Code No: RT31041 **R13** SET - 1

III B. Tech I Semester Supplementary Examinations, May - 2016
PULSE AND DIGITAL CIRCUITS
(Common to ECE and EIE)

Time: 3 hours Max. Marks: 70

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

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PART –A

1	a)	Describe about ringing circuit.	[3M]
	b)	State clamping circuit theorem.	[4M]
	c)	Explain piecewise linear characteristics of a diode.	[4M]
	d)	What are the types of triggering? Distinguish between them.	[4M]
	e)	What are the applications of Time-base generator?	[3M]
	f)	What do you mean by sampling gate? Give the applications of sampling gate?	[4M]

PART -B

2	a)	Discuss about attenuators.	[4M]
	b)	Analyze the low pass circuit for the exponential inputs, with help of waveforms.	[8M]
	c)	Discuss the application of an attenuator in a CRO.	[4M]
3	a)	Draw the basic circuit diagram of positive peak clamper circuit and explain its operation.	[8M]
	b)	Explain transfer characteristics of emitter coupled clipper and derive necessary equations.	[8M]
4	a)	Draw the circuits of 3-input OR-gate using diodes for: (i) Positive logic, (ii) Negative logic and explain the operation of circuit.	[8M]
	b)	Give the comparison of different logic families.	[8M]
5	a)	What are different types of multivibrators? Explain the stable state of a multivibrator.	[8M]
	b)	Sketch the circuit diagram of Schmitt trigger and explain its operation.	[8M]
6	a)	With the help of neat circuit diagram and waveforms explain transistor miller time base generator.	[8M]
	b)	Discuss about the recovery time of a sweep circuit. How do you achieve short recovery time?	[8M]
7	a)	Explain the process of synchronization of a sweep circuit.	[8M]
	b)	Write notes on: i) Astable relaxation circuits ii) Monostable relaxation circuits	[8M]

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