EINSTEIN'S ACADEMY

10TH STANDARD SCIENCE

UNIT – 4

10 Science

Unit: 4. Electricity MARKS: 40

MARKS

I. Choose the best answer 5 x 1 = 5

1. SI unit of resistance is

a) mho b) joule

c) Ohm d) Ohm meter

2. In a simple circuit, why does the bulb glow when you close the switch?

a. The switch produces electricity.

b. Closing the switch completes the circuit.

c. Closing the switch breaks the circuit.

d. The bulb is getting charged.

3. The wiring in a house consists of

circuits.

a. Parallel b. series

c. combined d. none of these

4. The component used to measure the current.

a. Voltmeter b. Galvanometer

c. Ammeter d. Diode

5. Kilowatt hour is the unit of

a) resistivity b) conductivity

c) electrical energy d) electrical power

II. Fill in the blanks

3x1=3

6. When a circuit is open, _____cannot pass through it.

7. The wiring in a house consists of _____circuits.

8. The power of an electric device is a product of _____and_____

IV. Match the items in column-I to the items (2)

in column-II:

(i) electric current - (a) volt

(ii) potential difference - (b) ohm meter

(iii) specific resistance - (c) watt

(iv) electrical power - (d) joule

(v) electrical energy - (e) ampere

V. short answer questions. (answer any Five) 5 x 2 = 10

9. Define electric potential and potential difference.

10. Why is tungsten metal used in bulbs, but not in fuse wires?

11. Name any two devices, which are working on the heating effect of the electric current.

12. State Ohm's law.

13. Define the unit of current.

VI. Long answer questions.

4 x 5= 20

14. a) What are the advantages of LED TV

over the normal TV?

b) List the merits of LED bulb.

15. Explain about domestic electric circuits.

16. a) State Joule's law of heating.

b) An alloy of nickel and chromium is used as the heating element. Why?

c) How does a fuse wire protect electrical appliances?

17. A piece of wire having a resistance R is cut into five equal parts.

a) How will the resistance of each part of the wire change compared with th original resistance?

b) If the five parts of the wire are placed in parallel, how will the resistance of the combination