



ANGEL'S PUBLIC SCHOOL

SAMPLE PAPER

HALF YEARLY EXAM SESSION 2025 – 26

CLASS – IX

TIME: 3 HRS

SUBJECT : SCIENCE

M.M:80

General Instructions:

- (a) This question paper consists of 39 questions in 5 sections.
- (b) All questions are compulsory.
- (c) Section A consists of 20 objective type questions carrying 1 mark each.
- (d) Section B consists of 6 Very Short questions carrying 02 marks each. Answers to these questions should in the range of 30 to 50 words.
- (e) Section C consists of 7 Short Answer type questions carrying 03 marks each. Answers to these questions should in the range of 50 to 80 words.
- (f) Section D consists of 3 Long Answer type questions carrying 05 marks each. Answer to these questions should be in the range of 80 to 120 words.
- (g) Section E consists of 3 source-based/case-based units of assessment of 04 marks each with sub-parts.

SECTION – A

Choose the correct option.

1. In which state of matter carbon dioxide occurs in most commonly around us?
(a) Solid (b) Liquid (c) Gas (d) Both(a) and (b)
2. Which of the following statements is not related to the endoplasmic reticulum?
(a) It behaves as transport channel for proteins between nucleus and cytoplasm.
(b) It transports materials between various regions in cytoplasm.
(c) It can be the site of energy generation.
(d) It can be the site of some biochemical activities of the cell.
3. Which process is responsible for conversion of solid to liquid directly?
(a) Condensation (b) Sublimation (c) Diffusion (d) Melting
4. Which of the following is not a type of animal tissue?
(a) Epithelial tissue (b) Nervous tissue (c) Muscular tissue (d) Vascular tissue
5. Oesophagus, lining of mouth are covered with:
(a) Simple epithelium (b) Squamous epithelium (c) Sponge epithelium (d) All of the above
6. Who discovered the cell?
(a) Robert Hooke (b) Anton van Leeuwenhoek (c) Louis Pasteur (d) Robert Brown
7. What is sublimation?
(a) The process of conversion of liquid to gas
(b) The process of conversion of solid directly into vapour
(c) The process of conversion of solid to liquid
(d) The process of conversion of liquid to solid
8. Differentiation leads to the development of various types of:
(a) parenchyma tissue (b) meristematic tissue (c) permanent tissue (d) none of them
9. A particle is moving in a circular path of radius r , the displacement after half of circle would be :
(a) zero (b) πr (c) $2r$ (d) $2\pi r$

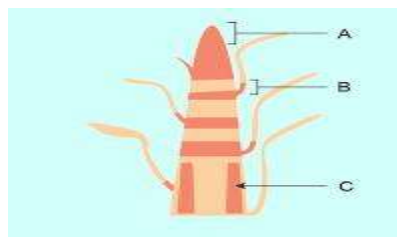
10. Which of the following sequence is not correct for an object moving along a straight path in accelerated motion?
- (a) It's speed keeps changing (b) It's velocity always changes
(c) It always goes away from Earth (d) A force always acting on it
11. A passenger in a moving train tosses a coin which falls behind him. It means the motion of the train is :
- (a) accelerated (b) uniform (c) retarded (d) along circular tracks
12. Which type of cells lack a well-defined nucleus?
- (a) Prokaryotic cells (b) Eukaryotic cells (c) Plant cells (d) Animal cells
13. Each cell has certain specific component within it known as:
- (a) cell body (b) cytoplasm (c) cell organelles (d) none of them
14. Which of the following conditions is most favourable for converting a gas into a liquid?
- (a) High pressure, low temperature (b) Low pressure, low temperature
(c) Low pressure, high temperature (d) High pressure, high temperature
15. Which of the following settles down when allowed to stand undisturbed for sometime?
- (a) Copper sulphate solution (b) Blood
(c) Muddy water (d) Solution of egg albumin in water
16. Xylem and phloem are types of:
- (a) epithelial tissue (b) nervous tissue (c) muscular tissue (d) plant tissues
17. Assertion (A): if a spring is stretched from one side the size and shape of the spring changes
Reason (R): Unbalanced force acting on the spring changes the size and shape of the spring in the direction of application
- (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.
18. Assertion (A): Elements and compounds are pure substances
Reason (R): properties of compounds are different from those of constituents' elements
- (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.
19. Assertion: Organisms are made up of cells.
Reason: Cells are structural units of living organisms. A cell keeps its chemical composition steady within its boundary.
- (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.
20. What is homogeneous mixture?
- (a) Homogeneous mixture is the mixture of two or more than two components
(b) In homogeneous mixture the composition and properties are uniform throughout the mixture
(c) both (a) and (b) are true (d) none of the above

SECTION - B

21. While getting down a moving bus, why should a person run in the same direction as that of the bus?
22. Differentiate between balanced and unbalanced force with examples.
23. If the displacement of body is 0, is it necessary that distance covered by it is also 0?
24. How the water changes into vapours at the temperature below its boiling point. List the factors affecting evaporation. Mention two examples from daily life where evaporation causes cooling.
25. State the characteristics of eukaryotic cells.
26. Why is the cell called structural and functional unit of life.

SECTION - C

27. A train starts from rest and travels uniformly for 30 seconds to acquire a velocity of 108 km/hr. It travels with that velocity for 20 mins. The driver now applies brake and the train retard uniformly to stop after 20 seconds. Find the total distance covered by the train.
28. Explain why particles of a colloidal solution do not settle down when left undisturbed, while in the case of a suspension they do.
29. Calculate the force exerted by a nail on the hammer of mass 500gm moving at 5m/s striking it considering a nail strikes at the hammer in the short of time of 0.01 sec.
30. Define suspension and its properties?
31. From a station x a train starts from rest and attains a speed of 54 km per hour in 10 seconds. Then by applying brakes, a negative acceleration of $2.5 \text{ m per second square}$ is produced and it stops at the station in 6 seconds. Find the distance between station x and y?
32. Observe the diagram:
 - (a) Label a,b,c parts.
 - (b) Give functions of a and c parts.



33. (a) Why lysosomes are known as suicidal bags?
- (b) Draw a well labelled diagram of a neuron.

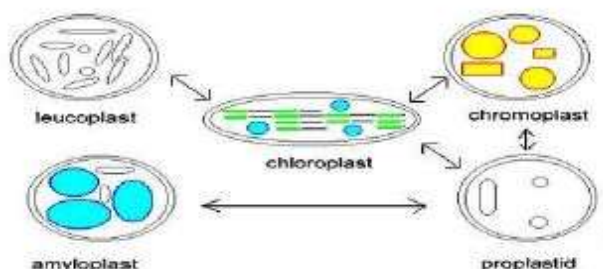
SECTION - D

34. Give the statement for Newton's second law of motion. Deduce a mathematical formation for it using above derived expression
35. (a) Differentiate between xylem and phloem.
- (b) Write two functions of blood.
36. Based on the following characteristic distinguish in tabular form the behaviour of a true solutions, suspension and colloidal solution .

SECTION - E

Read the text carefully and answer the questions:

37. Leucoplasts are colourless plastids. They store starch, oil, proteins. Chromoplasts are coloured plastids. They contain pigments. e.g. Chloroplasts contain green pigment present in the plant cell. Chromoplasts provide colour to various flowers and fruits.



(a) What is the function of leucoplasts?

- (i) They store starch, oil, proteins.
- (ii) They provide colour various flowers and fruits.
- (iii) They help in photosynthesis.
- (iv) They give support to the plants.

(b) Which plastids provide colour to fruits and flowers?

- (i) Leucoplast
- (ii) Chromoplasts
- (iii) Chloroplasts
- (iv) Protein Plast

(c) Which of the following statement is true?

- (i) Plastids are present in both plant and animal cell.
- (ii) Plastids are absent in plant as well as animal cell.
- (iii) Plastids are present only in plant cell.
- (iv) Plastids are present only in animal cell

(d) Which plastids contain green pigment?

- (i) Leucoplasts contain green pigment.
- (ii) Chloroplasts contain green pigment.
- (iii) Chromoplasts mainly contain green pigment.
- (iv) None of the plastids contain green pigment.

38. A group of students is exploring different states of matter in their science lab. They have samples of ice, water, and steam. They observe the properties and behavior of these substances under varying conditions. Observations: Ice: Solid state, rigid structure, fixed shape and volume.

Water: Liquid state takes the shape of the container, fixed volume.

Steam: Gaseous state expands to fill the container, no fixed shape or volume.

(a) Which state of matter has a definite shape and volume?

- (i) Liquid
- (ii) Gas
- (iii) Solid
- (iv) Plasma

(b) What happens to the molecules of ice when it melts into water?

- (i) They move closer together
- (ii) They gain energy and move apart.
- (iii) They lose energy and become solid
- (iv) They stop moving.

(c) Which process is occurring when water turns into steam?

- (i) Condensation
- (ii) Freezing
- (iii) Melting
- (iv) Vaporization

(d) Which of the following statements is true regarding the three states of matter?

- (i) All states can change into one another by adding or removing heat.
- (ii) Solids can turn directly into gases without becoming liquid.
- (iii) Liquids have a fixed shape but not volume.
- (iv) Gases have a definite volume but not shape.

39. One day Rahul decided to go to his office by his car. He is enjoying the driving along with listening the old songs. His car is moving along a straight road at a steady speed. On a particular moment, he notices that the car travels 150 m in 5 seconds.

(a) What is its average speed ?

- (i) 20 m/s
- (ii) 30 m/s
- (iii) 10 m/s
- (iv) 40 m/s

(b) How far does it travel in 1 second?

- (i) 20 m
- (ii) 30m
- (iii) 10 m
- (iv) 40 m

(c) How far does it travel in 6 seconds?

(i) 120 m

(ii) 130 m

(iii) 180 m

(iv) 140 m

(d) How long does it take to travel 240 m?

(i) 2s

(ii) 4s

(iii) 6s

(iv) 8s