



C09-EC-403

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BOARD DIPLOMA EXAMINATION, (C-09)
MARCH/APRIL—2018
DECE—FOURTH SEMESTER EXAMINATION
COMMUNICATION SYSTEMS

Time : 3 hours]

[Total Marks : 80

PART—A

3×10=30

- Instructions** : (1) Answer **all** questions.
(2) Each question carries **three** marks.
(3) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.

1. Compare between analog and digital communication techniques.
2. Define the terms 'bit rate' and 'dynamic range' for PCM system.
3. State the function of Start and Stop bits.
4. State the difference between FAX modem and data modem.
5. Mention any three differences between multiplexing and multiple access techniques.
6. Mention the advantages of electronic telephony over manual telephony.
7. Compare between 'in band' and 'out-of-band' signalling systems.

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8. Define radiation resistance of an antenna.
9. Draw the radiation pattern of an end fire array.
10. List the application of dish in VSAT.

PART—B

10×5=50

Instructions : (1) Answer *any five* questions.

(2) Each question carries **ten** marks.

(3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

11. Describe the coding and decoding of PCM signal with a block diagram.
12. Explain the operation of vocoders.
13. Explain the frequency division multiplexing technique used in telephony.
14. Explain frequency hopping system and direct sequence system type of spread spectrum communication techniques.
15. Describe the topology of a switched telephone network.
16. Explain the use of TDM in telephony.
17. (a) Describe the operation of loop antenna and mention its applications.
(b) Describe the operation of helical antenna and mention its applications.
18. (a) Explain the principle of a parabolic reflector.
(b) Explain the operation of broadside array.

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