Code No: RT22045   **R13**   SET - 1

II B. Tech II Semester Supplementary Examinations, November-2017
ANALOG COMMUNICATIONS
(Electronics and communication Engineering)

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 **THREE** Questions from **Part-B**

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PART –A

1.	a)	Draw the switching modulator	(4M)
	b)	Draw the ring modulator? What is its importance?	(4M)
	c)	What is Carson's rule? Why it is used?	(4M)
	d)	Draw the general structure of a receiver for noise measurement	(3M)
	e)	What is image frequency? How do you tackle it in the AM receiver	(4M)
	f)	Draw the single and double polarity PAM waves	(3M)

PART -B

2.	a)	Draw the diagram and explain working of FDM system	(8M)
	b)	Draw the switching Modulator and explain the process of generation of AM waves	(8M)
3.	a)	How do you detect SSB waves? Explain with neat diagram	(8M)
	b)	Discuss the process of generation of VSB waves	(8M)
4.	a)	Derive expression for the single tone modulated FM waves	(8M)
	b)	Show that Narrowband FM is equivalent to AM with respect to transmission bandwidth	(8M)
5.	a)	Derive expression for the figure of merit of an FM system	(8M)
	b)	Find the figure of merit of an AM system when the depth of modulation is (i) 100% (ii) 50% (iii) 30%	(8M)
6.	a)	Discuss the Effects of feedback on the performance of AM Transmitter	(8M)
	b)	Draw the AM Superhetrodyne receiver and explain the importance of each functional unit	(8M)
7.		Write short notes on the following	
		(i) TDM Vs. FDM	(8M)
		(ii) Generation and detection of PPM waves	(8M)

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