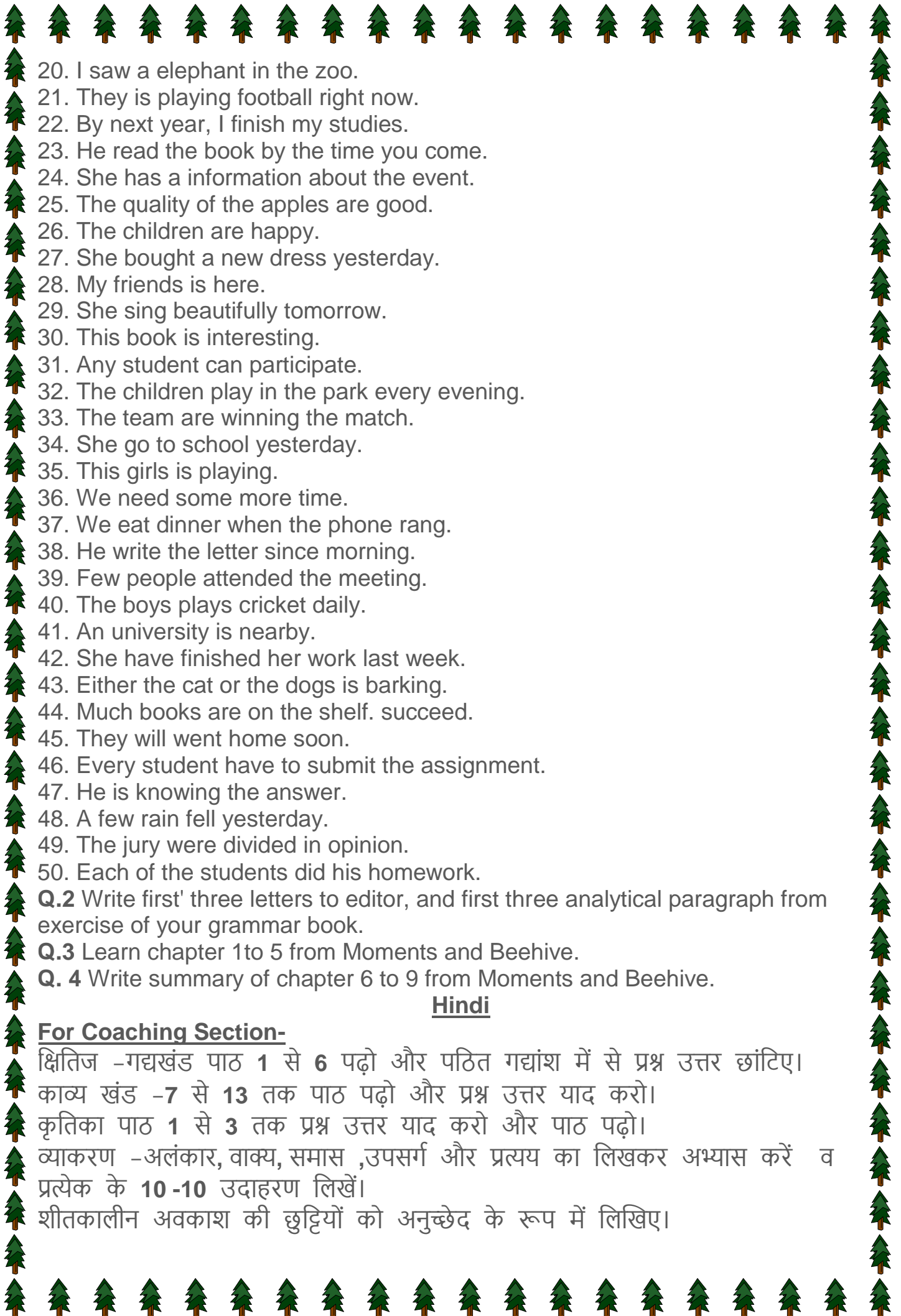
CLASS - 9th

English

Grammar

Q.1 Find out the error and replace it with proper word.

1. Everyone want to succeed.
2. They watch TV for two hours yesterday.
3. The committee have decided.
4. A boy go to the market every day.
5. They has been waiting since hours.
6. By the time we reach, the movie start.
7. Neither the teacher nor the students was aware.
8. The sun rises in the east. He did not saw the accident.
9. Neither of them is coming.
10. Either John or his brothers is responsible.
11. The news seem bad.
12. We was happy when he come.
13. Some water are needed.
14. She buy a umbrella yesterday.
15. He is a honest man.
16. The train leave before we arrived.
17. Mathematics are my favorite subject.
18. Each of the boys have a pen.
19. A bunch of flowers were on the table.



20. I saw a elephant in the zoo.

21. They is playing football right now.

22. By next year, I finish my studies.

23. He read the book by the time you come.

24. She has a information about the event.

25. The quality of the apples are good.

26. The children are happy.

27. She bought a new dress yesterday.

28. My friends is here.

29. She sing beautifully tomorrow.

30. This book is interesting.

31. Any student can participate.

32. The children play in the park every evening.

33. The team are winning the match.

34. She go to school yesterday.

35. This girls is playing.

36. We need some more time.

37. We eat dinner when the phone rang.

38. He write the letter since morning.

39. Few people attended the meeting.

40. The boys plays cricket daily.

41. An university is nearby.

42. She have finished her work last week.

43. Either the cat or the dogs is barking.

44. Much books are on the shelf. succeed.

45. They will went home soon.

46. Every student have to submit the assignment.

47. He is knowing the answer.

48. A few rain fell yesterday.

49. The jury were divided in opinion.

50. Each of the students did his homework.

Q.2 Write first' three letters to editor, and first three analytical paragraph from exercise of your grammar book.

Q.3 Learn chapter 1to 5 from Moments and Beehive.

Q. 4 Write summary of chapter 6 to 9 from Moments and Beehive.

Hindi

For Coaching Section-

क्षितिज -गद्यखंड पाठ 1 से 6 पढ़ो और पठित गद्यांश में से प्रश्न उत्तर छांटिए।

काव्य खंड -7 से 13 तक पाठ पढ़ो और प्रश्न उत्तर याद करो।

कृतिका पाठ 1 से 3 तक प्रश्न उत्तर याद करो और पाठ पढ़ो।

व्याकरण -अलंकार, वाक्य, समास ,उपसर्ग और प्रत्यय का लिखकर अभ्यास करें व प्रत्येक के 10-10 उदाहरण लिखें।

शीतकालीन अवकाश की छुट्टियों को अनुच्छेद के रूप में लिखिए।

*अवकाश के दौरान आप किसी पर्वतीय स्थल पर गए हैं, उसे लघु कथा के रूप में लिखिए।

*सबसे अधिक ठंड वाले दिन को संवाद के रूप में लिखिए।

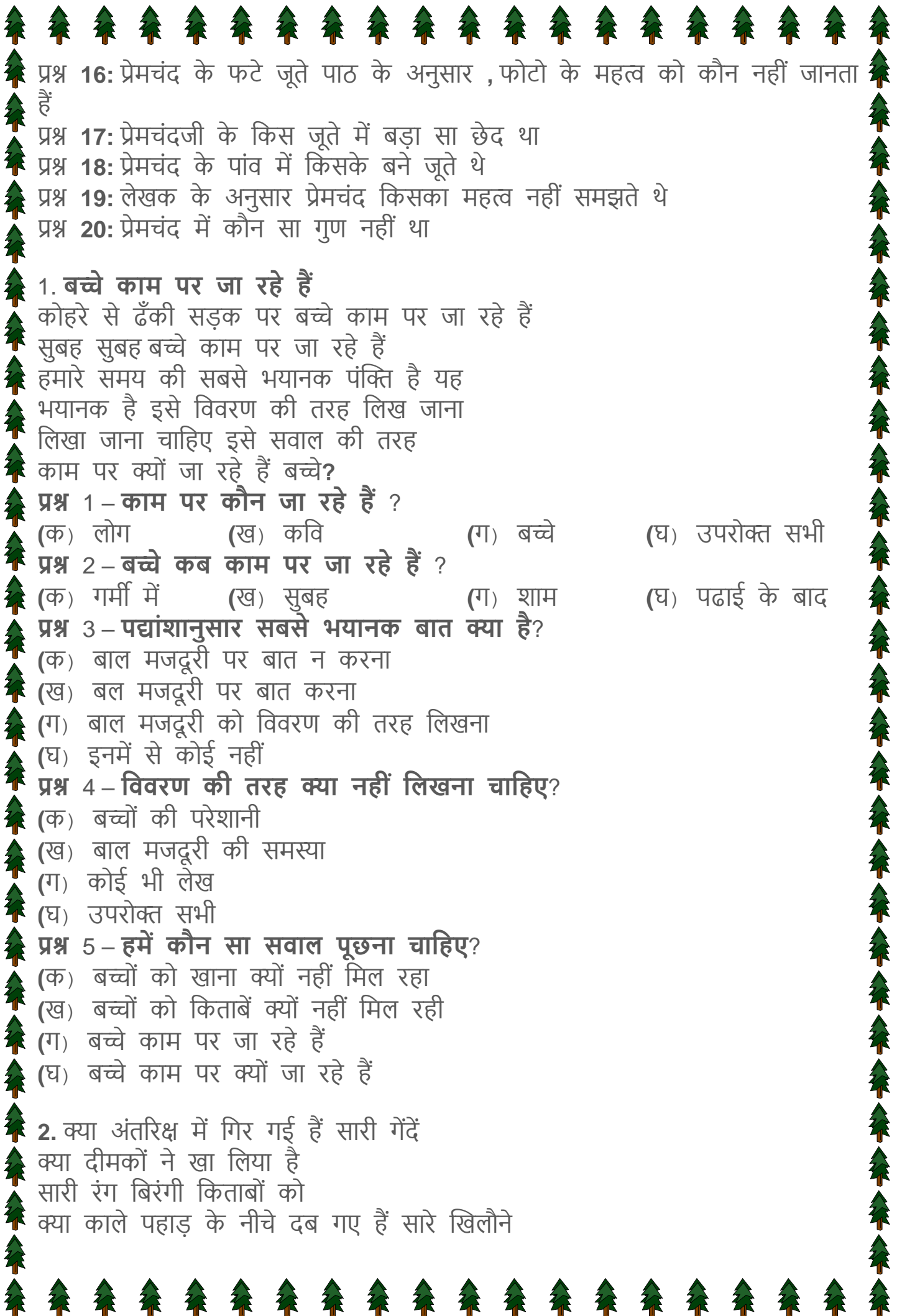
For Non-Coaching Section-

महादेवी वर्मा

- 1) प्रश्न: लेखिका के समय में लड़कियों की क्या स्थिति थी?
- 2) प्रश्न: लेखिका ने अपनी माँ के बारे में क्या बताया है?
- 3) प्रश्न: लेखिका उर्दू-फ़ारसी क्यों नहीं सीख पाई?
- 4) प्रश्न: छात्रावास के जीवन में लेखिका को क्या अनुभव हुआ?
- 5) प्रश्न: लेखिका को काव्य प्रतियोगिता में क्या मिला और उसे देशहित में क्यों दिया?
- 6) आपके बचपन के बारे में सोचने के लिए कुछ प्रश्न (अभ्यास हेतु) :
- 7) आपके बचपन का सबसे पसंदीदा खेल कौन सा था और क्यों?
- 8) क्या आपके बचपन में कोई ऐसा दोस्त था, जिसने आपको कुछ नया सिखाया हो?
- 9) आपके परिवार में आपको कौन सी कहानी सबसे ज़्यादा पसंद थी?
- 10) आपके बचपन का कोई यादगार सफ़र या घटना बताएं.
- 11) आज और आपके बचपन के समय में लड़कियों की शिक्षा और स्थिति में क्या अंतर आया है?

प्रेमचंद के फटे जूते

- प्रश्न 1: “प्रेमचंद के फटे जूते” पाठ के लेखक कौन हैं
- प्रश्न 2: प्रेमचंदजी को किस नाम से जाना जाता है
- प्रश्न 3: “प्रेमचंद के फटे जूते” पाठ में , लेखक ने प्रेमचंदजी का कैसा चित्रण किया
- प्रश्न 4: प्रेमचंद किसके साथ फोटो खिंचवा रहे
- प्रश्न 5: प्रेमचंद की फोटो में उनके फटे जूते देखकर लेखक क्या सोचने लगते हैं
- प्रश्न 6: लेखक को फोटो में प्रेमचंद की मुस्कान कैसी लगती है
- प्रश्न 7: प्रेमचंदजी ने कैसे जूते पहन कर फोटो खिंचवाई
- प्रश्न 8: प्रेमचंदजी के कौन से पैर का जूता ठीक-ठाक था
- प्रश्न 9: प्रेमचंद के चेहरे पर कैसी मूछें थी
- प्रश्न 10: “अगर प्रेमचंद के पास फोटो खिंचवाने की ऐसी पोशाक है तो , उनके पास रोजमर्रा के जीवन में पहनने वाली पोशाक कैसी होगी” , यह कथन किसका है
- प्रश्न 11: इस पाठ में लेखक ने किसके सरल व सादगी पूर्ण व्यक्तित्व का वर्णन किया है
- प्रश्न 12: लेखक के अनुसार , प्रेमचंदजी कैसा जीवन जीते थे
- प्रश्न 13: “प्रेमचंद के फटे जूते” रचना को लिखने की प्रेरणा लेखक को कहां से प्राप्त हुई
- प्रश्न 14: फोटो देखते वक्त , लेखक की दृष्टि कहां जाकर अटक गई
- प्रश्न 15: प्रेमचंद के फटे जूते पाठ में वर्णित प्रेमचंद की कौन सी मुस्कान लेखक के हौसले पस्त कर देती है



प्रश्न 16: प्रेमचंद के फटे जूते पाठ के अनुसार , फोटो के महत्व को कौन नहीं जानता हैं

प्रश्न 17: प्रेमचंदजी के किस जूते में बड़ा सा छेद था

प्रश्न 18: प्रेमचंद के पांव में किसके बने जूते थे

प्रश्न 19: लेखक के अनुसार प्रेमचंद किसका महत्व नहीं समझते थे

प्रश्न 20: प्रेमचंद में कौन सा गुण नहीं था

1. बच्चे काम पर जा रहे हैं

कोहरे से ढँकी सड़क पर बच्चे काम पर जा रहे हैं

सुबह सुबह बच्चे काम पर जा रहे हैं

हमारे समय की सबसे भयानक पंक्ति है यह

भयानक है इसे विवरण की तरह लिख जाना

लिखा जाना चाहिए इसे सवाल की तरह

काम पर क्यों जा रहे हैं बच्चे?

प्रश्न 1 – काम पर कौन जा रहे हैं ?

(क) लोग (ख) कवि (ग) बच्चे (घ) उपरोक्त सभी

प्रश्न 2 – बच्चे कब काम पर जा रहे हैं ?

(क) गर्मी में (ख) सुबह (ग) शाम (घ) पढ़ाई के बाद

प्रश्न 3 – पद्यांशानुसार सबसे भयानक बात क्या है?

(क) बाल मजदूरी पर बात न करना

(ख) बल मजदूरी पर बात करना

(ग) बाल मजदूरी को विवरण की तरह लिखना

(घ) इनमें से कोई नहीं

प्रश्न 4 – विवरण की तरह क्या नहीं लिखना चाहिए?

(क) बच्चों की परेशानी

(ख) बाल मजदूरी की समस्या

(ग) कोई भी लेख

(घ) उपरोक्त सभी

प्रश्न 5 – हमें कौन सा सवाल पूछना चाहिए?

(क) बच्चों को खाना क्यों नहीं मिल रहा

(ख) बच्चों को किताबें क्यों नहीं मिल रही

(ग) बच्चे काम पर जा रहे हैं

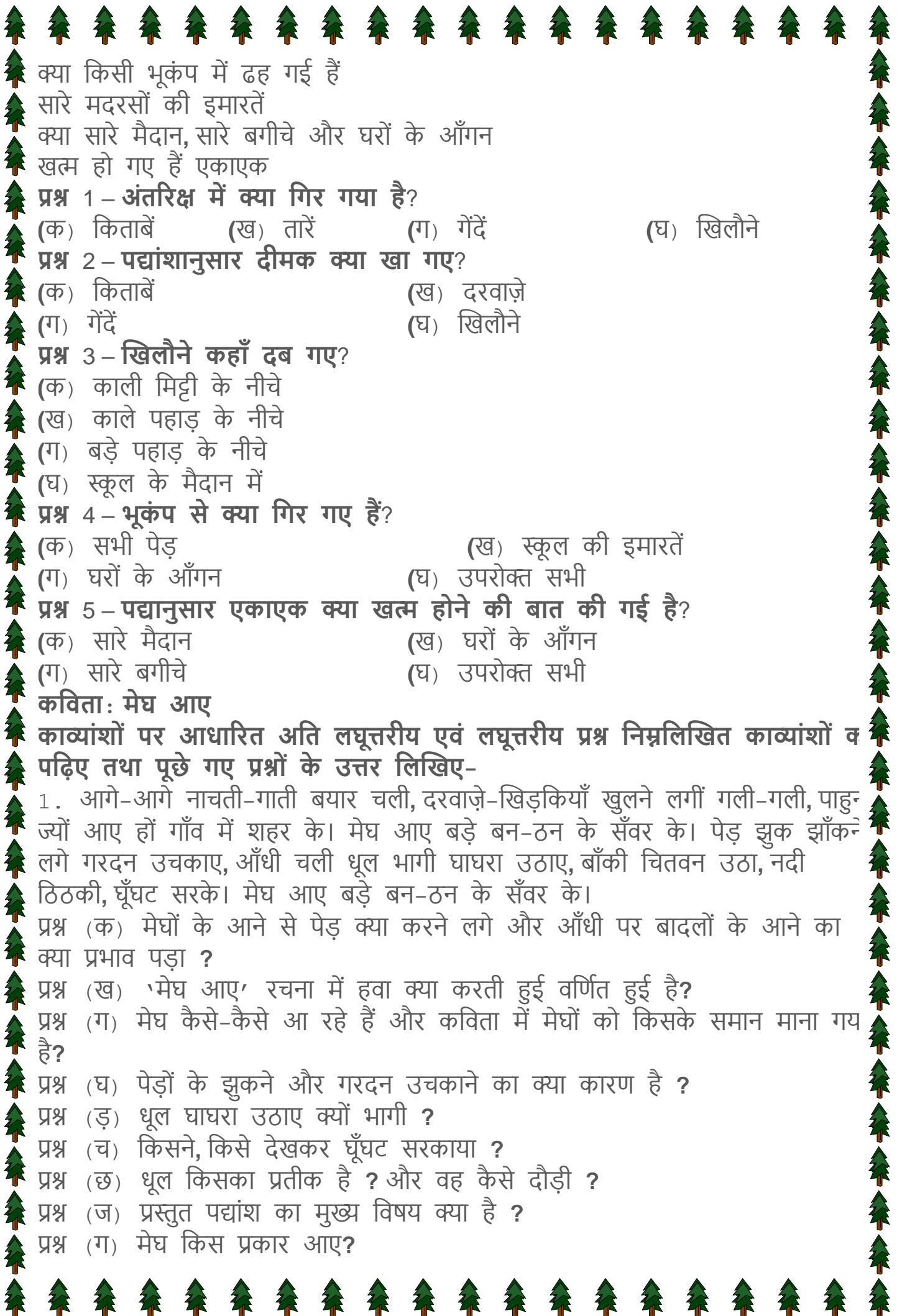
(घ) बच्चे काम पर क्यों जा रहे हैं

2. क्या अंतरिक्ष में गिर गई हैं सारी गेंदें

क्या दीमकों ने खा लिया है

सारी रंग बिरंगी किताबों को

क्या काले पहाड़ के नीचे दब गए हैं सारे खिलौने



क्या किसी भूकंप में ढह गई हैं
सारे मदरसों की इमारतें
क्या सारे मैदान, सारे बगीचे और घरों के आँगन
खत्म हो गए हैं एकाएक

प्रश्न 1 – अंतरिक्ष में क्या गिर गया है?

(क) किताबें (ख) तारें (ग) गेंदें (घ) खिलौने

प्रश्न 2 – पद्यांशानुसार दीमक क्या खा गए?

(क) किताबें (ख) दरवाज़े
(ग) गेंदें (घ) खिलौने

प्रश्न 3 – खिलौने कहाँ दब गए?

(क) काली मिट्टी के नीचे
(ख) काले पहाड़ के नीचे
(ग) बड़े पहाड़ के नीचे
(घ) स्कूल के मैदान में

प्रश्न 4 – भूकंप से क्या गिर गए हैं?

(क) सभी पेड़ (ख) स्कूल की इमारतें
(ग) घरों के आँगन (घ) उपरोक्त सभी

प्रश्न 5 – पद्यानुसार एकाएक क्या खत्म होने की बात की गई है?

(क) सारे मैदान (ख) घरों के आँगन
(ग) सारे बगीचे (घ) उपरोक्त सभी

कविता: मेघ आए

काव्यांशों पर आधारित अति लघूत्तरीय एवं लघूत्तरीय प्रश्न निम्नलिखित काव्यांशों व पढ़िए तथा पूछे गए प्रश्नों के उत्तर लिखिए-

1. आगे-आगे नाचती-गाती बयार चली, दरवाज़े-खिड़कियाँ खुलने लगीं गली-गली, पाहुन
ज्यों आए हों गाँव में शहर के। मेघ आए बड़े बन-ठन के सँवर के। पेड़ झुक झाँकने
लगे गरदन उचकाए, आँधी चली धूल भागी घाघरा उठाए, बाँकी चितवन उठा, नदी
ठिठकी, घूँघट सरके। मेघ आए बड़े बन-ठन के सँवर के।

प्रश्न (क) मेघों के आने से पेड़ क्या करने लगे और आँधी पर बादलों के आने का क्या प्रभाव पड़ा ?

प्रश्न (ख) 'मेघ आए' रचना में हवा क्या करती हुई वर्णित हुई है?

प्रश्न (ग) मेघ कैसे-कैसे आ रहे हैं और कविता में मेघों को किसके समान माना गया है?

प्रश्न (घ) पेड़ों के झुकने और गरदन उचकाने का क्या कारण है ?

प्रश्न (ङ) धूल घाघरा उठाए क्यों भागी ?

प्रश्न (च) किसने, किसे देखकर घूँघट सरकाया ?

प्रश्न (छ) धूल किसका प्रतीक है ? और वह कैसे दौड़ी ?

प्रश्न (ज) प्रस्तुत पद्यांश का मुख्य विषय क्या है ?

प्रश्न (ग) मेघ किस प्रकार आए?

व्याकरण

सूचना लेखन

प्रश्न- 1. आप केंद्रीय विद्यालय जलवायु विहार दिल्ली की सांस्कृतिक इकाई के सचिव प्रत्यूष/प्रत्यूषा हैं। आपके विद्यालय में स्वतंत्रता दिवस की पूर्व संध्या पर देशभक्ति पूर्ण कविताओं का पाठ किया जाना है जिसमें शहर के प्रसिद्ध कवि पधार रहे हैं। इसमें छात्र-छात्राओं के अभिभावक भी सादर आमंत्रित हैं। इस संबंध में एक सूचना आलेखन कीजिए।

प्रश्न-2 आपके विद्यालय ने गरीब छात्र-छात्राओं को निःशुल्क पुस्तकें वितरित करने का निर्णय किया है। जिन छात्र-छात्राओं के माता-पिता की वार्षिक आय एक लाख रुपये तक है, वे ही इसके पात्र हैं। इसकी सूचना देने के लिए एक आलेख तैयार कीजिए। आप छात्र कल्याण समिति के सदस्य अभिनव हैं।

रचनात्मक लेखन

अनुच्छेद लेखन

- 1) पर्वतीय सौंदर्य
- 2) ग्लोबल वार्मिंग
- 3) शिक्षा में खेलकूद का महत्व

अलंकार

अनुप्रास अलंकार, यमक अलंकार, रूपक अलंकार ,उपमा अलंकार के 10-10 उदाहरण लिखो व याद करो (ए-4सीट पर)

समास

समास के भेदों के 10 -10 उदाहरण लिखकर (A4 सीट पर) लिखते हुए चित्र भी बनाएँ।

उपसर्ग और प्रत्यय के सभी उदाहरण याद कीजिएगा।

Mathematics

For Coaching Section-

Solve Chapter 4 to 13 from R.D. Sharma.

Solve 50 Questions from Resonance every day.

Learn all identities.

For Non- Coaching Section-

Solve worksheet of chapter- Co-ordinate Geometry, Polynomial, Surface Area and Volume.

Write the history of Pi (π) on. A4 size sheet.

Write the properties of quadrilateral.

Science

Class- 9th (Coaching & Venus)

Physics

Chapter 1: Motion

1. Define uniform and non-uniform motion with one example each.

2. Derive the three equations of motion by graphical method.

3. A car starts from rest and accelerates uniformly at 2 m/s^2 . Find the distance travelled in 5 s.

4. A body moving with uniform acceleration covers 40 m in 4 s. Find its acceleration if initial velocity is 2 m/s .

Chapter 2: Force and Laws of Motion

1. State and explain Newton's three laws of motion.

2. Derive the relation $F = ma$

3. A force of 10 N produces an acceleration of 2 m/s^2 in a body. Find the mass of the body.

Chapter 3: Gravitation

1. State Newton's law of gravitation and write its mathematical form.

2. Derive the expression for acceleration due to gravity on the surface of Earth.

3. Calculate the gravitational force between two masses of 5 kg and 10 kg kept 2 m apart.

Chapter 4: Work and Energy

1. State and explain the law of conservation of energy.

2. Derive the expression for kinetic energy.

3. A body of mass 4 kg is moving with a velocity of 5 m/s . Calculate its kinetic energy.

Chapter 5: Sound

1. Define amplitude, frequency and time period of a sound wave.

2. Explain the relation between frequency and pitch.

3. A sound wave has a frequency of 200 Hz and wavelength 1.7 m. Calculate its speed.

Note: Solve all the questions in your fair notebook

Chemistry

Section I (Case Study Questions, Reason and Assertion)

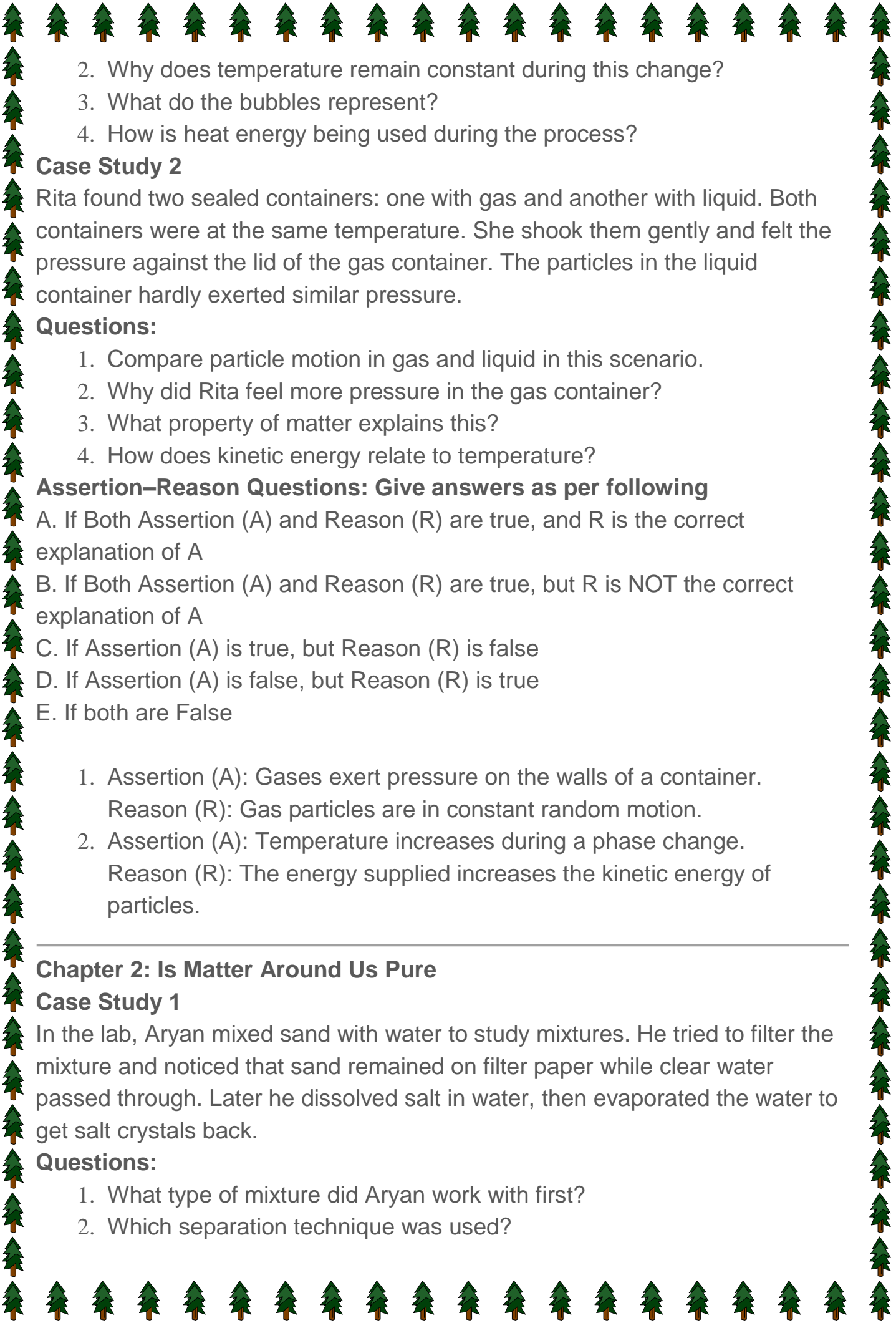
Chapter 1: Matter in Our Surroundings

Case Study 1

A student observed ice melting in a beaker at room temperature. As the ice changed to water, she measured temperature every minute and found that the temperature remained constant during the phase change even though energy was supplied. She also noticed bubbles forming in water when heated further.

Questions:

1. What type of change is occurring from ice to water?

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2. Why does temperature remain constant during this change?
 3. What do the bubbles represent?
 4. How is heat energy being used during the process?

Case Study 2

Rita found two sealed containers: one with gas and another with liquid. Both containers were at the same temperature. She shook them gently and felt the pressure against the lid of the gas container. The particles in the liquid container hardly exerted similar pressure.

Questions:

1. Compare particle motion in gas and liquid in this scenario.
2. Why did Rita feel more pressure in the gas container?
3. What property of matter explains this?
4. How does kinetic energy relate to temperature?

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. Assertion (A): Gases exert pressure on the walls of a container.
Reason (R): Gas particles are in constant random motion.
2. Assertion (A): Temperature increases during a phase change.
Reason (R): The energy supplied increases the kinetic energy of particles.

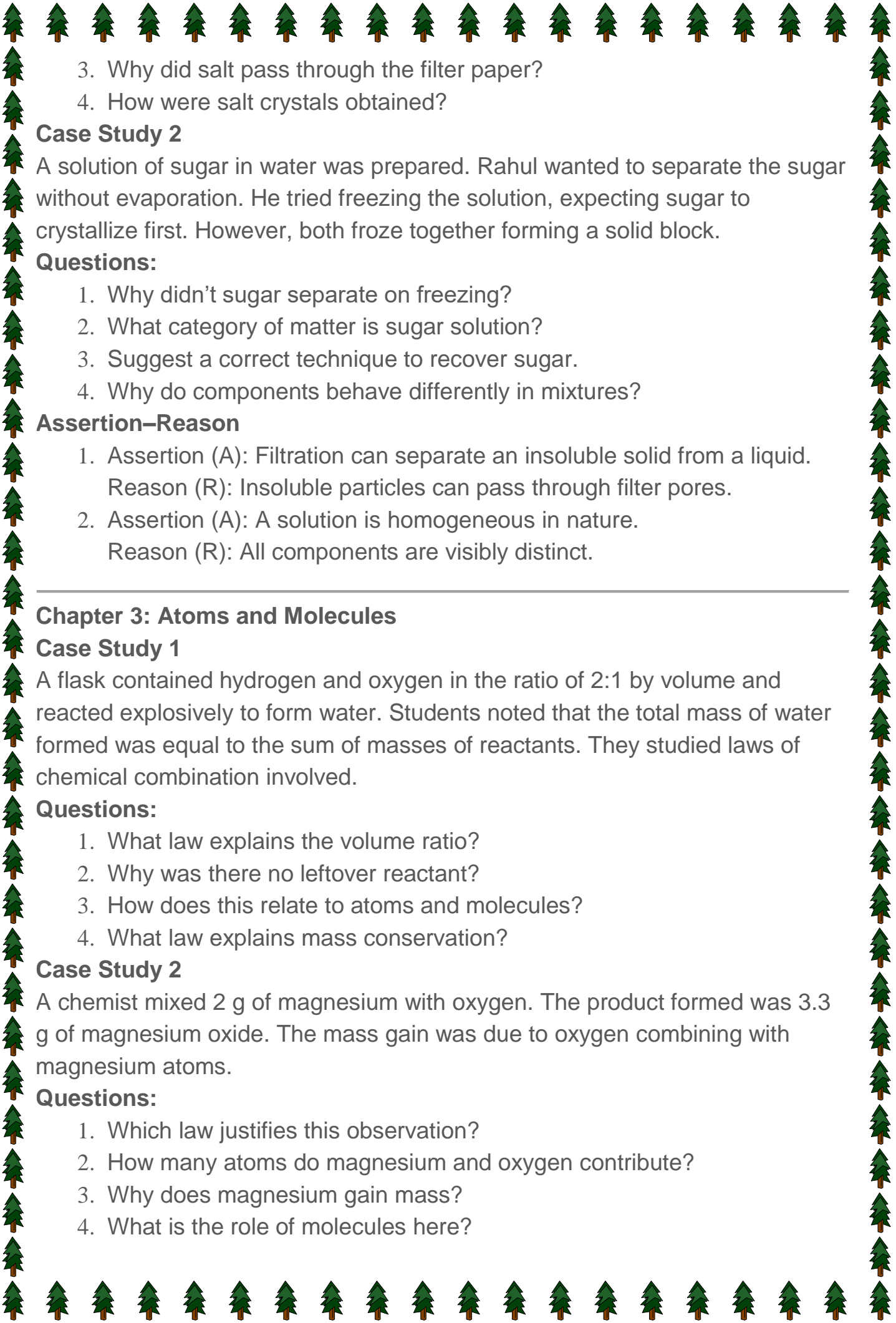
Chapter 2: Is Matter Around Us Pure

Case Study 1

In the lab, Aryan mixed sand with water to study mixtures. He tried to filter the mixture and noticed that sand remained on filter paper while clear water passed through. Later he dissolved salt in water, then evaporated the water to get salt crystals back.

Questions:

1. What type of mixture did Aryan work with first?
2. Which separation technique was used?

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3. Why did salt pass through the filter paper?
 4. How were salt crystals obtained?

Case Study 2

A solution of sugar in water was prepared. Rahul wanted to separate the sugar without evaporation. He tried freezing the solution, expecting sugar to crystallize first. However, both froze together forming a solid block.

Questions:

1. Why didn't sugar separate on freezing?
2. What category of matter is sugar solution?
3. Suggest a correct technique to recover sugar.
4. Why do components behave differently in mixtures?

Assertion–Reason

1. Assertion (A): Filtration can separate an insoluble solid from a liquid.
Reason (R): Insoluble particles can pass through filter pores.
 2. Assertion (A): A solution is homogeneous in nature.
Reason (R): All components are visibly distinct.
-

Chapter 3: Atoms and Molecules

Case Study 1

A flask contained hydrogen and oxygen in the ratio of 2:1 by volume and reacted explosively to form water. Students noted that the total mass of water formed was equal to the sum of masses of reactants. They studied laws of chemical combination involved.

Questions:

1. What law explains the volume ratio?
2. Why was there no leftover reactant?
3. How does this relate to atoms and molecules?
4. What law explains mass conservation?

Case Study 2

A chemist mixed 2 g of magnesium with oxygen. The product formed was 3.3 g of magnesium oxide. The mass gain was due to oxygen combining with magnesium atoms.

Questions:

1. Which law justifies this observation?
2. How many atoms do magnesium and oxygen contribute?
3. Why does magnesium gain mass?
4. What is the role of molecules here?



Assertion–Reason

1. Assertion (A): Total mass remains constant in a chemical reaction.
Reason (R): Atoms are neither created nor destroyed.
 2. Assertion (A): Dalton's atomic theory explains fixed ratios.
Reason (R): Atoms combine in simple whole-number ratios.
-

Chapter 4: Structure of the Atom

Case Study 1

In Rutherford's experiment, most alpha particles passed through the gold foil undeflected while some deflected at large angles. This led scientists to believe that most of the atom is empty space with a dense central nucleus.

Questions:

1. What model was disproved by this experiment?
2. What conclusion about atom structure was drawn?
3. Why did only some particles deflect?
4. Explain the nucleus significance.

Case Study 2

Electrons were discovered through cathode ray experiments showing negatively charged rays. Scientists concluded that particles smaller than atoms exist.

Questions:

1. What did cathode rays indicate?
2. How did charge affect the conclusion?
3. Name the particle discovered.
4. How did this change atomic model?

Assertion–Reason

1. Assertion (A): Most space in atom is empty.
Reason (R): Nucleus contains most mass.
2. Assertion (A): Electrons are part of atom's structure.
Reason (R): Cathode rays travel straight in absence of field.

Section II

Q3. When 3.0 g of carbon is burnt in 8.00 g oxygen, 11.00 g of carbon dioxide is produced. What mass of carbon dioxide will be formed when 3.00 g of carbon is burnt in 50.00 g of oxygen? Which law of chemical combination will govern your answer?

Q4. A 0.24 g sample of compound of oxygen and boron was found by analysis to contain 0.096 g of boron and 0.144 g of oxygen. Calculate the percentage composition of the compound by weight.

Q5. Explain with examples (i) Atomic number, (ii) Mass number, (iii) Isotopes and iv) Isobars. Give any two uses of isotopes.

Q6. Summarise the rules for writing of distribution of electrons in various shells for the first eighteen elements.

Biology

(Assignment -1)

Cell: Fundamental unit of life 🐞

Direction: In each of the following questions, a statement of Assertion is given and a corresponding statement of Reason is given just below it. of the statements, given below, mark the correct answer as:

(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) Both Assertion and Reason are false.

Q1: Assertion: A cell swells up when present in a hypotonic solution. Reason: More water molecules enter the cell than they leave

Q2: Assertion: Mitochondria and chloroplasts are semiautonomous organelles. Reason: They are formed by division of pre-existing organelles and contain DNA but lack protein synthesizing machinery.

Q3: Assertion: Leucoplasts perform photosynthesis.

Reason: Chloroplasts store fats, starch and proteins.

Q4: Assertion: A cell membrane shows fluid behaviour. Reason: A membrane is a mosaic of lipids and proteins

Q5: Assertion: Mitochondria are called 'powerhouses' of the cell. Reason: Mitochondria produce cellular energy in the form of ATP

Q6: Assertion: The endoplasmic reticulum which lacks ribosomes is called smooth endoplasmic reticulum (SER). Reason: SER is mainly involved in protein synthesis.

Q7: Assertion: Plasma membrane is selectively permeable. Reason: Plasma membrane allows some molecules to pass through it more easily than others.

Q8: Assertion: Cell wall is a non-living part of the cell. Reason: It offers protection, definite shape and support.

Q9: Assertion: A plant cell bursts if placed in water. Reason: High turgor pressure causes bursting of plant cells.

Q10: Assertion: Plant cells have very large vacuoles. Reason: In plant cells, vacuoles are full of cell sap.

Case study-

Q-1. Diffusion is the process of movement of molecules under a concentration gradient. It is an important process occurring in all living beings. Diffusion helps in the movement of substances in and out of the cells. The molecules move from a region of higher concentration to a region of lower concentration until the concentration becomes equal throughout.

Read the given passage carefully and give the answer of the following questions:

Q 1. Name the process which is useful for the movement of substances like CO₂ and O₂ across the plasma membrane.

- a. Osmosis
- b. Diffusion
- c. Endocytosis
- d. Plasmolysis

Q 2. Osmosis is the diffusion of:

- a. Water
- b. Free energy
- c. Solute and solvent
- d. None of these

Q 3. Diffusion finally stops when:

- a. concentration of particles of one region becomes higher than the other.
- b. concentration of particles of one region becomes lower than the other.
- c. concentration of particles of two regions becomes the same.
- d. None of the above

Q 4. Which of the following statement defines hypertonic solutions?

- a. A solution that has a lesser concentration of solutes on the outside of a cell when compared with the inside of a cell.
- b. A solution that has a greater concentration of solutes on the outside of a cell when compared with the inside of a cell.
- c. A solution that has same concentration of solutes on the outside of a cell when compared with the inside of a cell.
- d. None of the above

Q 5. If the two solutions have same concentrations, they are said to be:

- a. Isotonic
- b. Hypertonic
- c. Hypotonic
- d. Dilute



(Assignment-2)

Tissue

Direction: In each of the following questions, a statement of Assertion is given and a corresponding statement of Reason is given just below it. of the statements, given below, mark the correct answer as:

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- (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) Both Assertion and Reason are false.

Q-1. Assertion (A): Epithelial tissues are tightly packed and form a protective barrier.

Reason (R): Epithelial tissues have a high rate of cell division to replace damaged cells.

2. Assertion (A): Connective tissues provide structural support to organs and tissues.

Reason (R): Connective tissues are mainly composed of cells that can contract and relax.

3. Assertion (A): Muscular tissues are specialized for contraction and movement.

Reason (R): Muscular tissues are composed of cells that can change shape and size.

4. Assertion (A): Nervous tissues are responsible for transmitting electrical impulses.

Reason (R): Nervous tissues are composed of cells called neurons.

5. Assertion (A): Meristematic tissues are found in the regions of the plant that grow.

Reason (R): Meristematic cells are specialized and have lost the ability to divide.

6. Assertion : The inner lining of intestine has tall epithelial cells.

Reason : Columnar epithelium facilitates absorption and secretion.

7. Assertion : Most of plant tissues are dead.

Reason : Due to sedentary existence of plants, dead cells provide mechanical strength more easily than live ones and need less maintenance.

8. Assertion (A): The epidermal cells of a plant root are non-specialized and do not have any specific function.

Reason (R): The root epidermal cells are a type of permanent tissue and are meant to absorb water from the soil.

9. Assertion (A): Bone  is a type of dense connective tissue.

Reason (R): The matrix of bone tissue is hard and non-pliable.

10. Assertion (A): The vascular tissue in plants is called complex tissue.

Reason (R): It is made of more than one type of cells, which work together as a unit.

Case study -

Q-1. A tissue is a group of cells having a similar origin along with intercellular material and performing a similar function. The different cells of a tissue are usually joined together. The microscopic study of tissues is called histology.

Depending upon the constitution, their structure and arrangement, tissues are of two types simple and complex (= compound).

A simple tissue is made up of only one type of cells while a complex tissue consists of two or more types of cells.

In animals such a distinction is not possible. Here, the tissues that make up the bulk of the animal body are called fundamental tissues.

Simple tissues of animals are of four types: Epithelial tissue, connective tissue, muscular tissue and nervous tissue.

Simple plant tissues are parenchyma, collenchyma, sclerenchyma and complex tissues are xylem and phloem.

(i) What is tissue?

- (a) Group of cells
- (b) Group of cells performing a definite function
- (c) Group of cells, similar or dissimilar and performing a definite function
- (d) An organ

(ii) Which of the following is a simple tissue?

- (a) Blood
- (b) Bone
- (c) A leaf
- (d) Both (a) and (b)

(iii) Which of the following is a complex tissue?

- (a) Phloem
- (b) Xylem
- (c) Sclerenchyma
- (d) Both (a) and (b)

(iv) Blood is a type of.....tissue.

- (a) Epithelial
- (b) Muscular
- (c) Connective
- (d) Nervous

(v) Function of phloem in plants is conduction of

- (a) Minerals
- (b) Water
- (c) Salts
- (d) Food

(Assignment -3)

(Improvement in food resources)

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Q1: Assertion: Inter cropping prevents pests.

Reason: Plant pests can be controlled biologically by their natural parasites and pathogens.

Q2: Assertion: Fish and few other varieties of aquatic animals are used as food.

Reason: Fish and other varieties of sea food constitute good source of protein.

Q3: Assertion: Proper cleaning for cows and buffaloes is required. Reason: Proper cleaning maintains the health of animals and also helps in clean milk production

Q4: Assertion: Fungicides act against fungal pathogens.

Reason : Fungicides are not harmful to human beings.

Q5: Assertion: Vaccinations are given to farm animals.

Reason: Vaccinations protect the farm animals from a number of diseases caused due to virus and bacteria.

Q6: Assertion: Large schools of fish are located using radio signals. Reason: Radio signals help in increasing the fish yield.

Q7: Assertion: Usage of manure is advantageous for our environment.

Reason: Manure contains chemical substances like nitrogen, phosphorus and potassium.

Q8: Assertion: To replenish the lost nutrients in the soil, quick acting, handy nutrients are applied in the form of fertilizers.

Reason: Chemical fertilizer contains the necessary plant nutrients.

Q9: Assertion: Honey bees are nuisance to farmers. Reason: Bees destroy the crops to fulfil their nutritional requirements.

Q10: Assertion: Fumigation of the grains using chemicals is done before storage in warehouses. Reason: Fumigation gives a nice colour to the grains.

Q1. Read the following passage and answer the questions that follow:

India is a highly populated country, and as the population grows, food demand increases. To meet this demand, efforts like the Green Revolution (which increased grain production) and the White Revolution (which increased milk production) have played crucial roles. However, excessive use of natural resources for food production can lead to environmental damage. To ensure food security, it is essential not only to increase food production but also to provide people with access to food. Sustainable agricultural practices like mixed farming, intercropping, and integrated farming help maintain soil fertility while increasing crop yields. i. What was the primary goal of the Green Revolution?

ii. Why is increasing food production alone not enough to solve hunger and malnutrition?

iii. How does mixed farming help in sustainable agriculture?

Q2. To improve crop yields, scientists develop new crop varieties through hybridization and genetic modification. Hybridization involves crossing genetically different plants to combine desirable traits like disease resistance, high yield, and improved quality. For example, wheat varieties with high protein content, pulses with better nutritional value, and oilseeds with higher oil yield have been developed. Crop variety improvement also focuses on creating drought-resistant and pest-resistant crops.

(i) What is hybridization?

(ii) Why is it important to develop disease-resistant crop varieties?

(iii) Why do farmers prefer short-duration crop varieties?

Class- 9th (Mars)

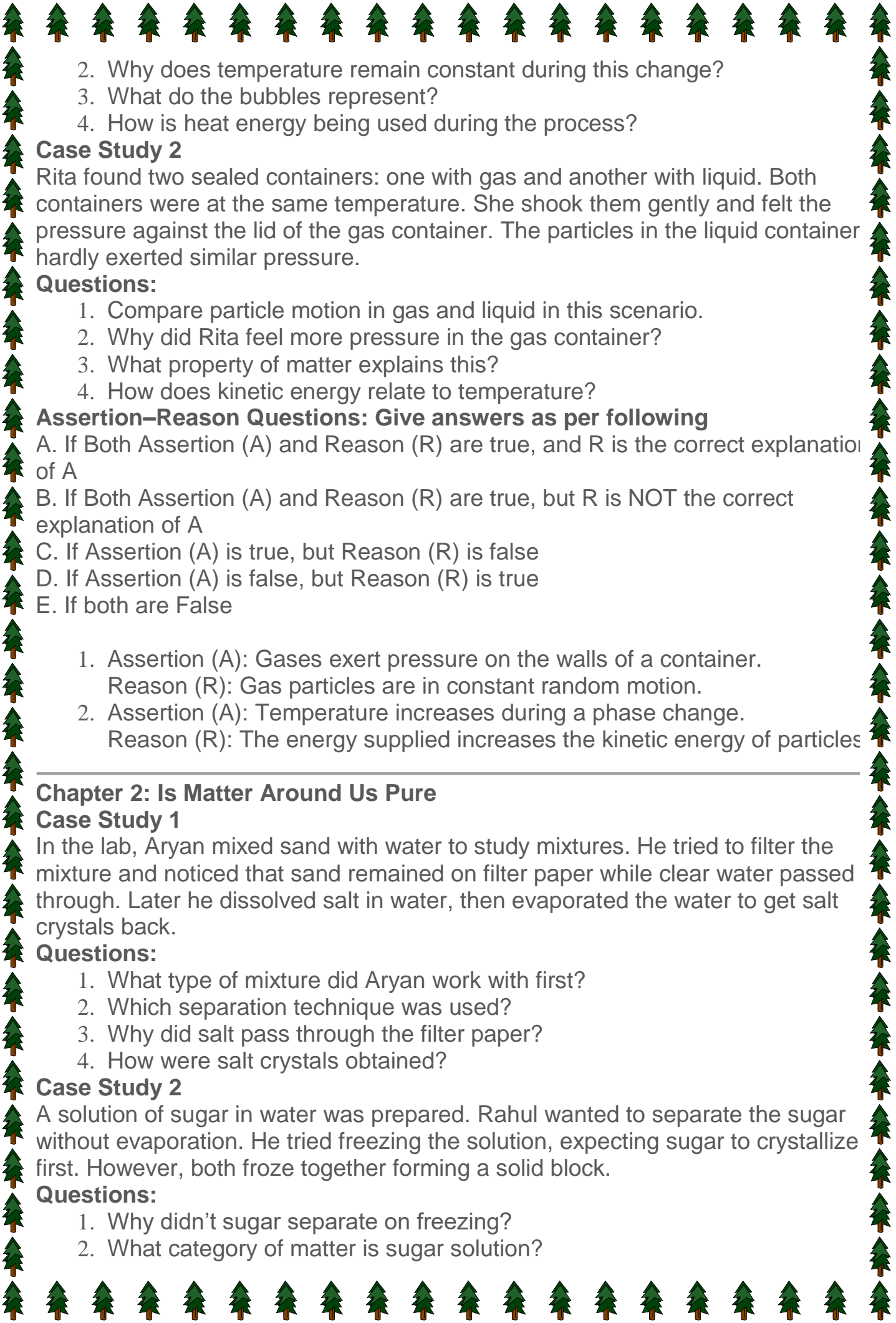
Chapter 1: Matter in Our Surroundings

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Questions:

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Rita found two sealed containers: one with gas and another with liquid. Both containers were at the same temperature. She shook them gently and felt the pressure against the lid of the gas container. The particles in the liquid container hardly exerted similar pressure.

Questions:

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Chapter 3: Atoms and Molecules

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1. What model was disproved by this experiment?
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Case Study 2

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2. How did charge affect the conclusion?
3. Name the particle discovered.
4. How did this change atomic model?

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Reason (R): Cathode rays travel straight in absence of field.

Chapter 5: The Fundamental Unit of Life

Case Study 1

A scientist viewed onion cells under a microscope. He identified cell wall, nucleus and vacuoles. He noted that cells are basic units of life and that all tissues are composed of cells.

Questions:

1. Why is the cell called fundamental unit?
2. What structures were seen?
3. How do cells form tissues?
4. What is the function of nucleus?

Case Study 2

A student compared cheek cells and plant cells. Cheek cells lacked chloroplasts and cell walls.

Questions:

1. Why were plant cells different?
2. What role do chloroplasts play?
3. How is shape affected by cell wall?
4. What does this show about cell types?

Assertion–Reason

1. Assertion (A): All living things are made of cells.
Reason (R): Cells carry out life processes.
2. Assertion (A): Plant cells have chloroplasts.
Reason (R): Chloroplasts help in photosynthesis.

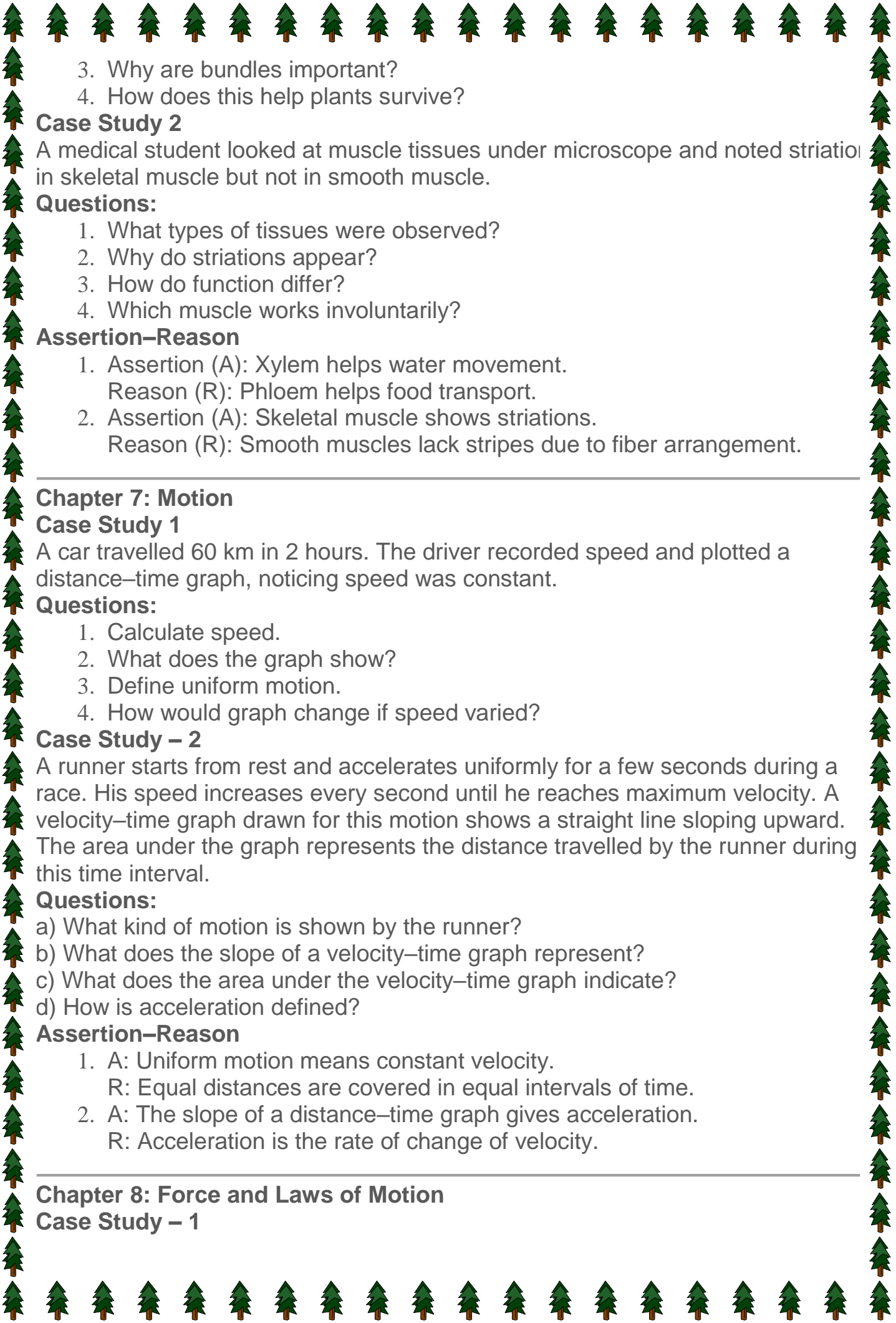
Chapter 6: Tissues

Case Study 1

In a cross section of a plant stem, xylem and phloem were arranged together forming vascular bundles. Xylem transported water while phloem transported food.

Questions:

1. Define tissues in plants.
2. What do xylem and phloem do?

- 
3. Why are bundles important?
 4. How does this help plants survive?

Case Study 2

A medical student looked at muscle tissues under microscope and noted striation in skeletal muscle but not in smooth muscle.

Questions:

1. What types of tissues were observed?
2. Why do striations appear?
3. How do function differ?
4. Which muscle works involuntarily?

Assertion–Reason

1. Assertion (A): Xylem helps water movement.
Reason (R): Phloem helps food transport.
 2. Assertion (A): Skeletal muscle shows striations.
Reason (R): Smooth muscles lack stripes due to fiber arrangement.
-

Chapter 7: Motion

Case Study 1

A car travelled 60 km in 2 hours. The driver recorded speed and plotted a distance–time graph, noticing speed was constant.

Questions:

1. Calculate speed.
2. What does the graph show?
3. Define uniform motion.
4. How would graph change if speed varied?

Case Study – 2

A runner starts from rest and accelerates uniformly for a few seconds during a race. His speed increases every second until he reaches maximum velocity. A velocity–time graph drawn for this motion shows a straight line sloping upward. The area under the graph represents the distance travelled by the runner during this time interval.

Questions:

- a) What kind of motion is shown by the runner?
- b) What does the slope of a velocity–time graph represent?
- c) What does the area under the velocity–time graph indicate?
- d) How is acceleration defined?

Assertion–Reason

1. A: Uniform motion means constant velocity.
R: Equal distances are covered in equal intervals of time.
 2. A: The slope of a distance–time graph gives acceleration.
R: Acceleration is the rate of change of velocity.
-

Chapter 8: Force and Laws of Motion

Case Study – 1

A cricket player pulls his hands backward while catching a fast-moving ball. This increases the time taken to stop the ball, reducing the force acting on his hands. According to Newton's laws of motion, force is related to the rate of change of momentum. Increasing stopping time decreases the impact force, preventing injury.

Questions:

- Why does the player pull his hands backward?
- Which physical quantity changes when the ball stops?
- State the law related to this observation.
- How does time affect force?

Case Study – 2

When a gun fires a bullet, the bullet moves forward while the gun recoils backward. Both motions occur simultaneously. This happens because forces act in pairs, equal in magnitude but opposite in direction, acting on different bodies.

Questions:

- What is recoil?
- Which law of motion explains this phenomenon?
- Why does the gun move backward?
- Are the forces acting on the same object?

Assertion–Reason

- A: Action and reaction forces act on different bodies.
R: They are equal in magnitude and opposite in direction.
- A: Force is directly proportional to acceleration.
R: Mass remains constant in Newton's second law.

Chapter 9: Gravitation

Case Study – 1

An object released from a height falls towards the Earth due to gravitational force. The acceleration experienced by all freely falling objects near Earth's surface is the same, regardless of their mass. This acceleration is called acceleration due to gravity and acts vertically downward.

Questions:

- What force causes the object to fall?
- What is acceleration due to gravity?
- Does mass affect the rate of fall?
- In which direction does gravity act?

Case Study – 2

A stone tied to a string is rotated in a circular path. If the string breaks, the stone moves in a straight line. The force responsible for circular motion acts towards the centre of the circle and keeps the object moving along the circular path.

Questions:

- Name the force acting on the stone.
- Why does the stone move straight after the string breaks?
- In which direction does centripetal force act?
- Give one example of circular motion.



Assertion–Reason

1. A: All objects fall with the same acceleration.
R: Gravitational force depends on mass.
2. A: Centripetal force is required for circular motion.
R: It acts towards the centre of the circular path.

Chapter 10: Work and Energy

Case Study – 1

A boy pushes a wall but the wall does not move. Although he applies force, no displacement occurs. In another situation, the same boy lifts a box from the floor to a table, causing displacement in the direction of applied force. These situations help explain the scientific definition of work.

Questions:

- a) Why is no work done in pushing the wall?
- b) What condition is necessary for work to be done?
- c) Is work done when lifting the box?
- d) Name the physical quantities involved in work.

Case Study – 2

A moving car possesses energy due to its motion. When the brakes are applied, the car slows down and eventually stops. The energy of motion is converted into other forms of energy such as heat due to friction.

Questions:

- a) What type of energy does the moving car have?
- b) What happens to this energy when brakes are applied?
- c) Name the energy produced due to friction.
- d) State the law related to energy transformation.

Assertion–Reason

1. A: Work is done only when force causes displacement.
R: Displacement must be in the direction of force.
2. A: Energy can neither be created nor destroyed.
R: Energy can change from one form to another.

Chapter 11: Sound

Case Study – 1

Sound is produced due to vibrations of objects. These vibrations create compressions and rarefactions in the surrounding medium. Sound waves require a medium to travel and cannot propagate through vacuum. Different sounds have different frequencies and amplitudes, which affect pitch and loudness.

Questions:

- a) How is sound produced?
- b) What are compressions and rarefactions?
- c) Why can sound not travel in vacuum?
- d) Which quantity affects pitch?

Case Study – 2

When a sound wave travels through air, particles vibrate back and forth but do not move from one place to another. The speed of sound depends on the medium and is different in solids, liquids, and gases.

Questions:

- Do air particles move with sound waves?
- How do particles behave during sound propagation?
- Which medium allows sound to travel fastest?
- On what factors does speed of sound depend?

Assertion–Reason

- A: Sound needs a medium to travel.
R: Sound waves are mechanical waves.
- A: Loudness depends on frequency.
R: Loudness is related to amplitude.

Chapter 12: Improvement in Food Resources

Case Study – 1

Farmers use improved crop varieties that are high-yielding, disease-resistant, and require less water. Proper irrigation, use of fertilizers, and pest control methods help increase crop production. These practices are important to meet the food demand of a growing population.

Questions:

- Why are improved crop varieties used?
- Name one method to increase crop yield.
- How does pest control help farmers?
- Why is food security important?

Case Study – 2

Animal husbandry involves scientific management of animals for food, fibre, and labour. Proper feeding, breeding, and disease control help improve the quality and quantity of animal products such as milk, eggs, and meat.

Questions:

- What is animal husbandry?
- Name two products obtained from animals.
- Why is proper feeding important?
- How does disease control help livestock?

Assertion–Reason

- A: Hybrid varieties improve crop yield.
R: They combine useful traits of parent plants.
- A: Animal husbandry increases food production.
R: It involves proper care and management of animals.

Section II

Q1. Why is the law of conservation of mass important while balancing chemical equations?

Q2. Why do electrons not fall into the nucleus in Bohr's model?

Q3. Write electronic configurations of first 10 elements and identify valence electrons.

Q4. Why do astronauts feel weightless inside a spacecraft?

Q5. Calculate your own weight on Earth and Moon.

Q6. Why does a moving object have energy even if it is not doing any work?

Q7. A mass of 10 kg is at a point A on a table. It is moved to a point B. If the line joining A and B is horizontal, what is the work done on the object by the gravitational force? Explain your answer.

Q8. An electric heater is rated 1000 W. How much energy does it use in 6 hours

Q9. A stone is dropped from the top of a tower 500 m high into a pond of water at the base of the tower. When is the splash heard at the top? Given, $g = 10 \text{ m s}^{-2}$ and speed of sound = 340 m s^{-1} .

Q10. Explain how defects in a metal block can be detected using ultrasound.

Q11. Why is crop rotation better than growing the same crop repeatedly?

Q12. How do you differentiate between capture fishing, mariculture and aquaculture?

Q13. Calculate the molecular masses of H_2 , O_2 , Cl_2 , CO_2 , CH_4 , C_2H_6 , C_2H_4 , NH_3 , CH_3OH .

Q14. Explain with examples (i) Atomic number, (ii) Mass number, (iii) Isotopes and (iv) Isobars. Give any two uses of isotopes.

Social Science

Case Study Question 1

Read the source given below and answer the questions that follow:

On the morning of 14 July 1789, the city of Paris was in a state of alarm. The king had commanded troops to move into the city. Rumours spread that he would soon order the army to open fire upon the citizens. Some 7,000 men and women gathered in front of the town hall and decided to form a people's militia. They broke into a number of government buildings in search of arms. Finally, a group of several hundred people marched towards the eastern part of the city and stormed the fortress-prison, the Bastille, where they hoped to find hoarded ammunition. In the armed fight that followed, the commander of the Bastille was killed and the prisoners released – though there were only seven of them. Yet the Bastille was hated by all because it stood for the despotic power of the king. The fortress was demolished and its stone fragments were sold in the markets to all those who wished to keep a souvenir of its destruction. The days that followed saw more rioting both in Paris and the countryside. Most people were protesting against the high price of bread. Much later, when historians looked back upon this time, they saw it as the beginning of a chain of events that ultimately led to the execution of the king in France, though most people at the time did not anticipate this outcome.

Answer the following questions

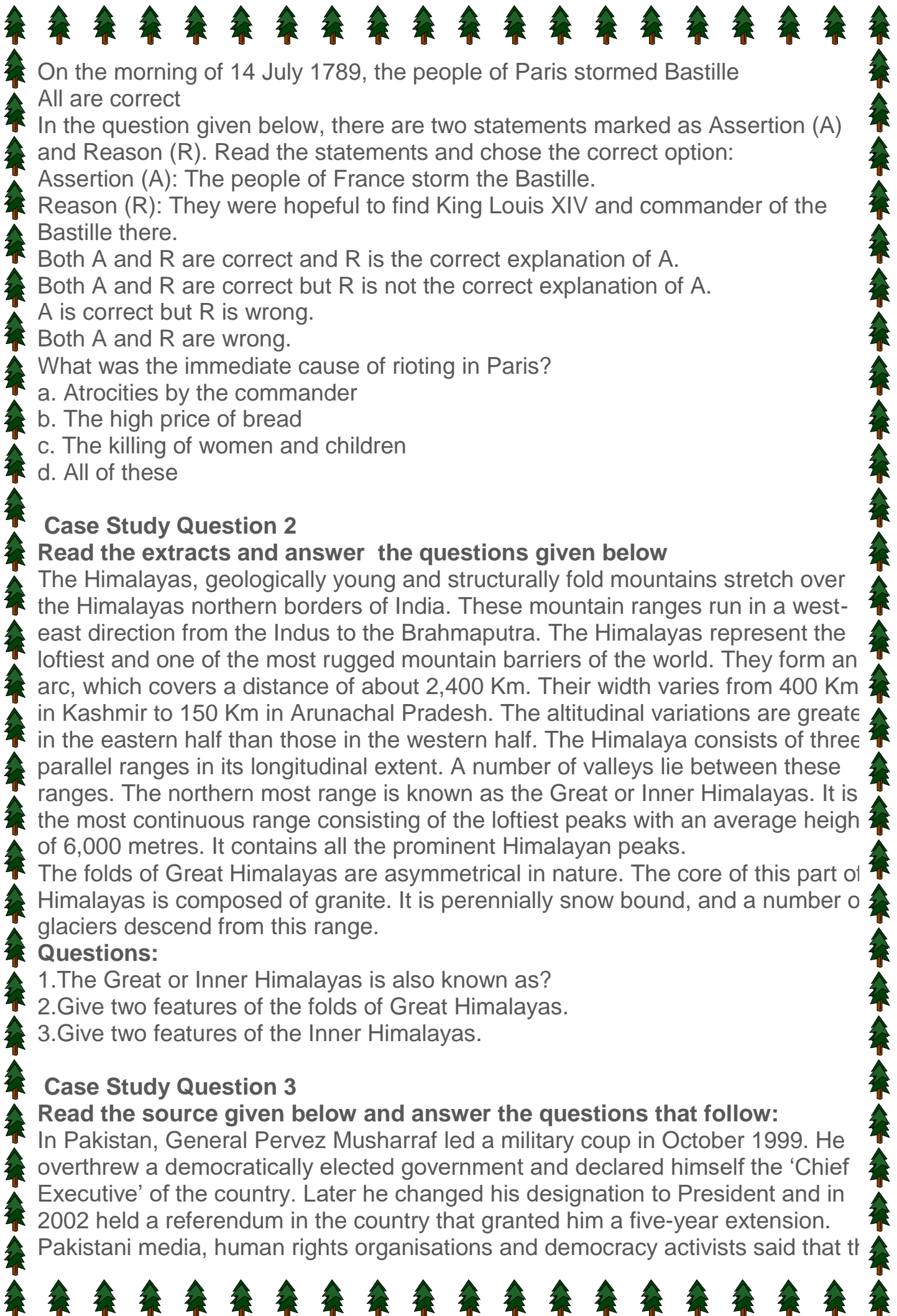
1. On 14th July, 1789 the people of the ____ estate attacked the Bastille prison and freed all the prisoners signalling the start of the ____.

2. first, civil war fourth, Russian war second, movement third, revolution

3. Which of the following statements is incorrect?

The Bastille was the fortress-prison.

The Bastille stood for the democratic power of the king.



On the morning of 14 July 1789, the people of Paris stormed Bastille

All are correct

In the question given below, there are two statements marked as Assertion (A) and Reason (R). Read the statements and chose the correct option:

Assertion (A): The people of France storm the Bastille.

Reason (R): They were hopeful to find King Louis XIV and commander of the Bastille there.

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

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

A is correct but R is wrong.

Both A and R are wrong.

What was the immediate cause of rioting in Paris?

- Atrocities by the commander
- The high price of bread
- The killing of women and children
- All of these

Case Study Question 2

Read the extracts and answer the questions given below

The Himalayas, geologically young and structurally fold mountains stretch over the Himalayas northern borders of India. These mountain ranges run in a west-east direction from the Indus to the Brahmaputra. The Himalayas represent the loftiest and one of the most rugged mountain barriers of the world. They form an arc, which covers a distance of about 2,400 Km. Their width varies from 400 Km in Kashmir to 150 Km in Arunachal Pradesh. The altitudinal variations are greater in the eastern half than those in the western half. The Himalaya consists of three parallel ranges in its longitudinal extent. A number of valleys lie between these ranges. The northern most range is known as the Great or Inner Himalayas. It is the most continuous range consisting of the loftiest peaks with an average height of 6,000 metres. It contains all the prominent Himalayan peaks.

The folds of Great Himalayas are asymmetrical in nature. The core of this part of Himalayas is composed of granite. It is perennially snow bound, and a number of glaciers descend from this range.

Questions:

- The Great or Inner Himalayas is also known as?
- Give two features of the folds of Great Himalayas.
- Give two features of the Inner Himalayas.

Case Study Question 3

Read the source given below and answer the questions that follow:

In Pakistan, General Pervez Musharraf led a military coup in October 1999. He overthrew a democratically elected government and declared himself the 'Chief Executive' of the country. Later he changed his designation to President and in 2002 held a referendum in the country that granted him a five-year extension. Pakistani media, human rights organisations and democracy activists said that th

referendum was based on malpractices and fraud. In August 2002 he issued a 'Legal Framework Order' that amended the Constitution of Pakistan. According to this Order, the President can dismiss the national and provincial assemblies. The work of the civilian cabinet is supervised by a National Security Council which is dominated by military officers. After passing this law, elections were held to the national and provincial assemblies. So Pakistan has had elections, elected representatives have some powers. But the final power rested with military officers and General Musharraf himself. Clearly, there are many reasons why Pakistan under General Musharraf should not be called a democracy. People may have elected their representatives to the national and provincial assemblies but those elected representatives were not really the rulers. They cannot take the final decisions. The power to take final decision rested with army officials and with General Musharraf, and none of them were elected by the people. This happens in many dictatorships and monarchies. They formally have an elected parliament and government but the real power is with those who are not elected. In a few countries, the real power was with some external powers and not with locally elected representatives. This cannot be called people's rule.

1. What is the meaning of Referendum?

2. Assertion (A) and Reason (R). Read the statements and choose the correct option:

Assertion (A): Pakistan not considered a democratic country even after having elections

Reason (R): Despite elections to the national and provincial assemblies, the final powers rested with General Musharraf and military officers.

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

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

A is correct but R is wrong.

A is wrong but R is correct.

3. After the passage of the _____, elections were held to the national and state assemblies.

Military rule

Referendum

Legal Framework Order

Both (b) and (c)

4. Does the given source explain the significance of which feature of democracy?

(Electoral Politics)

Assertion (A): Elections help people choose their representatives.

Reason (R): Elections allow citizens to vote and participate in democracy.

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



(Working of Institutions)

Assertion (A): The Prime Minister is the most powerful authority in India.

Reason (R): The Prime Minister takes all decisions alone.

- 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

Chapter: Climate

1. Assertion (A): India experiences monsoon-type climate.

Reason (R): The seasonal reversal of wind direction brings rainfall to India.

- 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

Assertion (A): The western coastal plains receive more rainfall than the interior parts of India.

Reason (R): The Western Ghats block the moisture-laden monsoon winds.

- 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

Assertion (A): Population density is unevenly distributed in India.

Reason (R): Physical factors like climate and availability of resources affect population distribution.

- 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

Assertion (A): Literacy rate in India has increased since independence.

Reason (R): The government has taken steps to improve education.

- 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

Assertion (A): Most rivers of Peninsular India flow towards the east.

Reason (R): The land slopes from west to east.

- 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

Learning work

Chapter: India – Size and Location

How does India's central location in Asia help it in trade and cultural contacts?



Why is the Tropic of Cancer important for India?

How does India's latitudinal extent influence its climate?

What is the significance of the Indian Standard Time?

Chapter: Climate

Why is the Indian climate described as a monsoon type?

How does the Himalayas influence India's climate?

Why do coastal areas have moderate temperatures?

What is meant by the "breaks" in the monsoon?

How do jet streams affect the Indian monsoon?

Chapter: Drainage

Why are Himalayan rivers perennial while Peninsular rivers are seasonal?

How does a river shape the land through which it flows?

Why are deltas formed on the eastern coast but not on the western coast?

What is the difference between a drainage basin and a water divide?

Why is the Ganga river system important for India?

Chapter: Natural Vegetation and Wildlife

How does climate influence natural vegetation in India?

Why are tropical evergreen forests found in areas of heavy rainfall?

How does deforestation affect wildlife?

Why is conservation of forests necessary?

What is the importance of biosphere reserves?

Chapter: Population

Why is population distribution uneven in India?

How do physical factors influence population density?

Why is literacy rate an important indicator of development?

What are the causes of population growth in India?

How does population growth affect resources?

Computer

1. Draw Liber office writer window, Liber office calc window and Liber office Impress window in fair notebook

2. Make a ppt on communication

3. Learn unit 1 (Communication), unit 2 (Self-Management) and unit 3 (Digital Documentation)