

Code: 9A04703

**R09**

B.Tech IV Year I Semester (R09) Supplementary Examinations June 2016

**RADAR SYSTEMS**

(Electronics &amp; Communication Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions  
All questions carry equal marks

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- 1 What is the use of radar? Derive the radar equation.
- 2 Derive the equation for probability of false alarm and probability of detection whenever the radar is inputted by noise alone.
- 3 Draw the block diagram of the simple CW radar and explain about its operation.
- 4 With the help of block diagram of the FM altimeter, explain its operation.
- 5 Draw the block diagram of the MTI radar with power oscillator transmitter. Explain about its operation.
- 6 Explain about the one co-ordinate Amplitude Comparison Monopulse tracking radar.
- 7 (a) Explain about the correlation function and cross-correlation receiver.  
(b) Explain about the matched filter with non-white noise.
- 8 Explain about Radiation pattern & Beam steering with respect to phased array antennas in detail. Mention the necessary relations.

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