Total No. of Questions : 8] *[Total No. of Printed Pages : 2*

Roll No ..

MEDC - 302(A)

M.E./M.Tech., III Semester

Examination, June 2016

Advanced Digital Communication (Elective-I)

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.
ii) All questions carry equal marks.

1. a) Discuss the principle working of QPSK signal. Draw the transmitter and receiver and the spectral characteristic of QPSK system.
   b) Determine the probability of error of BPSK signal.

2. a) Assess the impact of white Gaussian noise on the performance of a sampled data receiver.
   b) Discuss the principle working of optimum receivers for PCM.

3. a) Discuss about the link budget analysis of a digitally modulated link.
   b) How to estimate signal parameter carrier phase and symbol timing.

4. a) Determine the probability of error in detecting PAM with zero ISI.
   b) What is the need of spectrum spacing? Discuss about modulation codes used for spectrum spacing.

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5. a) Discuss the working of optimum receiver for a channel with AWGN.
   b) Discuss the principle of adaptive decision feedback equalization.

6. a) Discuss the working and performance of Direct sequence spread spectrum signals.
   b) What is inter carrier interference in OFDM? How it can be overcomed? Also discuss the applications of OFDM.

7. a) Characterize fading of multipath channels.
   b) Discuss diversity techniques for padding multipath channels.

8. Write short notes on any two of the following:
   a) QAM
   b) Frequency hopped spread spectrum
   c) Multi channel and multi carrier systems

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