Paper Code – U127-104A (T2)

March 2018 / IN - SEM (T2)
F. Y. B.TECH. (COMMON) (SEMESTER - II)
COURSE NAME: Basic Electronics Engineering
(2017 PATTERN)

Q.NO	Sub Q.NO	Marking Scheme	Marks	Difficulty Level	Cognitive level	CO Mapped
Q1	a)	Structure of N channel Enhancement-MOSFET :2M Working explanation : 2M Transfer characteristics of P and N channel MOSFET: 2M	[6]	M	Knowledge / Comprehension	CO2
	b)	Controlled full wave rectifier using SCR Circuit diagram : 2M Working with input output waveform:2M Expression for average output voltage:2M	[6]	M	Knowledge / Comprehension	CO2
	c)	$K = 0.12\ mA/V^2$: 2M $I_D = 1.08\ mA$: 2M	[4]	L	Comprehension	CO2
		OR				
Q2	a)	Circuit diagram for lamp/ fan regulator using TRIAC:3M waveforms at input and across lamp/fan load.: 3M	[6]	M	Comprehension	CO2
	b)	V-I characteristics of SCR:3M Definition of Latching current, Holding current and Forward break over voltage :3M	[6]	H	Comprehension	CO2
	c)	Diagram of two transistor analogy of SCR:2M Explaination:2M	[4]	L	Knowledge	CO2
Q3	a)	concept of virtual ground:2M Derive expression for the gain of inverting operation amplifier: 4M	[6]	M	Comprehension	CO3
	b)	Block diagram of Op-Amp: 2M Stating function of each block: 2M	[4]	L	Knowledge	CO3
	c)	Identification of circuit: Averaging amplifier :1M Output voltage = -2.5V:3M	[4]	L	Comprehension	CO3
		OR				
Q4	a)	What is comparator:2M	[6]	M	Knowledge	CO3

March 2018 / IN - SEM (T2)
F. Y. B.TECH. (COMMON) (SEMESTER - II)
COURSE NAME: Basic Electronics Engineering
(2017 PATTERN)

		Circuit diagram of inverting comparator:2M Explanation with input and output waveforms:2M			Comprehension	
	b)	Explanation of CMRR: 2M Explanation of Input offset voltage: 2M.	[4]	L	Knowledge	CO3
	c)	Gain=101:1M Vout=101Vpp:1M Comment: 2M	[4]	L	Comprehension	CO3