

Roll No.

Total No. of Pages : 02

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B.Tech. (ECE) (Sem-5)
ANALOG AND DIGITAL COMMUNICATION

Subject Code : BTEC-501-18

M.Code : 78297

Date of Examination : 10-06-2023

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

1. Write briefly :

- a) Show the effect of noise in pulse code modulation.
- b) Explain the concept of vestigial side band modulation.
- c) De emphasis circuit is used in receiver why?
- d) What is inter symbol interference?
- e) Write the concept of minimum shift keying.
- f) Give the relation between FM and PM signals.
- g) What do you mean by Baseband pulse transmission system?
- h) Why there is need a of communication?
- i) Draw frequency domain representation of Amplitude modulated signal.
- j) What is Gaussain noise?

SECTION-B

2. Write spectral characteristics of frequency modulated signals.
3. Explain the importance and use of Prediction in Differential Pulse Code Modulation (DPCM).
4. Explain Adaptive delta modulation, in detail and compare its performance with Delta Modulation.
5. Explain double side band transmitter system.
6. Explain the concept of time division multiplexing.

SECTION-C

7. Compare modulation techniques of FSK, QAM and MSK.
8. With block diagram and derivation explain phase shift method of SSB transmitter.
9. What are Random signals? What is the significance of random signals in probability theory? Also, write the concept of random process with Gaussian noise characteristics.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.