

SEPTEMBER 2017 / IN - SEM (T1)
F. Y. B.TECH. (COMMON) (SEMESTER - I)
COURSE NAME: Basic Electronics Engineering
(2017 PATTERN)

Q.NO	Sub Q.NO	Marking Scheme	Marks	Difficulty Level	Cognitive level	CO Mapped
Q1	a)	Circuit diagram comparison :2M Waveforms:1M,Vdc:1M ripple freq: 1M, PIV:1M	[6]	M	Comprehension	CO2
	b)	V _{p(sec)} = 17V, V _{pout} = 15.6V :2M PIV for each diode = 16.3V : 2M Waveforms: 2M	[6]	M	Comprehension	CO2
	c)	V-I diagram: 2M Explanation: 2M	[4]	M	Knowledge	CO1,CO2

OR

Q2	a)	Circuit Diagram: 2M All waveforms(input, output of rectifier, output of filter): 2M V _{LDC} : 1M, PIV:1M	[6]	M	Comprehension	CO2
	b)	Waveforms with V _{p(sec)} = 50V, V _{p(sec)} /2 = 25V: 4M , PIV = 49.3V: 2M	[6]	M	Comprehension	CO2
	c)	Working principle: 2M TWO color with material :2M	[4]	L	Knowledge	CO1

Q3	a)	Circuit Diagram: 1M Working principle: 3M Waveforms: 2M	[6]	M	Comprehension	CO2
	b)	I _B = 0.6mA I _C = 29.4mA: 2M β _{dc} = 49 :2M	[4]	L	Comprehension	CO2
	c)	I _B = 23μA :2M I _C = 4.6mA: 2M	[4]	L	Comprehension	CO2

OR

Q4	a)	Input characteristics diagram: 2M Output characteristics diagram: 2M DC load line diagram: 2M	[6]	M	Knowledge	CO2
	b)	I _C = 7.92mA :2M I _B = 79.2 μA :1M α _{dc} = 0.99: 1M	[4]	L	Comprehension	CO2
	c)	I _{C(sat)} = 0.5mA I _{B(min)} = 3.3μA	[4]	L	Comprehension	CO2