Code: R7410404

B.Tech IV Year I Semester (R07) Supplementary Examinations December 2015
RADAR SYSTEMS
(Electronics & Communication Engineering)
(For 2008 Regular admitted batch only)

Time: 3 hours   Max. Marks: 80

Answer any FIVE questions
All questions carry equal marks
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1 (a) Draw the block diagram of pulse radar and explain the functions performed by each block.
   (b) With a neat sketch explain the radar frequencies and the electromagnetic spectrum.

2 (a) Briefly explain about the radar cross section of targets.
   (b) Discuss in brief about pulse repetition frequency and range ambiguities.

3 (a) Explain the isolation between transmitter and receiver in simple CW radar.
   (b) Explain Doppler effect.

4 (a) Briefly explain about multiple-frequency CW radar.
   (b) Draw and explain the frequency-time relationships in FM-CW radar.

5 (a) Briefly explain about range-gated Doppler filters.
   (b) Discuss the limitations to MTI performance.

6 (a) Briefly explain about amplitude comparison monopulse tracking radar.
   (b) Write short notes on tracking in range.

7 (a) Describe the efficiency of non-matched filters.
   (b) Derive the impulse response of matched filter receiver.

8 (a) Explain the importance of noise temperature in radar receivers.
   (b) With a neat sketch explain the principle of branch-type duplexer.

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