UNIT-2

A.C. Circuits

		Questions	BT	CO	PO
Part – A (Short Answer Questions)					
1		What is phasor diagram?	BT2	CO2	PO2
2		What is capacitive reactance and inductive reactance?	BT1	CO2	PO1
3		What is the relation between resistance ,reactance and impedance?	BT3	CO2	PO2
4		What is resonance?	BT3	CO2	PO2
5		What is resonant frequency and write the expression for it?	BT2	CO2	PO3
6		Define resonance and parallel resonance.	BT2	CO2	PO1
7		Define real power and reactive power.	BT1	CO2	PO1
8		What are advantages of 3 phase system over 2 phase system?	BT3	CO2	PO2
9		Define apparent power and power factor.	BT3	CO2	PO2
10		Explain the concept of balanced load.	BT2	CO2	PO3
Part – B (Long Answer Questions)					
11	a)	Explain following terms 1)frequency 2) maximum power 3) time period 4)power factor	BT3	CO2	PO2
	b)	Explain active, reactive, apparent power with relevant equations?	BT3	CO2	PO3
12	a)	A voltage of 50v with 50HZ frequency is applied to a series RLC circuit with R=100 ohm, L=0.5H and C=40microfarad. Determine i) impedance ii) current iii) power factor iv) phase angle between voltage and current	BT3	CO2	PO2
	b)	Explain about Series Resonance and derive an expression for its bandwidth	BT3	CO2	PO2
13	a)	An alternate current is given by i=141.4sin(314t). find i)maximum value ii)frequency iii)Time period	BT2	CO2	PO2
	b)	Write the difference between series & parallel Resonance?	BT3	CO2	PO3
14	a)	Explain about three phase balanced circuits?	BT3	CO2	PO2
	b)	Explain behavior of series RLC circuit excited with ac?	BT2	CO2	PO1
15	a)	Explain behaviour of series RL circuit and write the expression for voltage,current,power and phasor diagram.	BT3	CO2	PO2
	b)	Explain about series RC circuit and derive expression for	BT2	CO2	PO2

		voltage,current,power and draw phasor diagram.			
16	a)	Explain about Three phase balanced & un balanced systems ?	BT2	CO2	PO3
	b)	Explain advantages of a three phase system over a single phase system?	BT2	CO2	PO2
14	a)	What are the different types of wires and cables? Explain.	BT2	CO5	PO1
	b)	Explain important characteristics of batteries?	BT1	CO5	PO2
15	a)	Briefly explain about fuse?	BT1	CO5	PO2
	b)	Explain working of ELCB?	BT1	CO5	PO3
16	a)	Explain about Power factor measurement using two watt meter method?	BT3	CO5	PO2
	b)	A consumer uses 10 KW geezer, 6 KW electric furnace &five 100 W bulbs for 15 hours .How many units (KWHr) of electrical energy have been used?	BT3	CO5	PO2