MOST IMPORTANT QUESTION– BEE (3110005)

MIMP question

1) State and explain (i) Kirchhoff's current and voltage laws (ii) Ohm's law
2) Derive expression for delta to star and star to delta conversion of resistive network.
3) Explain construction and working of single phase transformer and three phase transformer and Derive EMF equation for transformer.
4) Explain ideal transformer and what is difference between ideal transformer and actual transformer?
5) Explain Auto transformer and its applications and Explain the different types of losses in transformer
6) Explain types of cable and Explain Cable construction with neat sketch diagram
7) Explain charging and discharging equation for lead acid battery
8) Explain the phenomena of electrical resonance in R –L –C series circuit connected to variable frequency supply. Also derive the equation for resonance frequency. Explain Q factor and draw the resonance curve.
9) Established relationship between line and phase voltages and currents in balanced delta and star connection. Draw complete phasor diagram of voltages and currents.
10) Explain the two wattmeter method to measure power in 3- phase a.c. circuit, gives total power consumed by the circuit.
11) What is fuse? Give the types and purpose of fuse. Explain any one type of fuse.
12) What is power factor? Explain the methods to improve the power factor.
13) What is the need of earthing? Explain the different method of earthing. OR State the different methods of earthling and explain plate and pipe earthling with neat diagram.
14) Explain the concept of Rotating Magnetic Field (RMF).
15) Explain the construction and working of 3-phase induction motor with neat sketch.

IMP question

1) Explain Superposition Theorem
2) Explain transformer on No load and on load.

3) Explain terms (1) A-h Capacity (2) W-h capacity and Safety precaution for electrical appliances
4) Give the definitions of following quantities:
   (1) Form factor (2) Peak or Crest factor (3) rms and average value (4) Phase voltage (5) Line voltage (6) Phase current (7) Line current (8) Q-factor (9) Resonance phenomenon (10) Active power and Reactive power
5) Give the circuit diagram of ELCB. Explain its working in brief. (Most IMP)
6) Explain the construction and working of Synchronous generator with neat sketch.