	Code	e No: 53025				R09					
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	Time	Time: 3 hours M				ax. Marks: 75					
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	1.a) b)	Show that volt-as Derive the equation	mpere relationshi	p of R, L and C are li resistance of numbe	near. r of resistors	connected in					
*** * * * * * * * * * * *					* *	[0+/]	****				
	2.a) b)	Three 100 Ω resistors are connected first in star and then in delta across 415 V, 3-phase supply. Calculate the line and phase currents in each case and also the power taken from the source. Explain Thevenins's, and Maximum power transfer theorems with example. [8+7]									
	3.a)	Find average values the fundamentals	ue, form factor an	d peak factor for an a	alternating w	aveform	X * + X * * * * 0 * * * 0 * * * * *				
**** * * *	b)	A coil of resista 150 μF capacito Capacitance read	ance 10 $Ω$ and in r across 200V,50 ctance, impedance	Hz supply. Calculate, current and powe	connected in ate (i) Induc er factor. (ii	series with a tive reactance,) The voltage	•••••				
* * * * * * * * * * * * * * *	X * * * * * * * * * * * * * * * * * * X * * * *		d capacitor tespe			×[.7+8]	* * **** * * * *				
	4.	Explain O.C and regulation of tran	S.C Test on sing sformer.	gle phase Transforme	er, also deriv	e equation for [15]					
• X * • • • • × • • × • • • • •	5.a) b)	Explain Principle Derive the equati	of operation of I on for induced en	D.C generators.		[7+8]					
	6.a)	Write the Princip	ole of operation	of dc motors and ex	plain signifi	cance of back	Community and an end description				
	b)	emf in DC motor Explain different	s. losses in DC mot	ors.		[7+8]					
••× • * • • * • • * • * • * • *	·:7-a)	Explain the significance of slip in induction motor also explain working principle of Squirrel cage induction motor.									
	b)	Explain the power draw slip-torque	er stages of diffe characteristics of	rent losses in three j induction motor.	phase induct	ion motor and [7+8]					
*** * * * * * * * * * * * * *	8.a)	Write about defl indicating instrum	ecting torque, contents.	ontrolling torque and	d damping t	orque used in	× * * × * * * * * * * * * * *				
	0)		aision moving m	m anniheter with hea	i ulagrafili.	[0+/]					
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	Time	: 3 hours	(Common to CSE, II)			ax. Marks: 75				
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	1.a) b)	Show that volt-am Derive the equatio	pere relationship n for equivalent	of R, L and C are li resistance of numbe	inear. r of resistors c	connected in				
			es.		* * * * * * * * * * * * * * * * * * * *	[8+7]				
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	b)	A coil of resistan 150 μF capacitor Capacitance react	ce 10 Ω and in- across 200V,50 ance, impedance	ductance 0.1 H is Hz supply. Calcula , current and pow	connected in ate (i) Inducti er factor. (ii)	series with a ve reactance, The voltage				
% ◆ X → X X → X X → X X → X X × X X × X X	* * * * * * * * **** * * * * * ** * * ** * * *	across the coil and	capacitor respec	tively		.[7+8]				
	4.	Explain O.C and S regulation of transf	S.C Test on sing former.	le phase Transform	er, also derive	e equation for [15]				
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	6.a)	Write the Principl	e of operation o	f dc motors and ex	xplain signific	ance of back				
	b)	Explain different lo	osses in DC moto	ors.		[7+8]				
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*** * * * * * * * * * * * * * *	8.a) 	Write about deflect indicating instrume Explain about repu	torque, con ents	ntrolling torque and	d damping to	rque used in $[8+7]$				
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