C16-EC–405

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BOARD DIPLOMA EXAMINATION, (C-16)

MAY/JUNE—2023

DECE - FOURTH SEMESTER EXAMINATION

MICROWAVE AND SATELITE 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. List the applications of ground propagation.

2. Define virtual height and actual height.

3. List any six antenna parameters.

4. List the different microwave antennas.

5. State the applications of microwaves.

6. Give the list of different microwave solid state devices.

7. List the displays of radar.

8. State the factors affecting range of radar.

9. State the applications of satellite communication.

10. List the advantages of satellite communication system over terrestrial communication systems.

PART—B

10×5=50

Instructions : (1) Answer *any* **five** questions.

(2) Each question carries **ten** marks.

(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. Explain the Ionosphere wave (sky wave) propagation. 10

12. Explain the ground wave propagation and ground effects on waves. 7+3

13. Explain about horn antenna and give its applications. 7+3

14. Explain the function of parabolic reflector. 10

15. Explain the working principle of magnetron and state its applications. 7+3

16. Explain the working principle of travelling wave tube and state its applications. 7+3

17. Draw and explain the block diagram of Continuous Wave (CW) radar. 10

18. Explain the application of satellite in GPS (Global Position System). 10

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