CBSE SAMPLE PAPER – 04 (Unsolved)

SUMMATIVE ASSESSMENT – I

Class-IX (SCIENCE)

Time: 3 Hrs **MM: 90**

General Instructions

(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 33 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.

(viii) Question numbers 34 to 36 in Section-B are two marks questions are to be answered in about 30 words each based on practical skills.

Section – A

1. Arrange the following substances in the increasing order of force of attraction between their particles: Oxygen, salt, milk.
2. State the function of chromosome in a cell.
3. Name the force which is responsible for change in position or state of an object.
4. Define the term sublimation. Write the names of any two substances which sublime.
5. A solution is prepared by adding 40 g of sugar in 100 g of water. Calculate the concentration in terms of mass by mass percentage of solution.
6. Draw a labelled diagram of a neuron.
7. Find the weight of a 80 kg man on the surface of moon ? What should be his mass on the earth and on the moon? (g_e= 9.8 m/s^2 ; g_m= 1.63 m/s^2)
8. Define crop rotation. While choosing plants for crop rotation, what factors should be kept in mind?

9. List any three management practices while designing a shelter for cattle.

10. Define crop rotation. While choosing plants for crop rotation, what factors should be kept in mind?

11. List any three management practices while designing a shelter for cattle.

12. Explain the following :

    (i) Gases exert pressure on the walls of the container.

    (ii) Water is liquid at room temperature.

    (iii) Evaporation causes cooling.

13. You are given a mixture of mustard oil and water. Name the process that can be used to obtain mustard oil from the above mixture. Draw a well labeled diagram of the above process.

14. Write two similarities and one dissimilarity between mitochondria and plastid.

15. Write one term for the following tissues :

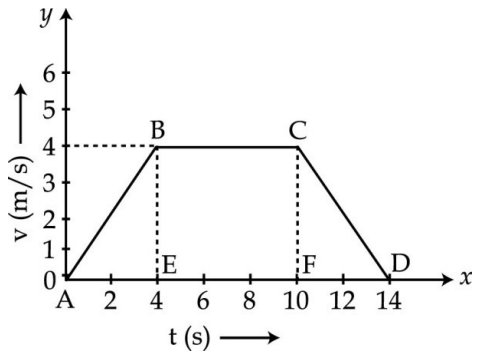
(a) That joins muscle to bone

(b) Fat reservoir of our body

(c) Supporting, fills the space inside the organs, and helps in repair of tissues.

16. Write difference between mass and weight?

17. Study the given graph and answer the following questions.



    (i) Which part of the graph shows accelerated motion?

    (ii) Which part of the graph shows retarded motion?

    (iii) Calculate the distance travelled by the body in first 4 seconds of journey graphically?

18. State reason for the following:

    (a) All the cars are provided with seat belts

    (b) It is dangerous to move out of a moving bus

(c) Road accidents at high speeds are very much worse than accidents at low speeds.

19. (i) State the two types of food requirements of dairy animals ?

(ii) List the various constituents of food of dairy animals.

(iii) Why do cattle need a balanced diet?

20. (i) How many nutrients are essential for plants?

(ii) What are macronutrients and micronutrients?

(iii) List the nutrients supplied by air, water and soil.

21. (a) State two characteristic properties each of:

(i) Solid (ii) liquid (iii) Gas

(b) Archit dropped a crystal of potassium permanganate into two beakers A and B containing hot water and cold water respectively. After keeping the beakers undisturbed for some time what did he observe and why?

22. (a) CO_2 is a gas. Write its two gaseous properties to justify it.

(b) How can we liquefy a gas?

(c) Solid CO_2 is also known as dry ice. Why?

(d) Write the full form of:

(i) CNG (ii) LPG

23. What is chromatography ? How will you separate the components of black ink using chromatography ? Write any two applications of chromatography.

24. (a) Give any one point of difference between true solution, colloidal solution and suspension.

(b) 20 g of sodium chloride is dissolved in 100 mL of water. How will you test whether the given solution is saturated or unsaturated at the given temperature?

(c) Suggest any one method by which we can increase the solubility of saturated solutions.

Section B

25. Rohan added iodine solution to four samples of food I, II, III and IV. Which will develop blue black colour?

(i) Boiled Rice (ii) Crushed potato

(iii) Boiled arhar dal (iv) Powdered arhar dal

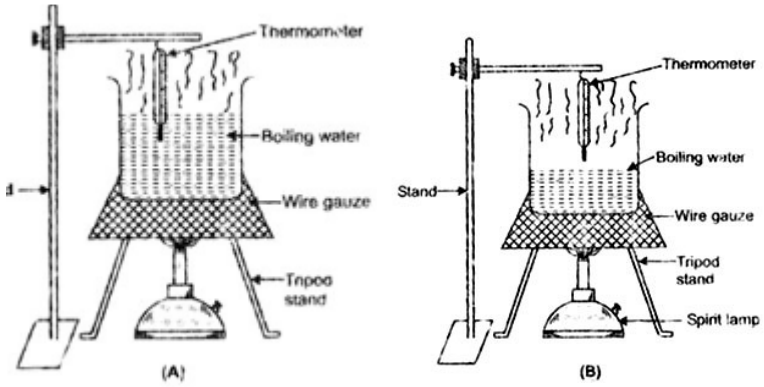
(a) I, II (b) I, II, III (c) I, II, IV (d) I, III, IV

26. When 2 – 4 drops of conc. hydrochloric acid are added in the given sample of arhar dal, the pink colour is due to :

(a) Metanil yellow (b) Starch

(c) Turmeric powder (d) Chalk powder

27. Two students Arpit and Rakshita are asked to arrange the apparatus to determine the boiling point of water. They arranged the apparatus as shown below by figures A and B respectively:



The diagram in which the apparatus is correctly arranged is :

(a) A only (b) B only

(c) both A and B (d) neither A nor B

28. A student measured the minimum force F_1 to just more a rectangular wooden block kept with largest surface area on a horizontal surface by a spring balance. He again measured the minimum force by placing the block with smallest surface area on the table as F_2. The repeated the experiment and established a relation between the two forces. The correct result will be :

(a) $F_1 > F_2$ (b) $F_2 > F_1$

(c) $F_1 = F_2$ (d) no relation between the two forces

29. While doing an experiment to find the relationship between the weight of a rectangular wooden block lying on a horizontal table and the minimum force required to just move it using a spring balance it is observed that :

(a) More inertia more force

(b) Less inertia less force

(c) Less inertia more force

(d) Inertia and force are not related to each other.

30. Sheela observed a slide of striated muscle fibre, under a microscope. Its cells would be:

(a) Long, spindle shaped and uninucleate

(b) Long, cylindrical, and without nuclei

(c) Long, cylindrical, and multinucleate

(d) Cylindrical, branched and uninucleate.

31. While preparing a temporary mount of onion peel cells or human check cells, a Cover slip is put on the mounted material on a slide very gently to :

(a) Avoid the crushing of mounted material

(b) Avoid the entry of air bubbles

(c) Avoid oozing of stain

(d) Avoid oozing of glycerin.

32. When we burn a cleaned piece of magnesium ribbon in air, we observe:

(a) A white dazzling light while burning.

(b) A white residue left after burning.

(c) A black residue left after burning.

(d) (a) and (b)

33. Mohan heated a mixture of sulphur and iron filings in a china dish till a grey – black product was formed. On adding carbon disulphide and stirring the contents he observed that:

(a) Particles of sulphur dissolve

(b) Particles of iron dissolve

(c) Grey black product dissolves

(d) No change takes place

34. While observing cells of different kinds under a microscope Raju observed that cells of different shapes and sizes. He was bit confused whether these cells have some features common in all. What are your views regarding Raju's curiosity.

35. When the raisins are soaked in water, they tend to swell up. Indentify and explain the process which takes place.

36. Mention the type of thermometer that should be used to determine the melting point of ice in laboratory. What should be precaustion taken.