

CSBE Class 8 Science
NCERT Exemplar Solutions
CHAPTER – 14
Chemical Effects of Electric Current

MULTIPLE CHOICE QUESTIONS

1. An electric current can produce:

- (a) heating effect only.
- (b) chemical effect only.
- (c) magnetic effect only.
- (d) chemical, heating, and magnetic effects.

Ans: (d) chemical, heating, and magnetic effects.

Explanation: An electric current can produce all the effects: Chemical effect, Heating effect, Magnetic effect

2. Boojho and Paheli performed experiments taking similar bulbs and cells but two different solutions A and B as shown in Fig.14.1.

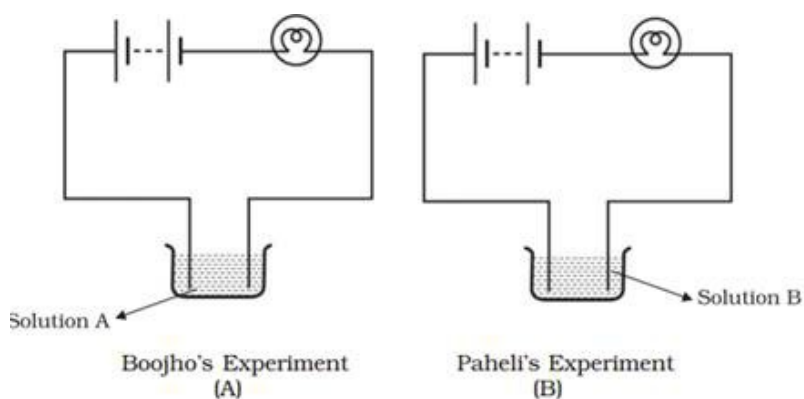


Fig. 14.1

They found that the bulb in the setup A glows more brightly as compared to that of the setup B. You would conclude that:

- (a) higher current is flowing through the circuit in setup A.
- (b) higher current is flowing through the circuit in setup B.
- (c) equal current is flowing through both the circuits.
- (d) the current flowing through the circuits in the two setups cannot be compared in this manner.

Ans: (a) higher current is flowing through the circuit in setup A.

Explanation: The bulb in the setup A glows more brightly as compared to that of the setup B. This means that a higher current is flowing through the circuit in setup A.

3. Boojho's uncle has set up an electroplating factory near his village. He should dispose off the waste of the factory:

- (a) in the nearby river.
- (b) in the nearby pond.
- (c) in the nearby cornfield.
- (d) according to the disposal guidelines of the local authority.

Ans: (d) according to the disposal guidelines of the local authority.

Explanation: Boojho's uncle should dispose off the waste of the electroplating factory according to the disposal guidelines of the local authority.

4. When an electric current is passed through a conducting solution, there is a change in the colour of the solution. This indicates:

- (a) the chemical effect of current.
- (b) the heating effect of current.
- (c) the magnetic effect of current.

(d) the lightning effect of current.

Ans: (a) the chemical effect of current.

Explanation: When an electric current is passed through a conducting solution, there is a change in the colour of the solution. This indicates the chemical effect of electric current.

5. Which one of the following solutions will not conduct electricity?

(a) lemon juice

(b) vinegar

(c) tap water

(d) vegetable oil

Ans. (d) vegetable oil

Explanation: Lemon juice contains citric acid, Vinegar contains acetic acid. Tap water has dissolved salts.

6. Which of the following metals is used in electroplating to make objects appear shining?

(a) iron

(b) copper

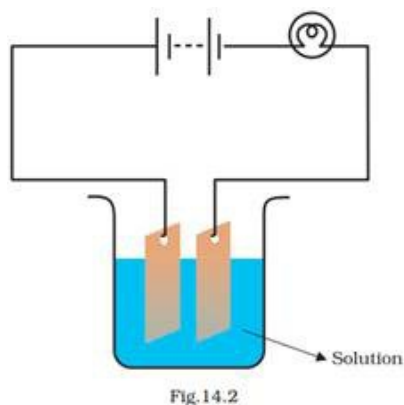
(c) chromium

(d) aluminium

Ans: (c) chromium

Explanation: **Chromium** is used for electroplating due to its shiny appearance and the ability to resist scratches.

7. Which of the following solutions will not make the bulb in Fig 14.2 glow?



- (a) sodium chlorides
- (b) copper sulphate
- (c) silver nitrate
- (d) sugar solution in diluted water

Ans. (d) Sugar solution in diluted water

Explanation: Sugar solution in diluted water will not make the bulb glow. Sugar does not dissociate into ions and distilled water too has no ions due to which there would not be any ions to transport the charges. Current is produced by the movement of charges.

8. Fill in the following blanks:-

- (a) The object to be electroplated is taken as _____ electrode.
- (b) One of the most common applications of chemical effect of electric current is _____.
- (c) Small amount of a mineral salt present naturally in water makes it a _____ of electricity.
- (d) Electroplating of _____ is done on objects like water taps and cycle bell to give them a shiny appearance.

Ans: (a) Cathode

(b) Electroplating

(c) Conductor

(d) Chromium

9. Why is a layer of zinc coated over iron?

Ans: A layer of zinc is coated over iron to protect iron from rusting and corrosion. This process is known as **galvanization**.

10. Will the solution of sugar in distilled water conduct electricity?

Ans: No, the solution of sugar in distilled water will not conduct any electricity.

11. Name the effect of current responsible for the glow of bulb in an electric circuit.

Ans: **Heating effect of electric current** is responsible for the glow of bulb in an electric circuit.