



## **BEE VIVA QUESTION AND ANSWER:-**

**Q.1 What is electric current?**

**Ans.** Flow of electrons is called electric current.

**Q.2 Define Electric Potential?**

**Ans.** The capacity of charged body to work is called electric potential.

**Q.3 What is Resistance?**

**Ans.** The property of material by virtue of which it opposes or resists the flow of current is known as resistance.

**Q.4 Define Electric Energy?**

**Ans.** The total amount of work done in an electric circuit is known as electric energy.

**Q.5 What is Electric Power?**

**Ans.** The rate at which work is done in an electric circuit is known as electric power.

**Q.6 On what factors does the resistance offered by a conductor depend on?**

**Ans.** 1. It is directly proportional to its length. 2. It is inversely proportional to the area of cross-section of conductor. 3. Depends on temperature of the conductor. 4. Depends on nature of material of conductor.

**Q.7 What is conductance?**

**Ans.** The property of conductor due to which it allows the current to pass through it is known as conductance.

**Q. 8 State Ohm's Law**

**Ans.** It states that "for any conductor potential difference (V) between two ends and current (I) flowing between two ends of conductor are directly proportional to each other".

**Q.9 State Kirchhoff's voltage Law.**

**Ans.** "The algebraic sum of product of current and corresponding resistance in closed circuit is equal to the electromotive force in that circuit".

**Q.10 State Kirchhoff's current Law.**

**Ans.** "The algebraic sum of the currents meeting at a node of electrical circuit is zero or at any node sum of incoming current is always equal to sum of outgoing currents.



**Q.11 What is bilateral network?**

**Ans.** A circuit or network in which the magnitude of current remains constant when the polarity of source is reversed is called bilateral network.

**Q.12 What are Passive Elements?**

**Ans.** A passive element is an electrical component that does not generate power, but instead dissipates, stores, and/or releases it. Passive elements include resistances, capacitors, and coils (also called inductors).

**Q.13 What are Active Elements?**

**Ans.** The active elements generate energy. Batteries, generators, operational amplifiers, etc are active elements.

**Q.14 State Superposition theorem.**

**Ans.** "In a linear and bilateral network containing two or more than two source of emf, the current flowing through any branch is algebraic sum of currents that would be produced due to each emf while acting alone and other sources of emf are to be replaced by their internal resistances".

**Q.15 What is Flux Density?** **Ans.** The number of flux passing per unit area is called flux density.

**Q.16 Define Magnetomotive force.**

**Ans.** It is the force which drives the flux through the magnetic circuit. In case of electromagnet, it is given by product of current and number of turns in the coil.

**Q.17 Define magnetic field intensity.**

**Ans.** It is defined as magnetomotive force per unit length of magnetic path.

**Q.18. Explain the term : Paramagnetic materials.**

**Ans.** The materials, which are not strongly attracted by the magnet, such as aluminium, tin, platinum, magnesium, manganese etc. are known as paramagnetic materials. The relative permeability is small but positive. **Q.19. Explain the term : Diamagnetic materials**

**Ans.** The materials which are repelled by a magnet such as zinc, mercury, lead, sulphur, copper, silver etc. are known as diamagnetic materials. The permeability is slightly less than unity.

**Q. 20 Explain the term : Ferromagnetic materials**



**Ans.**The materials, which are strongly attracted by the magnet, such as iron, steel, nickel, cobalt etc. are known as ferromagnetic materials. The permeability is very high.

**Q.21**What is permeability ?**Ans.**The ability of material to conduct flux is known as permeability. More the permeability, more is the flux and hence stronger is the magnet.

**Q.22** Define Reluctance.

**Ans.**The opposition offered to the flow of flux by magnetic path is called reluctance.

**Q. 23** What is permeance?**Ans.**The reciprocal of reluctance is known as permeance of magnetic circuit.

**Q.24**What do you mean by leakage flux?

**Ans.**It is that flux which does not follow its intended or desired path in a magnetic circuit.

**Q.25**What do you mean by residual flux?

**Ans.**It is the flux which remains in a sample of magnetic material after the magnetising force reduced to zero.

**Q.26** What is coercivity?**Ans.**It is the amount of magnetising force required to reduce the retained magnetism to zero