



C09-EC-604

**3760**

**BOARD DIPLOMA EXAMINATION, (C-09)  
OCTOBER/NOVEMBER-2018  
DECE-SIXTH SEMESTER EXAMINATION**

ADVANCED COMMUNICATION SYSTEMS

Time : 3 Hours ]

[ Total Marks: 80

**PART-A**

3X10=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. Define phase velocity and group velocity related to waveguide.
2. Give the classification of radar.
3. Write the applications of magnetron.
4. Mention different types of satellites.
5. List the advantages of satellite communication over terrestrial radio communication.
6. List the Indian communication satellites.
7. Mention the advantages of APDs over PIN diodes.
8. Define critical angle and numerical aperture.
9. Write the basic concepts of CDMA system used in mobile communication.
10. List radio characteristics of GSM.

## PART-B

10X5=50

*Instructions* : \*

1. Answer any **Five** questions
2. Each question carries **ten** marks.
3. Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

11. Explain Doppler Effect.
12. Draw the block diagram of a pulsed radar system and explain the function of each block.
13. Explain about telemetry, tracking and control subsystem of a satellite with a block diagram.
14. Draw the block diagram of earth station and explain the function of each block.
15. State the need for submarine cables and explain.
16. Explain wave length division multiplexing with a diagram.
17. Explain the functional architecture of intelligent network.
18. Explain about DECT.

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