

6439
BOARD DIPLOMA EXAMINATION
JUNE - 2019

* **DIPLOMA IN ELECTRONICS AND COMMUNICATION ENGINEERING**
MICROWAVE & SATELLITE COMMUNICATION SYSTEMS
FOURTH SEMESTER EXAMINATION

Time: 3 Hours

Total Marks: 80

PART - A (3m x 10 = 30m)

Note 1: Answer all questions and each question carries 3 marks

2: Answers should be brief and straight to the point and shall not exceed 5 simple sentences

1. Define Skip Distance
2. List the limitations of ground wave propagation
3. Distinguish between end-fire and broad side arrays
4. Define efficiency of an antenna
5. What are the limitations of Reflex Klystron ?
6. How does the dimensions of waveguide changes with cut-off frequency ?
7. List the advantages of CW RADAR
8. How does duplexer is useful in RADAR ?
9. State the need for satellite communication
10. List the advantages of satellite communication over terrestrial communication systems

PART - B (10m x 5 = 50m)

Note 1: Answer any five questions and each carries 10 marks

2: The answers should be comprehensive and the criteria for valuation is the content but not the length of the answer

11. a) Classify different layers of Ionosphere and write the uses of each in wave propagation
- * b) Explain the virtual height of Ionosphere with diagram
12. Write short notes on a) Super-refraction b) Tropospheric Scatter propagation
13. Distinguish between half wave dipole and folded dipole
14. a) State the need for antenna array
- b) Explain the construction and working of end-fire array

15. a) Explain the GUNN effect
- b) Explain the characteristics of GUNN diode
16. List various microwave passive components and write short notes on each
17. Explain how moving targets can be identified with block diagram
18. Explain different subsystems of satellite on board

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