

BHARATI VIDYAPEETH INSTITUTE OF TECHNOLOGY

QUESTION BANK

Unit Test-II

Program: - EJ

Semester: - V

Course:-MAR (315342)

Unit- III Microwave Active Components (10 M)

2 Marks Questions

1. List applications of IMPATT diode.
2. List applications of PIN diode.

4 Marks Questions

3. Draw equivalent circuit and VI characteristics of Tunnel diode.
4. Describe the operating principle of PIN diode and state its two applications.
5. Draw the construction of GUNN diode and describe the application of GUNN diode as an oscillator
6. Draw neat constructional diagram of IMPATT diode. Describe its working.

Unit -IV Radar Fundamentals (12 M)

2 Marks Questions

7. Draw block diagram of Radar system and explain it.
8. Give the factors that affect the RADAR range.
9. Give the typical usage of RADAR Beacon.

4 Marks Questions

10. Draw the block diagram of Pulsed RADAR explains it.
11. List the different antenna scanning pattern in RADAR. Explain any one.
12. Give RADAR range equation .Discuss the factors influencing maximum range.

13. Explain the working principle of Horn Antenna with neat sketch.

Unit- V Radar Systems (12 M)

2 Marks Questions

14. Show the use of Doppler Effect to calculate the relative velocity.

15. List the two advantages and two disadvantages of CW RADAR.

16. What is Blind speed?

17. State the application of MTI Radar.

18. List the application of SONAR System.

4 Marks Questions

19. Calculate the maximum range of a guided missile tracking RADAR operate at 5GHz With a 1 Mwatt peak power output. If the antenna diameter is 3m and the receiver has a bandwidth of 2MHz with 10 dB noise figure. The target cross section is 2m².

20. An MTI RADAR operates at 8 GHz with a prf of 3500 pps. Calculate the lowest Three blind speeds of this RADAR.

21. Draw the block diagram and explain operation of CW Doppler RADAR.

22. Classify different antenna patterns in Doppler Radar. Explain any one.

23. Distinguish between stationery target and moving target .Explain principle of MTI RADAR.

24. List different display methods used in Radar. Explain any one.

25. State the working principle of SONAR System.