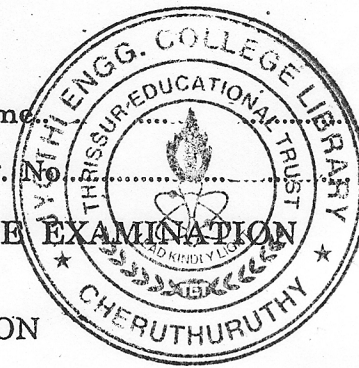


D 20901

Name

Reg. No.



FIFTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION  
OCTOBER 2011

EC/PTEC 09 504—DIGITAL COMMUNICATION

(2009 Admissions)

Time : Three Hours

Maximum : 100 Marks

Part A

1. What is non uniform quantisation ?
2. What is a base band signal ?
3. State Schwartz inequality ?
4. What is the need for synchronisation ?
5. What is a coherent receiver ?

Part B

1. What are the requirements of line codes ? Explain any two line codes with suitable example.
2. Explain any *one* adaptive delta modulation technique.
3. Explain the working and purpose of a descrambler.
4. Explain any *one* symbol synchronisation technique.
5. What are the advantages of spread spectrum ?
6. Draw the ASK, FSK, PSK and MSK waveforms of the bit stream 101011.

Part C

1. State sampling theorem. Explain the reconstruction of signals and discuss the practical difficulties in signal reconstruction.

Or

2. Derive the expression for signal-to-noise ratio of PCM system.
3. State and discuss the Nyquist second criterion for zero ISI.

Or

4. Explain any two types of equalisers with appropriate examples.
5. Derive the expression for impulse response of a matched filter.

Or

6. Discuss about the frequency hopped spread spectrum system.
7. Derive the bit error probability of coherent ASK, FSK receivers-Compare their performance.

Or

8. Derive the bit error probability of coherent PSK and MSK receivers. Compare their performance.