

Code :R7311303

R7

III B.Tech I Semester(R07) Supplementary Examinations, May 2011
PRINCIPLES OF COMMUNICATIONS
(Electronics & Control Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE questions
All questions carry equal marks

1. (a) Draw the block diagram of communication system and explain its each block.
(b) Explain the concept of power spectral density and its importance in communication system.
2. (a) Perform the analysis of AM signal. Calculate its modulation index and percentage of modulation.
(b) Describe generation and detection of DSBSC signal.
3. (a) Explain the generation of narrow-band FM and PM signals with the help of block diagram.
(b) Tabulate the comparison of FM and PM with respect to performance parameters.
4. (a) Define and explain the sampling theorem.
(b) Compare PAM, PWM and PPM systems.
5. (a) Describe quantizing noise in PCM.
(b) Draw the block diagram of delta modulation and explain.
6. (a) What is DPSK ? Explain the detection of DPSK signal.
(b) Compare the performance of ASK, FSK and PSK systems.
7. (a) Define and explain the terms 'concept of information', 'rate of information' and 'entropy'.
(b) Write notes on Shannon-Fano and Huffman coding.
8. (a) Explain various error detection techniques in communication systems.
(b) Illustrate convolutional codes with suitable example.
