

Printed Pages – 4

Roll No. :

328831(28)

B. E. (Eighth Semester) Examination, Nov.-Dec. 2021

(New Scheme)

(Electronics & Telecommunication Engg. Branch)

ADVANCED COMMUNICATION SYSTEMS

Time Allowed : Three hours

Maximum Marks : 80

Minimum Pass Marks : 28

Note : Attempt all questions. Part (a) of each unit is compulsory and carries 2 marks. Attempt any two part from (b), (c) and (d) of each question. Part (b), (c) and (d) carry 7 marks.

Unit-I

1. (a) What do you mean by Eclipse Effect? 2
- (b) Explain the block diagram of satellite communication system in details. 7

328831(28)

PTO

[2]

- (c) Explain the advantages of the Satellite Communication system in details. 7
- (d) Write short notes on : 7
- (i) Synchronous Satellite
 - (ii) Passive Satellite Systems

Unit-II

2. (a) Define G/T Ratio of Satellite. 2
- (b) Explain the interface effect of satellite communication system. 7
- (c) Discuss various parameters in the design consideration of analog based communication link. 7
- (d) Write short notes on : 7
- (i) Uplink design
 - (ii) SNR in FM in satellite link

Unit-III

3. (a) Write down comparison between TDMA and FDMA. 2

328831(28)

[3]

- (b) Explain the TDMA Frame Acquisition and Synchronization system in details. 7
- (c) Explain the CDMA Access Techniques in detail. 7
- (d) Write short notes on : 7
- (i) TDMA burst TME Plan
 - (ii) Frame Efficiency

Unit-IV

4. (a) Define the numerical aperture. 2
- (b) Explain the optical fiber modes and its propagation in details. 7
- (c) Explain the different types of attenuations in optical fiber communication. 7
- (d) Write short notes on : 7
- (i) Single Mode and Multi-Mode Fibers,
 - (ii) Step Index and Graded Index Fibers Structure

Unit-V

5. (a) What is the difference between LED and LASER. 2

328831(28)

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[4]

- (b) Write notes on population inversion. Give difference between spontaneous and stimulated emission. 7
- (c) Explain Avalanche photodiode mechanism. 7
- (d) Discuss Optical Network SONET in detail. 7