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C09–EC–**604**

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BOARD DIPLOMA EXAMINATION, (C–09)

MARCH/APRIL—2014

DECE—SIXTH SEMESTER EXAMINATION

ADVANCED 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. Define dominant mode, cut-off frequency and phase velocity related to wave-guide.

2. Mention the factors affecting the radar range.

3. State the disadvantages of pulsed radar.

4. List the advantages of satellite communication over terrestrial radio communication.

5. Define the terms apogee and perigee related to satellite communication.

6. List the Indian communication satellites and remote sensing satellites.

7. Define numerical aperture, mode and dispersion related to fiber optic communication.

8. Mention the application of optical fibers.

9. What is hand-off in cellular system?

10. Write a short note on power control in CDMA.

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 magnetron with a diagram. 8

(b) Mention the applications of magnetron. 2

12. Draw the block diagram of MTI radar and explain its working. 4+6

13. Draw the block diagram of earth station and explain the function of each block.

14. Explain the application of satellite in TV broadcasting.

15. Explain wavelength divisions multiplexing with a diagram.

16. Explain the operation of LASER diode used in optical fiber communication.

17. Explain about AMPS system.

18. Explain about global star system.

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