

[B19 EE 1101]

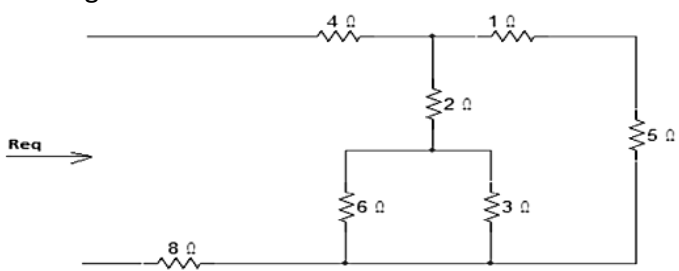
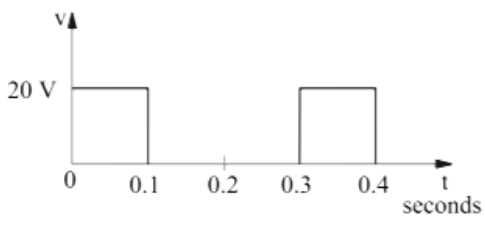
I B. Tech I Semester (R19) Regular Examinations
BASIC ELECTRICAL AND ELECTRONICS ENGINEERING
(MECHANICAL ENGINEERING)
MODEL QUESTION PAPER

TIME: 3 Hrs.

Max. Marks: 75 M

Answer **ONE Question** from **EACH UNIT**

All questions carry equal marks

UNIT-I			CO	KL	M
1.	.	State and explain Kirchhoff's Laws with example	CO:1	K2	8M
	(b).	Find R_{eq} for the given circuit	CO:1	K3	7M
					
(OR)					
2.	.	State and explain Superposition Theorem.	CO:2	K2	8M
	(b).	If 'n' number of resistance connected in parallel, derive the expression for the equivalent resistance?	CO:1	K3	7M
UNIT-II					
3.	.	Derive the expression for Average and RMS values of a sinusoidal waveform.	CO:2	K3	8M
	(b).	Compute the Average and RMS values of a waveform shown in below figure:	CO:2	K3	7M
					
(OR)					
4.	.	Explain the behavior of RL circuit connected to AC supply with neat Phasor diagram	CO:2	K2	8M
	(b).	Draw and Explain Power Triangle	CO:2	K4	7M

UNIT-III					
5.	.	Derive the EMF equation of DC generator.	CO:3	K2	8M
	(b).	An 8-pole, wave-connected armature has 600 conductors and is driven at 625 rev/min. If the flux per pole is 20 milli weber, determine the generated E.M.F.	CO:3	K3	7M
(OR)					
6.	.	Explain the speed control methods of DC shunt motor with neat sketches	CO:4	K5	8M
	(b).	Obtain the formula for Back EMF for different types of motors	CO:4	K3	7M
UNIT-IV					
7.	.	Explain the Principle of operation of single phase transformer	CO:3	K2	8M
	(b).	Obtain the formula for equivalent circuit referred to primary and secondary	CO:5	K3	7M
(OR)					
8.	.	Explain the Short circuit test on single phase transformer	CO:5	K4	8M
	(b).	Explain the principle and operation of Induction Motor	CO:3		7M
UNIT-V					
9.	.	Explain the operation of Diode in Forward and reverse bias conditions and draw V-I characteristics	CO:6	K3	8M
	(b).	Draw and explain input and tput Characteristics of CE configurations	CO:6	K3	7M
(OR)					
10.	.	Draw the circuit diagram of Bridge rectifier and explain its operation	CO:6	K3	8M
	(b).	Explain how the transistor acts as an amplifier	CO:6	K4	7M
