Physics - 12th Class Physics Chapter 2 Short Questions Preparation

Q1. Define Electromotive force and Terminal potential difference.

Ans 1: Electromotive force:The energy supplied to a unit charge in moving it from negative to positive electrode inside the source is called electromotive force.

Ans 2: Terminal potential difference:The potential difference across the terminal of a cell or battery when current is being drawn from it is called terminal potential difference.The potential difference across the conductor is zero when no current flows through it.

Q2. State Ohm's law and basic principle of electroplating.

Ans 1: Current passing through a wire is directly proportional to the potential difference applied across its ends provided that the physical state conductors remains same.
Basic principle of electroplating is a process of coating a thin layer of sum expensive metal of (gold,silver etc) on a article of some cheap metal.

Q3. What is meant by Tolerance? Also give one example.

Ans 1: Tolerance mean the possible variation in the value of resistance of a carbon resistors from a marked value.In case of silver and gold ban its value is +-10% and +-5% .

Q4. How a wheatstone bridge is used to determine an unknown resistance?

Ans 1: Wheatstone bridge is an especially designed electrically circuit used to calculate the accurate value of any unknown resistance.It consists of four resistance,a galvanometer, a battery and a switch connected.When the switch is closed current pas through the galvanometer and then the three known resistance R_1,$R_2$and $R_3$are adjusted in such a way that galvanometer show no deflection,In this balanced condition the fourth unknown resistance R_4can be calculated by using this relation.$R_1/R_2=R_3/R_4$.

Q5. Give two substance having negative temperature coefficient.Also define the temperature coefficient.

Ans 1: The temperature coefficient of a resistance is defined as fractional change in resistance per kelvin rise in temperature.Its unit is K^{-1}.Substance like Ge and Si have negative temperature coefficient.

Q6. How can rheostat be used as potential divider?

Ans 1: By adjusting the sliding contact resistance of the rheostat can be altered which in turn would regulate the potential offered by the cell E to the main circuit,And thus a rheostat can be used as potential divider.

Q7. What is wheat stone bridge?

Ans 1: It is an electrical circuit which can be used to find the unknown resistance of a wire.It consists of four resistance connected in the form of mesh.galvanometer,battery and switch.

Q8. How the heating effects produce when current flows through the conductor?

Ans 1: During their motion free electrons collide frequently with the atoms of metal,on each collision they transfer some of their kinetic energy to the atime with which they collide.And these collisions produce heating effect in the wire.

Q9. What is meant by tolerance?

Ans 1: Tolerance means the possible variation from the marked value.

Q10. Differentiate between conventional and non-conventional current.

Ans 1: Conventional Current: The current flow die to positive charges from a point at higher potential to a point at lower potential is called conventional current.

Ans 2: Non-Conventional Current: The amount of electric charge that flow through a cross section of a conductor per unit time is known as electric current.It is also known as non-conventional current.
