

Chapter: 3

Q.1 A) Choose the correct alternative and rewrite the sentence (1)

Which particles are responsible for flow of current in metallic conductors?

- a. protons
- b. electrons
- c. neutrons
- d. none of the above

B) Answer the following questions. (2)

1) Find co-related terms

Ammeter : current :: : Potential difference.

2) Find the odd man out:

- 2) Potential difference, Electric current, Resistance, The coulomb

Q.2 A) Give scientific reasons (Any one) (2)

- 1) Metals are good conductors of electricity.
- 2) While handling an electrical device, hands should be dry.

B) Answer the following questions. (Any two) (4)

1) Write short notes

- 1) 'Electric potential difference'.

2) Distinguish between

OHMIC Conductor and Non-OHMIC Conductor

- 3) Two resistances of $4\ \Omega$ and $6\ \Omega$ are connected in parallel. Find their equivalent resistance.

Q.3 Answer the following questions. (Any two) (6)

- 1) What should be done if a person gets an electric shock?
Why our body can conduct electricity?

2)

The resistance of a 1m long nichrome wire is $6\ \Omega$. If we reduce the length of the wire to 70 cm. What will be the resistance.

- 3) The following figures show conducting wires of different lengths. Answer the questions.



- a. Which wire has greater resistance? Why?
- b. Write the expression for resistivity.

c. How will you prove that the unit of resistivity is $\Omega\ m$?

Q.4 Answer the following questions. (Any one)

(5)

- 1) The given figure shows some electrical appliances connected in a circuit in a house. Answer the following questions.



- By which method are the appliances connected?
 - What must be the potential difference across individual appliances?
 - Will the current passing through each appliance be the same? Justify your answer.
 - Why are domestic appliances connected in this way?
 - If the TV stops working, will the other appliances also stop working? Explain your answer.
- 2) Derive the expression for the resistors connected in series combination.