



C16-EC-405

6439

BOARD DIPLOMA EXAMINATION, (C-16)

JANUARY/FEBRUARY—2022

DECE - FOURTH SEMESTER EXAMINATION

MICROWAVES AND SATELLITE 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 refractive index and reflection coefficient.
2. List any three applications of ground wave propagation.
3. Define radiation pattern.
4. Classify antennas based on frequency range.
5. List different microwave solid state devices.
6. Define TE and TM waves.
7. Define Doppler Effect.
8. Draw the block diagram of CW Radar.
9. List any three advantages of satellite communication system over terrestrial communication systems.
10. List any three applications of satellites.

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[Contd...

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PART—B

- 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. (a) List the limitations of ground wave propagation. 3
(b) Explain space wave propagation. 7
12. (a) Explain duct propagation. 5
(b) Explain skip distance and skip zone. 5
13. Explain horn antenna and list its advantages. 10
14. Explain end fire array and broad side array. 10
15. Explain the working of Reflex klystron. 10
16. Explain the working of GUNN diode. 10
17. Draw and explain the block diagram of pulse radar. 10
18. Draw and explain the block diagram of communication satellite system. 10

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