

UNIQUE STUDY POINT BY SUMEET SAHU
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ELECTRICITY
Class 08 - Science (Curiosity)

Time Allowed: 30 minutes

Maximum Marks: 25

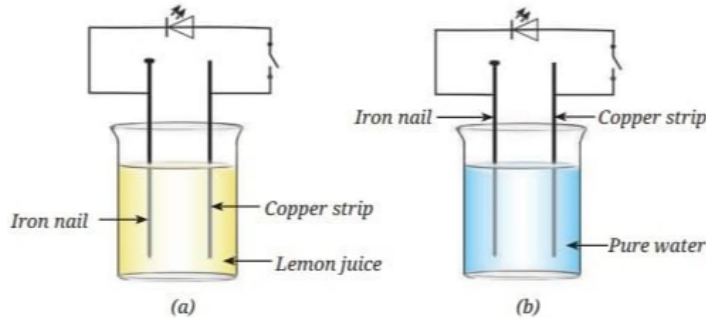
1. If we don't have an electric lamp while making an electric circuit with an electric cell, is there any other way to find out if current is flowing in the circuit? [3]
2. Is it possible to make temporary magnets? How can these be made? [2]
3. We can generate heat by burning fossil fuels and wood; but how is heat generated in various electrical appliances? [2]
4. How do we know if a cell or a battery is dead? Can all cells and batteries be recharged? [3]
5. Fill in the blanks: [1]
The solution used in a Voltaic cell is called _____.
6. Fill in the blanks: [1]
A current carrying coil behaves like a _____.
7. State whether the given statement is True or False: [1]
Dry cells are less portable compared to Voltaic cells.
8. State whether the given statement is True or False: [1]
A coil becomes an electromagnet only when electric current flows through it.
9. State whether the given statement is True or False: [1]
An electromagnet, using a single cell, attracts more iron paper clips than the same electromagnet with a battery of 2 cells.
10. An electric current flows through a nichrome wire for a short time. [1]
 - i. The wire becomes warm.
 - ii. A magnetic compass placed below the wire is deflected.
 - a) Both (i) and (ii) are not correct
 - b) Only (i) is correct
 - c) Both (i) and (ii) are correct
 - d) Only (ii) is correct

11. Match the items in Column A with those in Column B. [2]

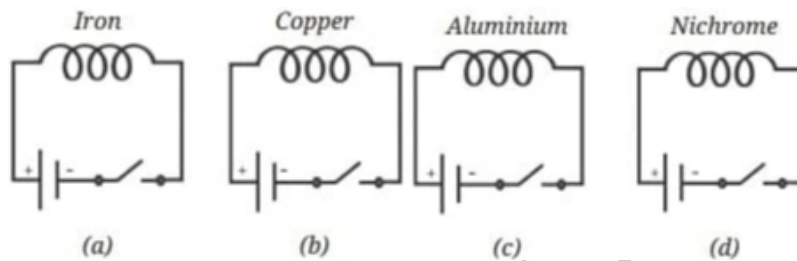
Column A	Column B
(i) Voltaic cell	(a) Best suited for electric heater
(ii) Electric iron	(b) Works on magnetic effect of electric current
(iii) Nichrome wire	(c) Works on heating effect of electric current
(iv) Electromagnet	(d) Generates electricity by chemical reactions

12. Nichrome wire is commonly used in electrical heating devices because it [1]
- a) is an insulator of electricity.
 - b) is a good conductor of electricity.
 - c) generates more heat for a given current.
 - d) is cheaper than copper.

13. Electric heating devices (like an electric heater or a stove) are often considered more convenient than traditional heating methods (like burning firewood or charcoal). Give reason(s) to support this statement considering societal impact. [2]
14. Suppose Sumana forgets to move the switch of her lifting electromagnet model to OFF position (in introduction story). After some time, the iron nail no longer picks up the iron paper clips, but the wire wrapped around the iron nail is still warm. Why did the lifting electromagnet stop lifting the clips? Give possible reasons. [1]
15. In Fig., in which case the LED will glow when the switch is closed? [2]



16. We have four coils, of similar shape and size, made up from iron, copper, aluminium, and nichrome as shown in Fig. When current is passed through the coils, compass needles placed near the coils will show deflection. [1]



When current is passed through the coils, compass needles placed near the coils will show deflection.

- a) In all four circuits
 b) Only in circuits (a) and (b)
 c) Only in circuits (a), (b), and (c)
 d) Only in circuit (a)