



C09-EC-604

**3760**

**BOARD DIPLOMA EXAMINATION, (C-09)  
SEPTEMBER/OCTOBER - 2020  
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 microwave frequency range.
2. Mention various modes of operation of waveguide.
3. List the types of indicators used in RADAR systems.
4. State the functions of microwave link.
5. Define apogee and perigee.
6. List the methods for increasing channel capacity of a satellite system.
7. List the different types of fibre optic cables.

- \* 8. List the applications of optical fibres.
- 9. What is frequency reuse?
- 10. List the radio characteristics of GSM.

**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 working of TWT (Travelling Wave Tube) with a diagram. 7
- (b) Mention any three applications of TWT. 3
- 12. Draw the block diagram of MTI radar and explain the function of each block.
- 13. Draw the block diagram of earth station and explain the function of each block.
- 14. Explain the application of satellite in global positioning system (GPS).
- 15. Explain the operation of LED used in optical fibre communication with a diagram.
- 16. Explain wavelength division multiplexing with a diagram.
- \* 17. Explain the functional architecture of structured intelligent network.
- 18. Explain CDMA system used in mobile communications.

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