I Answer all the questions. Each question carries 1 mark.

1. What is internal energy?

2. Food materials containing fat/oil, when left for a long time, lose their smell. Why?

3. State Fermat’s principle?

II Answer all the questions. Each question carries 2 marks.

4. What would be the final temperature of a mixture of 50g of water at 20°C temperature and 50g of water at 40°C temperature?

5. What is chemical equation? Give one example.

III Answer all the questions. Each question carries 4 marks.

6. Write the differences between evaporation and boiling

7. What is electrolysis of water?

IV Answer all the questions. Each question carries 1 mark.

8. Three bodies A, B and C are in thermal equilibrium. The temperature of B is 45°C then the temperature of C is

   A) 45°C     B) 50°C     C) 40°C     D) any temperature

9. Boiling point of water at normal atmospheric pressure

   A) 0°C     B) 100°C     C) 110°C     D) -5°C

10. The chemical equation: $\text{BaCl}_2 + \text{Na}_2\text{SO}_4 \rightarrow \text{BaSO}_4 + 2 \text{NaCl}$ represents following type of chemical reaction.

    A) Displacement B) combination) decomposition D) double-displacement

11. What happens when dil. HCl is added to iron filings?

    A) Oxygen     B) Nitrogen     C) Hydrogen     D) CO₂

12. The image which cannot be caught on a screen is called

    A) Real image     B) virtual image     C) both     D) none