Code No: **R41044** **R10** **Set No. 1**

IV B.Tech I Semester Supplementary Examinations, February/March - 2018

RADAR SYSTEMS

(Electronics and Communication Engineering)

Time: 3 hours **Max. Marks: 75**

Answer any FIVE Questions
All Questions carry equal marks
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1	a)	Derive the basic radar range equation?	[8]
	b)	Draw the radar waveform of a signal with f=100MHz and duty cycle is 20%.	[7]
2	a)	Draw the output envelope of the radar and explain the importance of a threshold level?	[8]
	b)	List out and Explain any two types of system losses?	[7]
3	a)	Draw the block diagram of a simple CW-Radar and explain the function?	[8]
	b)	Explain the importance of receiver bandwidth?	[7]
4	a)	Ex plain the function of Range-and-doppler measurement of a FM-CW radar with linear wave?	[8]
	b)	Explain the function of a FM-CW Altimeter?	[7]
5	a)	Explain the function of MTI Radar as butterfly effect on A-scope?	[8]
	b)	Explain the function of a single delay-line canceller?	[7]
6	a)	List out the tracking techniques? Explain anyone of the tracking method in detail?	[8]
	b)	Explain the function of Boxcar generator?	[7]
7	a)	Write short notes on matched filter design?	[8]
	b)	Explain the working of correlation detection?	[7]
8		Write a short notes on i) F/N ratio of a 2-stage linear network ii) Duplexer	[15]