7. Will the compass needle show deflection when the switch in the circuit shown by fig. 14.15 is closed?

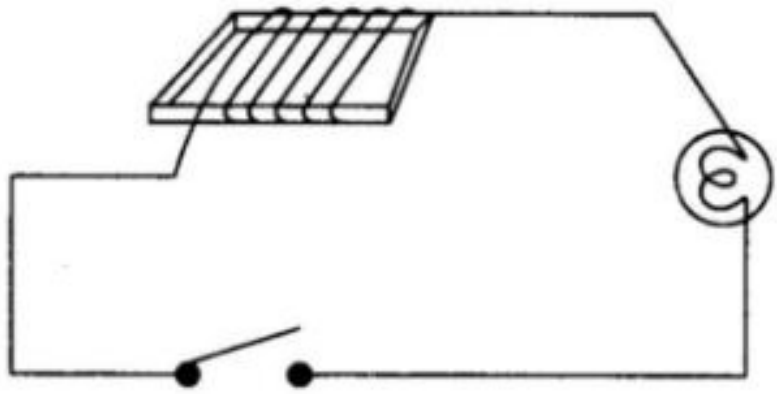

Fig. 14.15

Answer: No, because there is no source of electric current in this circuit, i.e., there is no battery.

8. Fill in the blanks:
(a) Longer line in the symbol for a cell represents its _____terminal
(b) The combination of two or more cells is called a _____.
(c) When current is switched 'on' in a room heater, it _____.
(d) The safety device based on the heating effect of electric current is called a _____.
Answer:
(a) positive
(b) battery
(c) becomes red hot and emits heat
(d) fuse.

9. Mark 'T' if the statement is true and 'F' it is a false:
(a) To make a battery of two cells, the negative terminal of one cell is connected to the negative terminal of the other cell. [T/F]
(b) When the electric current through the fuse exceeds a certain limit , the fuse wire melts and breaks. [T/F]
(c) An electromagnet does not aatract a piece of iron. [T/F]
(d) An electric bell has an electromagnet. [T/F]
Answer: (a) F (b) T (c) F (d) T

10. Do you think an electromagnet can be used for separating plastic bags from a garbage heap? Explain.
Answer: No, the plastic bags do not get attracted by the magnet, so they cannot be separated by an electromagnet. Plastic bags are not magnetic materials, only magnetic materials like iron can be attracted by the magnet.

11. An electrician is carrying out some repairs in your house. He wants to replace a fuse by a piece of wire. Would you agree? Give reasons for your response.

Answer: No, we would not agree to allow to replace the fuse by a wire. Wires in the fuses are of specific melting points. So wd should always use ISI marked fuses in our houses to prevent short circuits.

12. Zubeda made an electric circuit using a cell holder shown in fig. 14.16, a switch and a bulb. When she put the switch in the 'ON' position, the bulb did not glow. Help Zubeda in identifying the possible defects in the circuit

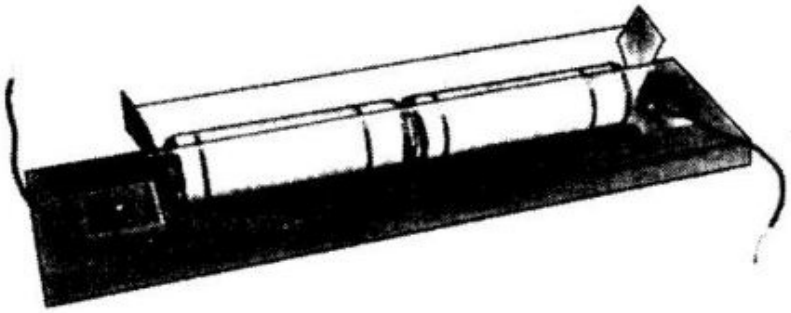

Fig. 14.16 A cell holder.

Answer: It is important to put the cells in right series. The positive terminal of the first cell should be connected with negative terminal of the second cell. The switch should be closed properly and bulb should not be fused. If Zubeda will check these then the bulb will certainly glow.

13. In the circuit shown in fig. 14.17.

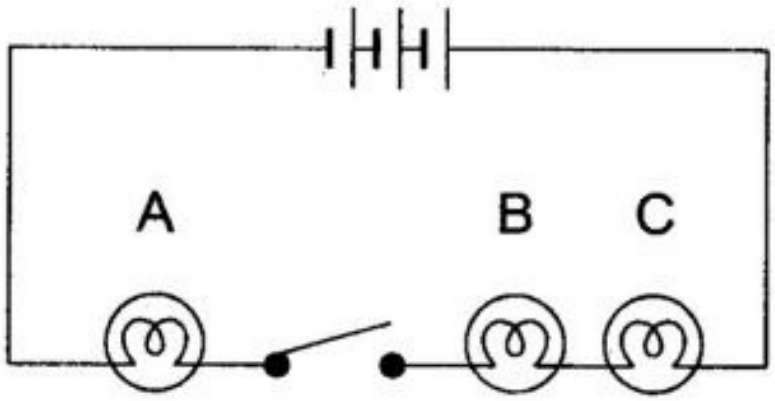

Fig. 14.17

Would any of the bulb glow when the switch is in the 'OFF' position? What will be the order in which the bulbs A, B and C will glow when the switch is moved to the 'ON' position?

Answer: No bulb will glow.
All bulbs will glow simultaneously.

********** END **********