

Marking Scheme: All questions carry 10 marks each. Subparts (A) and (B) carry 3 marks each and subpart (C) carries 4 marks.

Question 1:

- 1. Define the term 'induced magnetism'. What is meant by the phrase 'induction precedes attraction'?
- 2. State 3 differences between permanent magnet and electromagnet
- 3. State three evidences of the existence of earth's magnetic field. Explain any one of them in detail.

Question 2:

- 1. Solve the following:
 - a. In transferring 1.5 C charge through a wire, 9 J of work is needed. Find the potential difference across the wire
 - b. A bulb draws current 1.5 A at 6 V. Find the resistance of filament of bulb while glowing
- 2. State three differences between primary cell and secondary cell.
- 3. Draw an electric circuit diagram showing various components like the cell, key, rheostat, bulb, voltmeter and ammeter. Also state the function of each of these components.

Question 3:

- 1. Draw the pattern of magnetic field lines near a bar magnet placed with its north pole pointing towards the geographic north. Indicate the position of neutral points by marking an 'x'
- 2. You are given a magnetized bar and a compass needle. How will you identify the polarities of the bar (i.e. which end of the bar magnet is north pole and which one is the south pole)
- 3. State the four factors affecting resistance of a conductor and also mention how these factors affects the resistance.