Code: 9A04703

B.Tech IV Year I Semester (R09) Regular & Supplementary Examinations December 2015
RADAR SYSTEMS
(Electronics & Communication Engineering)

Time: 3 hours   Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

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1   (a)   Derive the simple form of radar equation.
     (b)   Describe the applications of radar.

2   Define radar cross section of a target. Explain about the RCS of simple targets like sphere, cone-sphere.

3   Draw the block diagram of the CW radar with non zero IF receiver. Explain about its operation.

4   (a)   Discuss in brief about multiple - frequency CW radar.
     (b)   Explain the measurement of range in FM – CW radar.

5   Draw the block diagram of the MTI radar with power amplifier transmitter. Explain about its operation.

6   (a)   Draw and explain the wave front phase relationships in phase comparison monopulse radar.
     (b)   Write a brief note on acquisition and scanning patterns.

7   What is the function of matched filter receiver? Describe about the response characteristics.

8   (a)   Explain the principle of balanced duplexer.
     (b)   Discuss in brief about series verses parallel feeds.

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