## 13.12 QUESTIONS FROM PAST PAPERS:

### Definitions:

**Q.1** Define the following:

(i) Resistivity

(ii) Temperature coefficient of resistance

(iii) Electromotive Force **(2002 P.E, 2003 P.E)**

### Ohm's Law, Combination of Resistance Resistivity and Dependence of resistance on temperature.

**Q.1** How is the resistance of metallic conductor affected by variation in Temperature. **(2013, 2011)**

**Q.2** State the law which governs the potential difference across the conductor and the current passing through it. How is the resistance of the conductor related to its dimensions? Derive the formula for the temperature co-efficient of resistivity. **(2007, 2005)**

**Q.3** State Ohm's Law and derive an expression for the equivalent resistance of three resistors connected in parallel. **(2006)**

**Q.4** State Ohm's Law, Define resistivity and name the factors on which the resistance of a conductor depends. **(2002 P.M)**

**Q.5** Differentiate between electromotive force and terminal potential difference of a battery when an external resistance is connected and not connected across it.

### EMF and Voltage:

**Q.1** Define potential difference and electromotive force. Both are measured in volts. What is the difference between these concepts? **(2010)**

**Q.2** Differentiate between terminal potential difference and EMF of a battery. Derive the relevant expression. **(2008)**

**Q.3** Differentiate between electromotive force and terminal potential difference of a battery when an external resistance is connected and not connected across it. **(2002 P.M)**