

Duration: 3.00 hr.

Max.Marks:80

N.B.: All Questions are compulsory.
 Attempt any three questions out of five
 All questions carry equal marks.
 Assume suitable data, if required and state it clearly.

Q.No	Question	Max Marks/ Question
Q1.	(a) Explain frequency agility and diversity technique. (b) Explain factors which govern pulse repetition frequency. (c) Derive radar range equation. (d) Draw block diagram of MTI radar and explain each block in short.	[20] [05] [05] [05]
Q2.	(a) What do you mean by radar cross section (RCS)? Explain RCS of sphere. (b) Explain operation of Traveling Wave Tube used in RADAR Transmitter.	[10] [10]
Q3.	(a) Describe receiver noise and signal to noise ratio in RADAR. (b) Describe radar frequencies and various radar applications.	[10] [10]
Q4.	(a) With the help of detailed block diagram explain conical scanning used in Radar systems. (b) Explain doppler filter banks along with its merits and demerits.	[10] [10]
Q5.	(a) Draw and explain sequential lobing tracking radar. (b) Write a note on "generation of microwave signal with magnetron".	[10] [10]
Q6.	(a) What do you mean by tracking accuracy? What are limitations of tracking accuracy? (b) Explain the concept of probability of false alarm. (c) Write note on radar plotting. (d) What do you understand by term clutter? Explain different types of clutters	[5] [5] [5] [5]

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