

Roll No.

Total Pages : 2

BT-8/M-20

38037

MODERN TRENDS IN COMMUNICATION

Paper–EECT-404-E

Time Allowed : 3 Hours]

[Maximum Marks : 100

Note : Attempt **five** questions in all, selecting at least **one** question from each Unit. All questions carry equal marks.

UNIT-I

1. (a) Draw QPSK modulator and explain the why QPSK is considered better than other modulation techniques. 10
- (b) Explain, why delta modulation is used in digital communication systems. 10
2. (a) Explain the characteristic properties of PCM which make it a ideal choice for modulation. 10
- (b) Explain the concept of Error correction and Detection. 10

UNIT-II

3. (a) Elucidate in detail about the telemetry tracking and command subsystem used for Satellite communication. 12

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- (b) Write a note on Kepler's laws for planetary motion. 8
4. Calculate the link budget for Satellite communication and explain, how the free space path loss affects the communication. 20

UNIT-III

5. (a) Explain the working principle of Light transmission through Optical fiber. Also highlight the significance of numerical aperture. 10
- (b) Write a note on characteristic features, merits, demerits and application areas of Fiber optic communication. 10
6. (a) Write a note on losses taking place in the Optical communication. 10
- (b) What do you mean by dispersion? How it affects the communication of light through the fiber? 10

UNIT-IV

7. Write a note on the various optical sources in communication and why laser diode is preferred over LED's. 20
8. Write notes on the following : 10,10
- (a) Avalanche photo diode.
- (b) Connector and splices.