6439

BOARD DIPLOMA EXAMINATION
MARCH/APRIL - 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. Write the equation for field strength in ground wave propagation
2. What is the reason for refraction of EM waves?
3. Compare Horn antenna with a dipole antenna
4. Define antenna input impedance
5. List the different bands of microwave frequencies
6. List the different types of T-Junctions
7. List the functions of COHO and STALO in MTI RADAR
8. What are the disadvantages of CW RADAR
9. List the functions of telemetry tracking and command subsystem
10. List the applications of satellite communication

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. Write short notes on a) Super-refraction b) Tropospheric Scatter propagation
12. a) Briefly explain the ground wave propagation

    b) Explain how refraction limits propagation of ground waves
13. Define the following terms with reference to antennas

    (i) Beam width (ii) Radiation Pattern (iii) Power Gain (iv) Directivity

14. a) List the different microwave antennas

    b) Explain the working of Dish antenna

15. What are different microwave passive devices and state their need.

16. Explain the construction and working of GUNN diode

17. Draw the block diagram of CW RADAR and explain each block

18. Draw and explain block diagram of satellite communication system

- xxx -