Code No: R1622045 **R16** SET - 1

II B. Tech II Semester Supplementary Examinations, November - 2019
PULSE AND DIGITAL CIRCUITS
(Com to ECE, EIE, ECC)

Time: 3 hours Max. Marks: 70

Note: 1. Question Paper consists of two parts (**Part-A** and **Part-B**)
2. Answer **ALL** the question in **Part-A**
3. Answer any **FOUR** Questions from **Part-B**

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PART –A

1.	a)	Define attenuator?	2M
	b)	Draw the transfer characteristics of a diode clipper and define transmitting Region, limiting region, and clipping region?	2M
	c)	Define t_{on} and t_{off} of a transistor.	2M
	d)	Calculate the gatewidth of a monostable multivibrator R=10kΩ and c=10μF?	3M
	e)	Draw the sweep voltage and sawtooth waveforms and name the parts in that Waveform?	2M
	f)	Define positive and negative logic and give the examples?	3M

PART -B

2.	a)	Calculate the lowest square wave frequency that can be passed by an amplifier With a lower 3-db frequency of 5 Hz. If the maximum allowable tilt in the Output is 2%.	7M
	b)	Explain about RLC ringing circuit?	7M
3.	a)	Draw the circuit diagram of an emitter –coupled clipping circuit and draw its Transfer characteristics indicating all intercepts, slopes and voltage levels.	7M
	b)	Design a diode clamper to restore a d.c level of +3 volts to an input signal Of peak to peak value of 10 volts. Assume drop across diode is 0.6 volts.	7M
4.	a)	Explain how transistor acts as switch. Draw base and collector waveforms and indicate all the time intervals.	7M
	b)	Explain applications of Schmitt trigger.	7M
5.	a)	Explain the need of trigger circuit in monostable multivibrator? List out types of trigger circuits?	7M
	b)	Explain about free running multivibrator.	7M
6.	a)	Explain how UJT is used for sweep circuit.	7M
	b)	Draw the circuit of a two stage transistor bootstrap circuit to get an exactly linear Sweep.	7M
7.	a)	How pedastal can be reduced in sampling gate? List the applications of Sampling gates.	7M
	b)	Draw and explain the basic CMOS inverter circuit.	7M
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