Code Hilling Hand

Code No. : 3043

FACULTY OF ENGINEERING
B.E. 3/4 (ECE) I Semester (Main) Examination, December 2010
ANALOG COMMUNICATIONS

Time : 3 Hours]

12 to noite of [Max. Marks : 75

Note : Answer all questions from Part -A. Answer any five questions from Part -B.

2.4

(25 Marks)

11.	Define modulation. What are the different types of modulations?	3
2.	What is meant by quadrature null effect ?	2
3.	Compare NBFM and WBFM.	2
4.	Define instantaneous frequency, frequency deviation, modulation indent of an FM wave.	3
5.	What is Image frequency ? Give a note on its rejection.	3
6.	What is the purpose of a mixer ?	2
7.	What is the importance of pre-emphasis and De-emphasis ?	3
8.	Write the expressions for SNR's of AM and DSB-SC signals.	2
9.	Define noise temperature.	2
10.	Write short notes on Pulse width modulation.	3
	PART – B (50 Marl	ks)
11.	a) Give the time domain representation of SSB and explain its generation using any one of the methods.	7
	b) Write short notes on choice of time constant in envelope detection,.	3

	Code	No.	•	3043	1
--	------	-----	---	------	---

Code No. 7 2042	Code No. : 3043
12. a) Explain the demodulation of frequency mode Poster-Seeley discriminator	ulated signal using 6
b) Discuss the need for modulation.	4 ANALOG
13. a) Explain the operation of Super beterodyne r	eceivers.
b) Give the differences between high-level mod modulation.	ulation and low-level 3
14. Explain with a block diagram the steps involved figure and explain each step in detail.	in calculating the noise
15. a) Prove sampling theorem for low pass signal	s and define Aperture effect. 6
b) Explain how a PPM signal is generated from	a PWM signal. 4
<ul><li>16. a) Define the terms</li><li>i) Thermal noise born and his volume of the terms</li></ul>	
ii) Shot noise iii) Noise temperature and	
iv) Noise figure.	8 2. What is image frequency ? Gi
b) Explain the operation of phase locked loop	for FM detection. 2
<ul><li>17. a) Write short notes on VSB.</li><li>b) Write short notes on Squelch circuit.</li></ul>	<ol> <li>What is the importance of pre-</li> </ol>