

Roll No.

Total No. of Pages : 01

Total No. of Questions : 08

M.Tech. (ECE) (Sem.-1st)**ADVANCED COMMUNICATION SYSTEMS**

Subject Code : EC-504

Paper ID : [E0564]

Time : 3 Hrs.

Max. Marks : 100

INSTRUCTION TO CANDIDATES :

1. Attempt any FIVE questions out of EIGHT questions.
2. Each question carry TWENTY marks.

1. Describe delta modulation. What are its limitations? How can these be removed?
2. Describe GSM and discuss the updating of relevant registers in different types of call transfer.
3. (a) Calculate the bit rate of one SONET frame. Discuss SONET multiplexing hierarchy.
(b) Describe the architecture of Optical transport network.
4. (a) Derive the expression for Erlang's call congestion relation.
(b) Explain SPADE system.
5. (a) Determine system noise temperature for a receiver.
(b) Describe the downlink design for a large earth station satellite system giving the various system considerations.
6. Describe analog frequency modulation and demodulation. Compare FM with AM for bandwidth and power comparison.
7. (a) Describe need for use of line formats in a digital link. Discuss any line format.
(b) Discuss the link management protocols for a WDM link.
8. Write a note on :
 - (a) Detection of CDMA coded signals
 - (b) SDH