

Time: 3 Hrs

Total Marks: 80

- N.B. :** (1) Question no 1 is compulsory
 (2) Attempt any 3 question out of remaining.
 (2) Figures to the right indicate full marks.
 (3) Assume suitable data wherever necessary and indicate the same.

- Q1
 a. Compare CW Radar with Frequency Modulated Radar. [5]
 b. Explain Frequency Agility and Diversity Technique. [5]
 c. Explain factors which governs pulse repetition frequency. [5]
 d. Explain radar range equation. [5]
- Q2
 a Explain Doppler Filter banks along with its merits and demerits [10]
 b What do you mean by Radar Cross Section? Explain RCS of Sphere. [10]
- Q3
 a Draw and explain 'Delay Line Canceller' along with its frequency response. [10]
 b Give importance of Match filter of Radar and discuss them in detail. [10]
- Q4
 a Discuss in brief Radar Resolution Cell, land and Sea Clutter [10]
 b With the help of detailed block diagram explain Conical Scanning used in Radar Systems [10]
- Q5
 a Draw and explain Travelling Wave Tube Amplifier used in Radar Transmitter [10]
 b Compare low power and High Power Radar Transmitter along with their applications [10]
- Q6
 a Explain methods of Integration of Radar Pulses to improve its detection. Define Integration Improvement Factor. How does it affect Radar Equation [10]
 b Draw block diagram of MTI Radar and explain each block in detail. [10]