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C09–EC–403

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BOARD DIPLOMA EXAMINATION, (C–09)
OCT/NOV—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. What is the difference between bit rate and baud rate?

2. State the need of data codes.

3. State Sampling Theorem.

4. List any three differences between Multiplexing and Multiple access.

5. What is the concept of spread spectrum Communication?

6. Mention the advantages of electronic telephony over manual telephony.

7. List the advantages of ISDN.

8. Sketch the radiation patterns of an isotropic antenna and half wave dipole.

9. Define the terms 'directivity' and 'front to back ratio' of an antenna.

10. State the need for an antenna array.

PART–B

10×5=50

Instructions : (1) Answer *any* **five** questions.
(2) Each questions carries **ten** marks.
(3) Answers should be comprehensive and the criteria for valuation are the content but not the length of the answer.

11. Explain the conversion between parallel and serial data.

12. Explain Quadrature Amplitude Modulation(QAM).

13. (a) Compare FDMA,TDMA and CDMA

(b) Explain direct sequence system of spread spectrum communication.

14. Explain frequency-devision multiplexing technique used in telephony with necessary diagram.

15. (a) Explain the function of various signals present on a local loop telephone line.

(b) Compare in-band and out-of band signalling systems for telephony.

16. (a) Explain the internet Telephony(VOIP).

(b) Explain briefly the signalling system seven(SS7) for telephony.

17. Explain the working of broadside and end fire arrays with radiation patterns.

18. Explain the use of diversity and down tilt in cellular base station antennas.

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