CBSE SAMPLE PAPER - 1 (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.

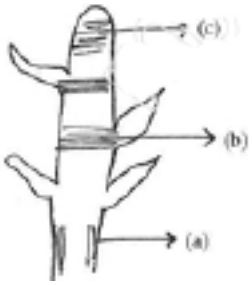
(vii) Question numbers 25 to 33 in Section-B are multiple choice questions based on practical skills. Each question is a one mark question. You are to select one most appropriate response out of the four provided to you.

(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. State the function of chromosome in a cell.
2. Arrange the following substances in the increasing order of force of attraction between their particles : Oxygen, salt, milk.
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. Define crop rotation. While choosing plants for crop rotation, what factors should be kept in mind?
8. List any three management practices while designing a shelter for cattle.
9. 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).
10. Explain the following :
    (i) Gases exert pressure on the walls of the container. (ii) Water is liquid at room temperature.
    (iii) Evaporation causes cooling.
11. Write two similarities and one dissimilarity between mitochondria and plastid.
    a. 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.
    b. Draw a well labelled diagram of the above process.
12. 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.
13. Label the following and give one function of each part labelled (a), (b) and (c).



14. A man weighing 60 kg runs along the rails with a velocity of 18 km/h and jumps into a car of mass 1 quintal (100 kg) standing on the rails. Calculate the velocity with which car will start travelling along the rails.

15. A swimmer is able to swim in a forward direction in a swimming pool only when he is pushing the water in the backward direction. Give reason for the above mentioned statement and justify the same.

16. 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.

17. A stone is thrown vertically upwards with a velocity of 40 m/s and is caught back. Taking g=10 m/s^2, calculate the maximum height reached by the stone. What is the net displacement and total distance covered by the stone?

18.
    a. Seema buys few grains of gold at the poles as per the instructions of one of her friends. She hands over the same when she meets her at the equator. Will the friend agree with the weight of gold bought? If not, why?
    b. If the moon attracts the earth, why does the earth not move towards the moon?

19.
    a. State the two types of food requirements of dairy animals?
    b. List the various constituents of food of dairy animals.
    c. Why do cattle need a balanced diet?

20. State two characteristic properties each of :
    (i) Solid.
    (ii) Liquid.
    (iii) Gas.

21.
    (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.

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

23. (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.

24.

(a) Differentiate between uniform linear and uniform circular motion.

(b) Write any four examples of uniform circular motion.

(c) Is uniform circular motion accelerated motion?

Section B

25. Matanil yellow is

(a) A dye

(b) Yellow grain similar to arhar dal

(c) A nutritional supplement

(d) Another type of dal.

26. Shivam added two drops of iodine solution to potato extract. Which of the following represents the correct observation made by shivam?

(a) Colour of extract change to black

(b) Colour of extract change to brown

(c) Colour of extract change to brown black

(d) Colour of extract change to blue black

27. At room temperature a student sets up the apparatus to determine the melting point of ice. He takes a beaker half filled with ice and dips a mercury thermometer in it. The correct observation is:

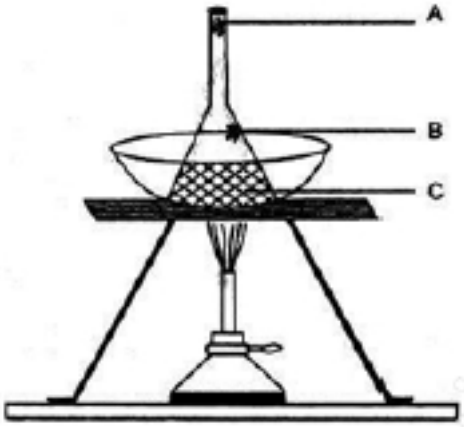
(a) Mercury in the thermometer keeps on falling till it reads □1□ C, it remains constant thereafter.

(b) Temperature falls, reaches 0□ C, then it remains constant even after the whole of the ice has melted.

(c) The temperature falls in the beginning but starts rising as soon as the ice starts melting.

(d) Temperature falls, reaches 0□□C and remains constant only as long as both ice and water are present in it.

28. The correct labeling of the diagram shown below is:-



(a) A - cotton plug, B - impure NH4Cl, C-mixture of NH4Cl and common salt

(b) A - NH4Cl vapours, B- pure NH4Cl, C- mixture of NH4Cl and common salt

(c) A - cotton plug, B - pure NH4Cl, C- mixture of NH4Cl and common salt

(d) A - Nh4Cl vapours, B - impure Nh4Cl, c- mixture of NH4Cl and common salt.

29. When a beam of light was passed through a solution, the path of light became visible. The solution could be -

(a) Lemonade

(b) Sugar solution

(c) Milk

(d) Salt solution .

30. When iron fillings and sulphur powder are heated in china dish at high temperature , we observe that

(a) Sulphur starts melting

(b) Iron fillings start melting

(c) Mixture becomes red hot

(d) Mixture evaporates.

31. Namita took small amount of mixture of iron and sulphur powder in a test tube and to it she added 15 ml of carbon disulphide. The test tube was vigourously shaken. It is was observed that

    (a) Both iron and sulphur dissolve to form a solution

    (b) Grey coloured iron particles dissolved but not the sulphur.

    (c) Yellow coloured sulphur particles dissolved but not the iron.

    (d) No change was observed.

32. On burning magnesium ribbon in air, a white ash is obtained. Name of the product and the type of change are:-

    (a) Magnesium hydroxide and physical change

    (b) Magnesium oxide and physical change

    (c) Magnesium oxide and chemical change

    (d) Magnesium hydroxide and chemical change.

33. Human cheek cells as observed under the microscope are

    (a) Irregular in shape with a nucleus in the centre

    (b) Circular in shape with a nucleus in the centre

    (c) Rectangular in shape with a nucleus towards the periphery

    (d) Spindle shaped with a nucleus in the centre.

34. Write the precautions that should be observed while preparation of temporary mount of cheek cell?

35. How can you separate the components of a mixture of sand, common salt and ammonium chloride? Explain.

36. Distinguish between mixture and compounds on the basis of:

    i. Appearance

    ii. Behaviour towards a magnet

    iii. Behaviour towards carbon disulphide.