B.Tech III Semester End Examinations, 2021

ELECTRONIC DEVICES & CIRCUITS (19APCO403T)

(Electronics & Communication Engineering)

Time: 3 Hours | Max Marks: 70

PART-A(Compulsory) (10*2= 20 M)

		Answer the following	UNIT	Marks
1	a)	Draw the V-I characteristics of UJT	I	2
	b)	What is the difference between DIAC and TRIAC	I	2
	c)	Draw the waveforms of output of full wave rectifier with & without filters	II	2
	d)	What is the difference between L-section & pi filters?	II	2
	e)	What is Bias Compensation?	III	2
	f)	What is the difference between CC and CE configurations?	III	2
	g)	What is the difference between Enhancement mode & Depletion mode?	IV	2
	h)	What is the difference between n-channel & p-channel JFET?	IV	2
	i)	Explain how JFET acts like a switch.	V	2
	j)	What are the different biasing circuits?	V	2

PART-B (5*10= 50 M)

Answer One Full Question from each unit; All questions carry EQUAL marks.

	UNIT-I	
2	Explain the construction, Operation and Characteristics of Tunnel diode with the help of Energy band diagram.	10 M

(OR)

3	What is SCR? Explain its operation and V-I characteristics	10 M
	UNIT-II	
4	Explain in detail the operation of Clipping and Clamping circuits with waveforms	10 M

(OR)

5	Explain the construction, operation, and characteristics of Zener diode.	10 M
	UNIT-III	
6.	Compare and differentiate between the different configurations of BJT	10 M

(OR)

7	Explain how BJT acts as a switch and Amplifier	10 M

		UNIT-IV	
8		Explain the construction, principle of operation & applications of JFET	10 M

(OR)

9.	Explain the construction, principle of operation & applications of MOSFET	10 M

UNIT-V

10	Explain how FET acts a switch and Amplifier.	10 M

(OR)

11.	Explain in detail the different biasing circuits used using MOSFET	10 M