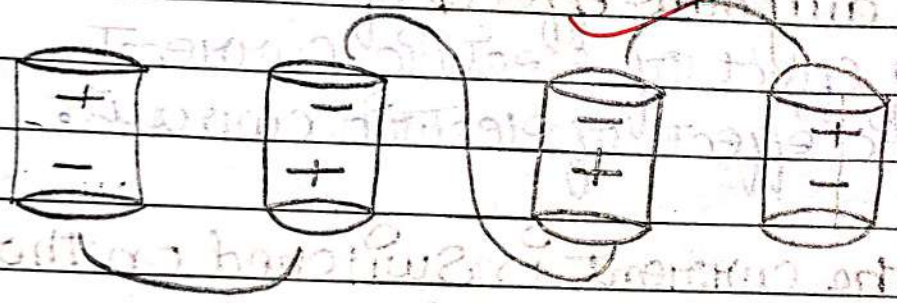
16-8-2024

Electric Current And Its Effects

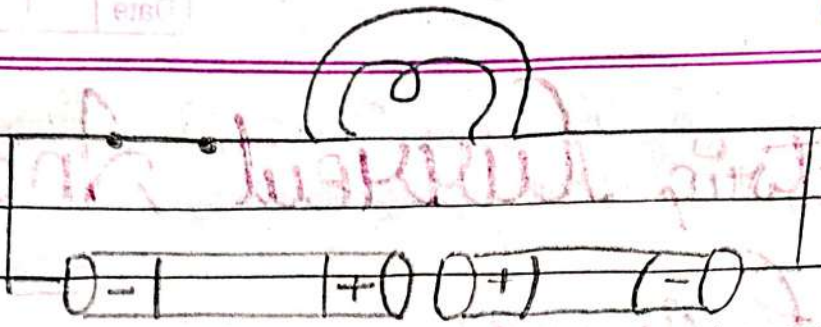
* Exercises

Q5 Fig. 10.22 shows four cells fixed on a board. Draw lines to indicate how you will connect their terminals with wires to make a battery of four cells.

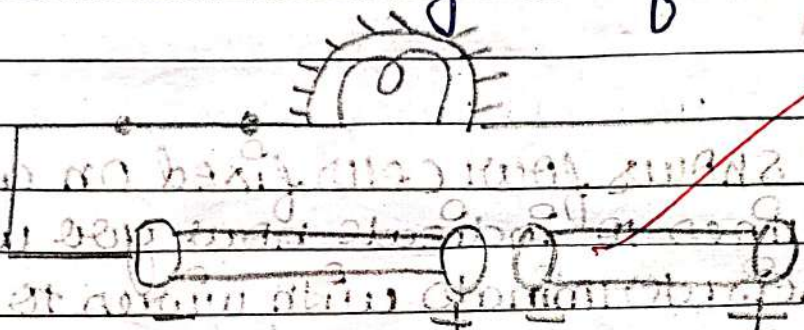
Ans



Q4 The bulb in the circuit shown in Fig. 10.23 does not glow. Can you identify the problem? Make necessary changes in the circuit to make the bulb glow?



Ans The cell are not connected properly.
Correct arrangment of cells -



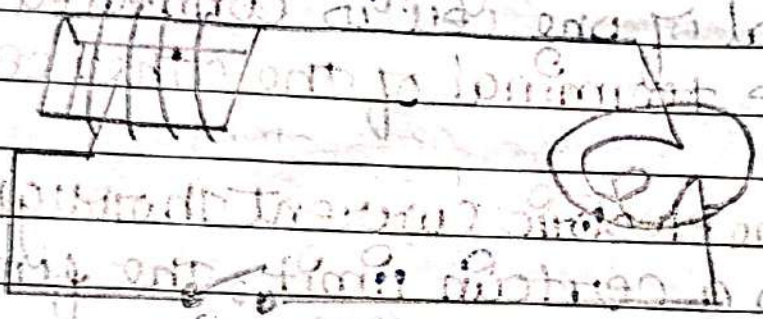
05 Name any two effects of electric current.
Ans i) Heating effect of electric current.
ii) Magentic effect of electric current.

06 When the current is switched on through a wire, a compass needle kept nearby gets deflected from its north-south position. Explain?
Ans: No, In the absence of current, the wire does not behave as a magnet and hence the compass needle will not show any deflection.

Ans 01 Will the compass needle show deflection whe

6/ The switch in the circuit shown by Fig. 10.24 is closed?

Ans When a current is switched on through a wire, the wire starts behaving as a magnet, when a compass needle is placed near wire, it gets influenced by the magnetic effect of electric current and gets dfjected from its north-South position.



Q8 Fill in the blanks:

a) Longer line in the symbol for a cell represents its positive terminal.

b) The combination of two or more cells is called a battery.

c) When current is switched 'on' in a room heater, it produce heat.

d) The safety device based on the heating effect of electric current is called a fuse.

Q9 Mark 'true' and 'false' in the following statement.

a) To make a battery of two cells, the negative terminal of one cell is connected to the negative terminal of the other cell. (False).

b) When the electric current through the fuse exceeds a certain limit, the fuse wire melts and breaks. (True).

c) An electromagnet does not attract a piece of iron (False).

d) An electric bell has an electromagnet (True)

Q10 Do you think an electromagnet can be used for separating plastic ~~bad~~ ~~bab~~ bags from a garbage heap? Explain?

Ans No, Electromagnet can not be used to separate plastic bags from a garbage heap, because it attracts only metals.

Q11 An electrician is carrying out some repair in your house. He wants to replace a fuse by a piece of wire. Would you agree? Give reason for your response.

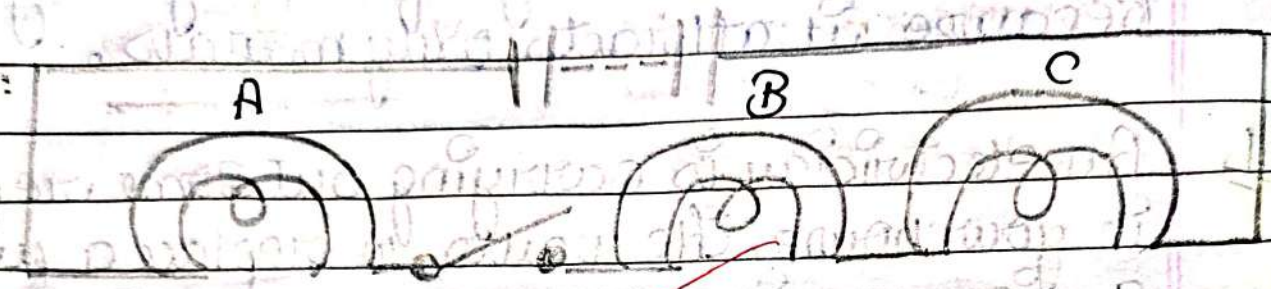
Ans No, because if any accident the current exceeds this safe limits the wire may become overheated and may cause fire.

Q12 Zubeda made an electric circuit using a cell holder shown in Fig 10.4 a switch and a bulb. When she put the switch in the ~~'OFF'~~ 'ON' position, ... circuit.

Ans One the reason may be that the rubber band used in cell holder may be tight enough to keep the two cells in contact with each other, so the circuit will not complete, the bulb will not glow.

Other reason may be that the two cells are not connected properly.

Q13 In the circuit shown in Fig. 10.25



i) would any of the bulb glow when the switch is in the 'OFF' position?

Ans No.

ii) What will be the order in which the bulbs A, B and C will glow when the switch is moved to the 'ON' position?

Ans Bulbs will glow simultaneously.