CAMBRIAN PUBLIC SCHOOL

KANKE ROAD, RANCHI

Revision Assignment

Subject: Science **Class: IX**

Chemistry

NCERT Chapters

- Exploring Mixtures and Their Separation
- Journey Inside an Atom

A. Very Short Answer Questions

1) Define a homogeneous mixture with one example.

2) What is meant by the concentration of a solution?

3) Write the formula for calculating mass by volume percentage (% m/v).

4) Define solubility of a substance.

5) Who proposed the Plum Pudding Model of the atom?

6) What is a valence electron?

B. Short Answer Questions

7) Calculate the mass by volume percentage of a solution prepared by dissolving 10 g of common salt in water to make 250 mL of solution.

8) Explain any three methods used for the separation of mixtures. Give one suitable example for each from: Solid–Solid, Solid–Liquid and Liquid–Liquid mixtures.

9) Describe Thomson's Plum Pudding Model, Rutherford's Nuclear Model, and Bohr's Model of the atom. State one limitation of Thomson's model and one limitation of Rutherford's model.

10) Write the electronic configuration, number of valence electrons and valency of: (a) Sodium (Atomic Number 11) (b) Oxygen (Atomic Number 8).

C. Competency-Based Questions

11) A student was given a mixture containing iron filings, sand and common salt.

Answer:

a) Arrange the methods of separation in the correct sequence.

b) Name the principle involved in each method.

c) Why should filtration be performed before evaporation?

d) Which method would you use if the mixture contained kerosene and water instead? Give the reason.

12) Four elements P, Q, R and S have atomic numbers 6, 8, 11 and 17 respectively.

Answer:

a) Write the electronic configuration of each.

b) Identify the element having the highest valency.

c) Which element is most likely to lose one electron? Give a reason.

d) State one postulate of Bohr's model that explains the arrangement of electrons.

e) Why is the atomic number considered a better basis for classifying elements than the mass number?

Physics

- **Motion**
- **How the force affected the motion**

A: Very Short Answer Questions

1) What is the SI unit of acceleration?

2) Define 1 Newton.

3) If displacement is zero, can distance be non-zero? Give one example.

4) Name the law which states "Every action has equal and opposite reaction".

B: Short Answer Questions

5) Distinguish between speed and velocity. Give one example of each.

6) A train travels 360 km in 4 hours. It then travels 120 km in 2 hours. Find the average speed of the train for the entire journey.

7) State Newton's Second Law of Motion. Derive the formula F = ma from it.

8) Why is it difficult to stop a heavy truck moving at the same speed as a bicycle? Explain on the basis of momentum.

C: Long Answer Questions

9) a) State and explain Newton's First Law of Motion.

b) Give two examples from daily life to show inertia of motion and inertia of rest.

c) Why do we wear seat belts while traveling in a car?

10) a) Draw a velocity-time graph for:

i) Uniform motion ii) Uniformly accelerated motion

iii) Uniformly retarded motion.

b) A car starts from rest and accelerates at 2 m/s^2 for 10 seconds.

Find:

i) Final velocity ii) Distance covered in 10s .

Biology

Chapters:

- Cell
- Tissues

Very Short Answer Questions

1) Name the selectively permeable membrane of a cell.

2) Name the tissue that covers the outer surface of the body.

3) Name the tissue that stores food in plants.

4) Which animal tissue connects muscles to bones?

5) Which blood cells help in blood clotting?

Short Answer Questions

6) Mention any two functions of the plasma membrane.

7) Differentiate between rough endoplasmic reticulum and smooth endoplasmic reticulum.

8) Write two differences between cardiac muscle and skeletal muscle.

9) Mention any two functions of nervous tissue.

Long Answer Questions

10) Explain the structure and functions of the plasma membrane.

11) Explain the structure and functions of xylem with its components.

12) Describe the different types of muscular tissues with one function of each.

13) Draw a plant cell and label any eight parts.

14) Draw a striated muscle fibre and label its parts.

15) Draw the different types of plant tissues (Parenchyma, Collenchyma and Sclerenchyma) and label them.

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