



C09-EC-403

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**BOARD DIPLOMA EXAMINATION, (C-09)
APRIL/MAY—2015
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) Answer should be brief and straight to the point and shall not exceed *five* simple sentences.

1. What are the advantages of digital communication?
2. Explain error detection using redundancy check.
3. State the need of START and STOP bits.
4. Explain the difference between multiplexing and multiple accesses.
5. State the need of a Modem in data communication.
6. Mention the applications of Internet telephony.
7. What are the advantages of electronic telephony over manual telephony?

8. Mention the applications of Yagi antenna.
9. Explain the operation of Dish antenna system.
10. Mention the applications of folded dipole.

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. Explain cyclic redundancy check (CRC) method for error detection and correction using checksum. Mention the advantages of CRC checksum.

12. Explain the types of digital modulation (ASK, FSK and PSK).

13. Explain FDM used in telephony.

14. (a) Explain the working principle of spread spectrum.

(b) Explain about frequency hopping system.

15. (a) Explain the features of ISDN.

(b) Explain the operation of EPABX.

16. Explain in-band and out-band signalling systems.

17. Explain the terms 'antenna gain', 'directivity', 'beam width' and 'front-to-back ratio'.

18. (a) Explain the terms 'isotropic radiator' and 'half-wave dipole'. Draw their radiation patterns. 5

(b) Explain the terms 'radiation resistance', 'decibel' and 'neper'. 5
