Chapter 14

MULTIPLE CHOICE QUESTIONS

1. d 2. a 3. d 4. a
5. d 6. c 7. d

VERY SHORT ANSWER QUESTIONS

8. (a) Cathode (c) Conductor
   (b) Electroplating (d) Chromium

9. A coating of zinc is provided to protect iron from corrosion and rust.

10. No

11. Heating effect of electric current.

SHORT ANSWER QUESTIONS

12. Addition of another cell increased the current through the bulb sufficiently to make it glow.

13. The current through liquid B could be weak and therefore unable to make the bulb glow. However, it was strong enough for the LED to glow.

14. The spoon should be connected to the negative terminal of the battery. The other electrode should be made of silver.

15. Tin is less reactive than iron. Tin coating prevents food from coming in contact with iron and thus prevents it from getting spoiled.

16. Diagram A shows the correct observation.

LONG ANSWER QUESTIONS

17. No, Yes, No, Yes

18. • Bubbles of gas may be formed on the electrodes.

- Deposits of metal may be seen on electrodes.
- Change in the colour of the solution may take place.
- The solution may get heated. (Any three)

19. Yes, copper from the copper sulphate solution will be deposited on the carbon rod. Copper from the copper plate will be dissolved into the copper sulphate solution for electroplating.

20. (i) plate A – Pure copper
(ii) plate B – Impure copper
(iii) the solution – Copper sulphate

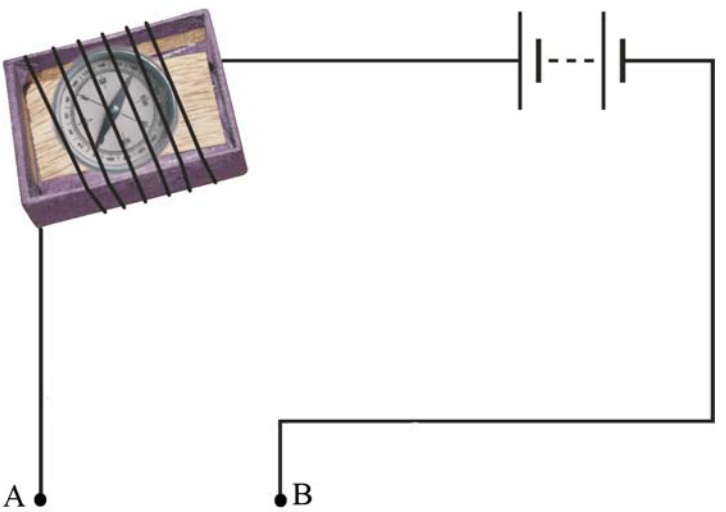
Copper from impure copper plate is transferred to the pure copper plate by the process of electroplating.

21. Yes, air is a poor conductor of electricity. No, under certain conditions, such as during lightning, air may conduct electricity.

22. If the water is distilled water and lemon juice is not added, no current will pass through the circuit. If the water taken is salty, then a feeble current will pass through the circuit and bubbles will be seen on the negative electrode.

23. (i) It indicates the presence of current in the circuit.
(ii) The bulb did not glow because the current was not sufficient to make it glow.
(iii) Deflection in the magnetic compass will increase.
(iv) Deflection in the compass will increase further.

24.



Whenever current flows through the circuit the megnetic compass needle shows deflection due to magnetic effect of current.