

Code No: R41044

**R10****Set No. 1**

IV B.Tech I Semester Supplementary Examinations, Oct/Nov - 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) Draw the basic radar block diagram and explain the function of each block. [8]  
b) Explain about unambiguous Range. [7]
- 2 a) Explain the importance of integration of Radar pulses. [8]  
b) Explain about the importance of pulse repetition frequency to avoid Range ambiguity? [7]
- 3 a) Explain the working of Intermediate-frequency receiver with suitable Diagram. [8]  
b) Explain the need of Isolation and methods between transmitter and Receiver. [7]
- 4 a) Explain the working principle of MTI Radar with Power amplifier. [8]  
b) Define blind speed? Derive the blind speed equations. [7]
- 5 a) Explain the working principle of amplitude comparison monopulse Radar on one-angle co-ordinator. [8]  
b) List out and explain Acquisition Techniques. [7]
- 6 a) Discuss briefly about the electronically steered phased array antennas. [8]  
b) With a neat sketch, explain the principle, operation and working of Lens antennas. [7]
- 7 a) Derive the equation of S/N of a matched filter. [8]  
b) Prove that the output signal of a matched filter is correlation function. [7]
- 8 Write short notes on  
(i) Displays (ii) Duplexer Design [15]