



C09-EC-403

3469

BOARD DIPLOMA EXAMINATION, (C-09)
OCT/NOV—2014
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 analog and digital communication techniques.
2. Mention the types of pulse modulation.
3. Distinguish between synchronous communication and asynchronous communication.
4. Define multiplexing.
5. What is TDMA?
6. Compare in-band and out-of-band signalling systems.
7. What is the principle of fax machine?
8. Define decibel and neper.
9. Write a short note on Marconi antenna.
10. What are the differences between broadside array and end-fire array?

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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. (a) Explain the error detection using parity bit. 3
(b) Explain the error correction using hamming code. 7
12. Explain the operation of vocoder.
13. (a) State the need of modem in data communication. 3
(b) Describe the operation of telephone modem. 7
14. (a) Describe the principle of spread-spectrum communication.
(b) Explain direct sequence system.
15. Describe various signals present on a local-loop telephone line with diagram.
16. (a) Explain the features of ISDN.
(b) Explain the operation of EPABX.
17. (a) Explain the principle of parabolic reflector. 3
(b) Explain the constructional features and operation of dish antenna system. 7
- * 18. (a) Explain how we can change the electrical length of an antenna without changing its physical length. 4
(b) Explain the grounding of antenna with radiation pattern. 6
