



C09-EC-604

**3760**

**BOARD DIPLOMA EXAMINATION, (C-09)  
OCT/NOV—2017  
DECE—SIXTH SEMESTER EXAMINATION  
ADVANCED COMMUNICATION SYSTEMS**

Time : 3 hours ]

[ Total Marks : 80

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**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. State the function of waveguide.
2. Write the applications of magnetron.
3. What is Doppler effect?
4. Draw the block diagram of a communication satellite.
5. State the function of a satellite.
6. Draw the block diagram of an earth station.
7. Compare repeater and optical amplifier.

- \* 8. Name the various optical detectors used in fibre optic communication.
9. Write the basic concepts of CDMA systems used in mobile communication.
10. Mention the main features of AMPS.

**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. Derive the expression for radar range.
12. Explain the operation of a magic tee.
13. Explain the methods of increasing channel capacity of a satellite system.
14. Explain the application of satellite in TV broadcasting (DTH).
15. Explain ethernet on fibre and gigabit ethernet.
16. Explain total internal reflection used in optical fibres.
17. Explain the concept of EDGE technology.
- \* 18. Explain about frequency reuse and hand off in cellular communication.

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