

## Electric current and its effects.

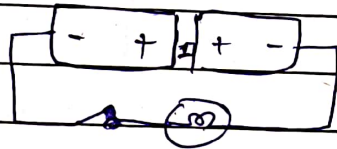
### 7. Short Answer:

1. Why do not tube lights (or fluorescent tubes) generate heat?

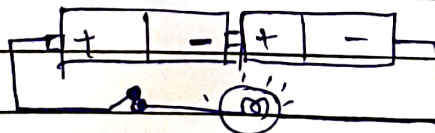
Ans: A tube-light or fluorescent tube does not generate heat because it does not contain current carrying filament.

### 8. Long Answer:

1. The bulb in the circuit shown alongside does not glow. Where is the fault in the circuit? Correct the fault and redraw the circuit diagram.



Ans: The cells are connected wrong. They should be placed one after the other connecting negative terminal of one to the positive terminal of the other. The corrected connection is shown below.



III. HOTS:

1. Why cannot copper wire be used as a fuse wire?

Ans: A copper wire cannot be used as a fuse wire because it has a high melting point, low resistance. It would not melt easily when a high electric current will pass through it and may damage the electrical appliances.

2. A copper wire coil is suspended freely. When no current is passed through it, it comes to rest in any direction.

Which direction will it point if current is passed through it?

Ans: When current is passed through a copper wire coil, a magnetic field generates around it and it behaves like a magnet. Since a magnet suspended freely in air rests in north and south direction, the coil will also rest in north-south direction as long as the current is made to pass through it.

3. You must have seen birds sitting on an overhead electric cable comfortably. Once a while, a monkey (or any other small animal) swings between the two parallel wires, gets electrocuted and dies. Give explanation.

Ans:





When birds sit on an overhead electric cable they sit only on one of the two parallel cables. This does not complete the circuit and not lead to any current flow.

When monkey or any other small animal swings between the two parallel wires, it completes the circuit thus allows current flow leading to electric shock.