

Code: 9A04501

B.Tech III Year I Semester (R09) Supplementary Examinations June 2017

ANALOG COMMUNICATIONS

(Electronics and Communication Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 (a) Discuss about different coding methods.
(b) Discuss about different modulation methods.
- 2 (a) Derive an expression for single tone AM waveform. Assume sinusoidal carrier and modulating signal. Also sketch its signal and spectrum.
(b) The antenna current of an AM transmitter is 8 A when only the carrier is sent, but it increases to 9.6 A when the carrier is modulated by a single sine wave. Find the percentage modulation. Determine the antenna current when the percentage of modulation changes to 0.6.
- 3 (a) Describe the generation AM SSB using filter method.
(b) Calculate the percentage power saving when the carrier and one of the side bands are suppressed in an AM wave modulated to a depth of: (i) 40%. (ii) 90%.
- 4 (a) Distinguish between NBFM and WBFM.
(b) What is the bandwidth required for FM signal, give the necessary reasons.
- 5 Discuss the demodulation of FM using:
(a) Frequency discriminator.
(b) Phase discriminator.
- 6 (a) With the help of curve, explain functionality good domestic receiver.
(b) Discuss the need for multiplexing.
- 7 With the help of block diagram, discuss about analog base band transmission system with noise.
- 8 Write short notes on the following:
(a) Inter Symbol Interference.
(b) PTM.
(c) Flat top sampling.
