**BEEE IMP QUESTIONS (Unit II & III)**

**EE Branch**

**Unit II**

Q.1 Define the following

i. Active power

ii. Reactive Power

iii. Apparent power

iv. Form factor

v. Peak factor

Q.2 A choke coil has a resistance of 10Ω & an inductance of 0.05H is connected in series with a condenser of 100µf. The whole circuit has been connected to a 200V, 50 Hz supply. Calculate:

i. Impedance

ii. Power factor

iii. Current

iv. Real Power

Q.3 Derive the relation between line & phase quantities in balanced three phase star connection. Also draw the phasor diagram.

Q.4 Explain how power in 3 phase circuit can be measured by two wattmeter method.

Q.5 Explain the meaning of phase sequence and balanced & unbalanced supply and loads.

Q.6 Explain the advantages of three phase system.

Q.7 The power readings of two wattmeter are 15 kw & -4kw for a 3-ph balanced load. If the supply voltage is balanced 440V, find the true power drawn by the load, p.f. and line current.

Q.8 Derive an expression of impedance, current, power factor, power in watts in series RL circuit.

Q.9 A balanced star connected load of 8 + 6j ohm is connected across three phase, 50Hz, 440V supply system. Calculate 1. Line current 2. Power absorbed 3. Reactive volt Ampere.

Q.10 What do you understand by RMS value, Average value.

**Unit III**

Q.1Explain the laws of electromagnetic induction. Compare electric & magnetic circuit.

Q.2 Discuss the construction, working principle, emf equation & equivalent circuit of single phase transformer.

Q.3 Explain OC & SC test in transformer.

Q.4 A 6600/440V, 50 Hz, single phase 600 kVA transformer has 1200 primary turns. Find:

1. Transformation ratio

2. Secondary Turns

3. Maximum flux through the core

Q.5 Explain the losses in transformer.

Q.6 Explain about voltage regulation & efficiency.

Q.7 Discuss about magnetization characteristics of ferromagnetic materials.

Q.8 Open circuit & sgort circuit test on a single phase transformer gave the following results.

Vo=200v, Io=0.7 A, Wo= 20W test from primary side,

Vs=10V, Is=10A, Ws=40 watt test from primary side. Determine the equivalent circuit referred to primary side.

Q.9 Draw the phasor diagram of practical transformer on inductive load.

Q.10 Define:

i. MMF

ii. Magnetic Flux Density

iii. Magnetic Flux

iv. Magnetic Field Strength