

Time: 3 Hrs

CBSE SAMPLE PAPER – 01

MM: 90

SUMMATIVE ASSESSMENT – I

General Instructions

Class-IX SCIENCE

- (i) The question paper comprises of two Sections, A and B. You are to attempt both the sections.
- (ii) All questions are compulsory.
- (iii) Question numbers 1 to 3 in Section-A are one mark questions. These are to be answered in one word or in one sentence.
- (iv) Question numbers 4 to 6 in Sections-A are two marks questions. These are to be answered in about 30 words each.
- (v) Question numbers 7 to 18 in Section-A are three marks questions. These are to be answered in about 50 words each.
- (vi) Question numbers 19 to 24 in Section-A are five marks questions. These are to be answered in about 70 words each.
- (vii) Question numbers 25 to 36 in Section-B are multiple choice questions based on practical skills. Each question is a one mark question. You are to select one most appropriate response out of the four provided to you.

Section – A

1. Which of the following diffuses faster? Water vapour, wax or, ethyl alcohol.
2. Which blood cells deal with immune reaction?
3. Define electrostatic force.
4. If a potted plant is covered with a glass jar, water vapour appears on the wall of the glass jar. Why?
5. Describe the microscopic structure of the cell.
6. Calculate the force of gravitation between the earth and the Sun, given that the mass of the earth = 6×10^{24} kg and of the Sun = 2×10^{30} kg. The average distance between the two is 1.5×10^{11} m.
7. Differentiate between physical and chemical change?
8. Write a short note on epithelial tissue.
9. Draw a labelled diagram of a neuron.
10. Why do you fall in the forward direction when a moving bus brakes to a stop and fall backwards when it accelerates from rest?
11. Discuss why pesticides are used in very accurate concentration and in very appropriate manner.
12. Write a method to separate different gases from air.
13. Classify each of the following as a physical or a chemical change. Give reasons.

- (a) Drying of a shirt in the sun.
 - (b) Rising of hot air over a radiator.
 - (c) Burning of kerosene in a lantern.
 - (d) Change in the colour of black tea on adding lemon juice to it.
14. Prove that if a body is thrown vertically upward, the time of ascent is equal to the time of descent.
 15. State Newton's second law of motion and derive it mathematically?
 16. The velocity of a body in motion is recorded every second as shown-

time(s)	0	1	2	3	4	5	6	7	8	9	10
Velocity(m/s)	62	54	48	42	36	30	24	18	12	6	0

- Calculate the –
- (a) Acceleration (b) distance travelled and draw the graph.
17. Comment on the following statements:
 - (a) Evaporation causes cooling.
 - (b) Rate of evaporation of an aqueous solution decreases with increase in humidity.
 - (c) Sponge though compressible is a solid.
 - (d) Ice is solid at 0°C , while water is liquid at room temperature.
 - (e) Sugar crystals dissolve faster in hot water than cold water.
 18. Raghu switched from traditional to modern farming practices in which he used large amounts of fertilizers and pesticides to gain an increase in profit.
 - (i) What are the adverse effects of modern farming?
 - (ii) What is soil pollution?
 - (iii) What do you think will be effect on the soil in long run?
 - (iv) What alternative method could be more beneficial for farming?
 19. Why does the temperature of a substance remain constant during its melting point or boiling point?
 20. Draw a plant cell and label the parts:
 - (a) Synthesize food
 - (b) produce energy
 - (c) Store house of organic substances like protein, organic acids
 - (d) Packages material coming from endoplasmic reticulum
 - (e) Determine function and development of the cell.

21. (a) What happen to sugar when it is dissolved in water? Where does the sugar go? What information do you get about the nature of matter from the dissolution of sugar in water?
(b) Which type of compounds can be purified by sublimation?
22. A ball thrown up vertically returns to the thrower after 6 s. Find
(a) the velocity with which it was thrown up.
(b) the maximum height it reaches, and
(c) its position after 4s.
23. Why are improved poultry breeds developed? Describe the desirable traits for which new varieties are developed.
24. An athlete completes one round of a circular track of diameter 200 m in 40 s. What will be the distance covered and the displacement at the end of 2 minutes and 20 seconds?

Section B

25. 300k will have its corresponding temperature in degree centigrade as:-
(a) 30° (b) 300° (c) 27° (d) 673°
26. Blood and sea water are:-
(a) both mixtures
(b) both are compound
(c) blood is a mixture whereas sea water is a compound
(d) blood is a compound and sea water is a mixture
27. Amoeba acquires its food through a process, termed
(a) Exocytosis (b) endocytosis
(c) Plasmolysis (d) Exocytosis and endocytosis both
28. In desert plants, rate of water loss gets reduced due to presence of:
(a) cuticle (b) stomata
(c) lignin (d) suberin
29. If a body starts from rest, what can be said about the acceleration of body?
(a) Positively accelerated (b) Negative accelerated
(c) Uniform accelerated (d) None of the above
30. Which law explains swimming?
(a) Newton's first law (b) Newton's second law
(c) Newton's third law (d) All of these
31. To solve the food problem of the country, which among the following is necessary?

- (a) Increased production and storage of food grains
 - (b) Easy access of people to the food grains
 - (c) People should have money to purchase the grains
 - (d) All the above
32. Preventive and control measures adopted for the storage of grains include:
- (a) Strict cleaning (b) proper disjoining
 - (c) fumigation (d) all the above
33. What does slope of position time graph give?
- (a) speed (b) acceleration
 - (c) uniform speed (d) Both (a) and (c) depending upon the type of graph.
34. Which would require a greater force-accelerating a 2 kg mass at 5 ms^{-2} or a 4 kg mass at 2 ms^{-2} ?
35. In experiment to demonstrate the boiling point of water, state reason for following precautions
- (a) The bulb of thermometer should not touch the sides of the beaker.
 - (b) Pumice stone should be added while boiling water.
36. Sheema was asked to prepare four separate mixtures in four beakers A, B, C, D by mixing sugar, fine sand, thin paste of starch and chalk powder respectively in water and then categorize each as stable or unstable. What will be the correct categorization?