Roll No. ☐☐☐☐☐☐☐☐☐☐☐☐   Total No. of Pages : 01

Total No. of Questions : 08

M.Tech. (ECE) (2016 Batch) (Sem.–1)
ADVANCED COMMUNICATION SYSTEM
Subject Code : MTEC-103
Paper ID : [74148]

Time : 3 Hrs.   Max. Marks : 100

INSTRUCTIONS TO CANDIDATES :
1. Attempt any FIVE questions out of EIGHT questions.
2. Each question carries TWENTY marks.

Q1. a) Write the applications of digital communication system. What are the fundamental limitations of a communication system?

b) Give detail of digital transmission impairments.

Q2. a) Calculate the bit rate of one SONET frame. Discuss SONET multiplexing hierarchy.

b) Explain GPRS in detail.

Q3. a) Explain briefly the architecture of Optical Transport Network.

b) Discuss significant features of Link management protocols.

Q4. Explain :

a) FDMA.   b) DPCM.   c) VSAT.   d) BPSK.

Q5. a) Discuss how system noise temperature is determined for a satellite communication system?

b) Discuss satellite communication link design procedure.

Q6. Describe analog frequency modulation and demodulation. Compare FM with AM for bandwidth and power comparison.

Q7. a) What are the advantages of using CDMA for a cellular network? List different Performance metrics that may be used to make the handoff decision.

b) Describe GSM and discuss the updating of relevant registers in different types of call transfer.

Q8. a) Discuss about the CDMA and SDH techniques.

b) How is one TDM signal separated into its original components? Discuss the duration of a data unit before and after the TDM process.