	Pimpri Chinchwad Education Trust's **Pimpri Chinchwad Polytechnic** **Academic Year : 2025 – 26 (Odd Sem)** (NBA Accredited and ISO 9001:2015 Certified Institute)		**Revision : 00** / **Date : 01/06/2018**
Department of Computer Engineering			
BEE Assignment			

Question Bank BEE

Unit 1

1. State Faraday's law of Electromagnetic Induction.(Both Laws)
2. State Lenz's law.
3. Define (i) Form factor (ii) Peak factor.
4. Compare electric and magnetic circuits on any four points.
5. A sinusoidal voltage with equation $V = 200 \sin (314 t + \pi/3)$ volt is applied to a load. Calculate (i) Maximum voltage (ii) RMS voltage (iii) Frequency (iv) Time period (v) Phase angle (vi) Angular frequency.
6. Draw Delta connected load. State relation between: (i) Line voltage and phase voltage (ii) Line current and phase current.
7. A balanced 3-Phase star connected load consists of three resistances each of 4 Ω connected to 400 V, 3 phase 50 Hz supply, find: (i) Phase voltage (ii) Phase current (iii) Line current (iv) Line Voltage.
8. Define- Peak Value and Time period
9. Define Reluctance and MMF.
10. Draw a Three phase waveform and Phaser Diagram.

Unit 2

1. Define Voltage ratio and current ratio of Transformer.
2. State the EMF equation of the transformer.
3. List the type of transformer.
4. State working principle of transformer.

Unit 4

1. Draw the circuit diagram of the zener diode as a voltage regulator
2. State the need of filters. write types of filters.
3. Compare Online UPS and Offline UPS.
4. Draw symbol of LED and zener diode.
5. Draw the block diagram of regulated power supply and explain the working of each block.
6. Differentiate between P-N junction diode and zener diode.
7. Draw the circuit diagram of the PI(π) filter and state its working.
8. Draw and describe the working principle of LED.
9. Describe working of Offline UPS.

Unit 5

1. Draw symbols of NPN and PNP.
2. Compare CB,CE,CC.
3. Define α and β. Give the relation between α and β.
4. Describe the working principle of an NPN transistor.
5. Explain Active, Saturation and Cut-off mode of transistor.

Subject Teacher
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