SUBJECT:- PHYSICS   CLASS:- XTH   DATE:22/04/XXI

SUBJECT TEACHER:- MR. NEEL NIRANJAN

CHAPTER 1. (ELECTRICITY) (BASED ON NCERT PATTERN)

Q1. How much energy is given to each coulomb of charge passing through a 6 V battery?

Ans. Amount of charge = 1 coulomb or 1C,   Potential difference = 6V , Energy or work done = ?

Work done or energy = V × Q[Q is the amount of charge flowing between two points at potential difference V = 6]

i.e., W = V × Q

W = 6 × 1

Work done or energy = 6 joules.

Q2. On what factors do the resistance of a conductor depend?

Ans. Resistance of a conductor depends on:

(a) **Length of a conductor.** Resistance of a conductor is directly proportional to the length of a conductor. If length increases resistance will also increase.

(b) **Area of cross section of a conductor.** The resistance of a conductor is inversely proportional to the area of the cross section of a conductor.

(c) **Effect of material of a conductor.** The resistance of a conductor also depends on the material of a conductor.

E.g. The resistance of nichrome wire is 60 times more than that of copper wire as nichrome has high electrical resistance.

(d) **Effect of temperature.** The resistance of all pure metals increases on increasing the temperature and decreases on decreasing the temperature.

Q3. Will current flow more easily through a thick wire or a thin wire of the same material, when connected to the same source? Why?

Ans. The current will flow more easily through a thick wire as compared to the thin wire because the resistance of thick wire is less than that of thin wire. Less resistance, means more current.