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.		[20]
	(a) Explain frequency agility and diversity technique.	[05]
	(b) Explain factors which govern pulse repetition frequency.	[05]
	(c) Derive radar range equation.	[05]
	(d) Draw block diagram of MTI radar and explain each block in short.	[05]
Q2.	(a) What do you mean by radar cross section (RCS)? Explain RCS of sphere.	[10]
	(b) Explain operation of Traveling Wave Tube used in RADAR Transmitter.	[10]
Q3.	(a) Describe receiver noise and signal to noise ratio in RADAR.	[10]
	(b) Describe radar frequencies and various radar applications.	[10]
Q4.	(a) With the help of detailed block diagram explain conical scanning used in Radar systems.	[10]
	(b) Explain doppler filter banks along with its merits and demerits.	[10]
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Q5.	(a) Draw and explain sequential lobing tracking radar.	[10]
	(b) Write a note on "generation of microwave signal with magnetron".	[10]
Q6.	(a) What do you mean by tracking accuracy? What are limitations of tracking accuracy?	[5]
	(b) Explain the concept of probability of false alarm.	[5]
	(c) Write note on radar plotting.	[5]
	(d) What do you understand by term clutter? Explain different types of clutters	[5]

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