Marks: 25 Time:20 mins

I. Choose the correct option in the following questions:

1. Cell is a device which-

(a) converts chemical energy into electrical energy

(b) electrical energy into light energy

(c) electrical energy into magnetic energy

(d) None of these

2. Filament of a bulb is made up of -

(a) aluminium

(b) chromium

(c) platinum

(d) tungsten

3. Bulb glows only in-

(a) closed circuit

(b) open circuit

(c) in both circuits

(d) open circuit if bulb is not fused-

4. An example of a conductor is -

(a) tap water

(b) salt solution

(c) metal wire

(d) all of these

5. What will happen if you join the two terminals of a cell without connecting them through a switch or a bulb?

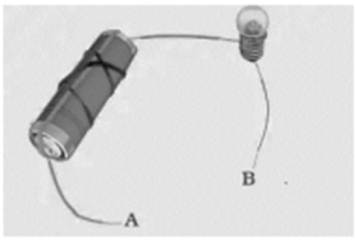
(a) There will be no impact to cell

(b) The chemicals in the electric cell get used up slowly and cell will produce electricity longer

(c) The chemicals in the electric cell get used up very fast and the cell will no longer produce electric current. It will stop working.

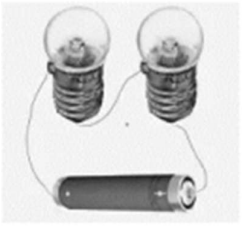
(d) None of these.

6. In the below arrangement, the bulb will not glow, if it is connected to



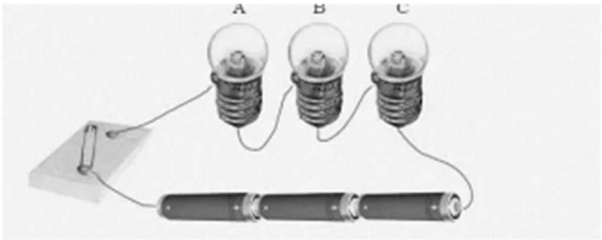
(a) copper wire
(b) metal clip
(c) steel spoon
(d) Plastic

7. Which is of these is true:



(a) If the first bulb filament is broken, the second bulb will still glow
(b) If the second bulb filament is broken, the first bulb will still glow
(c) Both the bulb will glow even if one of the bulb filaments is broken
(d) Neither of the bulb will glow

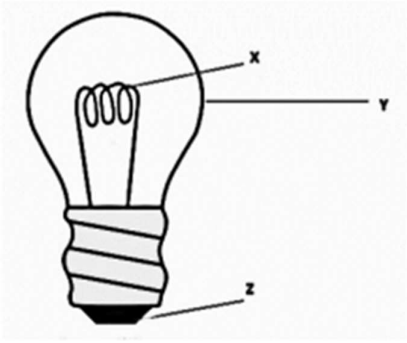
8.



In the above diagram, the switch is moved to on position

(a) Bulb A will glow first
(b) Bulb B will glow first
(c) Bulb C will be glow first
(d) All the bulbs will glow together. 8

II. Label the following diagram of the bulb, what is X made of? What is its function?



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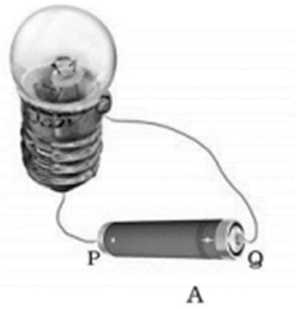
III. Fill in the blanks with appropriate words:

1. An electrical cell has two terminals, ……and.……
2. Materials through which current can pass are called …….
3. Materials through which current cannot pass are called ……..
4. Our body is a ……. conductor of electricity.
5. When a switch is off, the circuit becomes ……
6. We use ……to test the conductivity of a material.
7. A switch ……. or ……. a circuit.
8. Electricity we use in our homes is supplied from a …… 10

IV. Source Based Question Figure A and B show a bulb connected to a cell in two different ways.



A

B

(i) What will be the direction of the current in both cases?

(ii) Will the bulb glow in both cases?

(iii) Does the brightness of the glowing bulb depend on the direction of current through it? 3