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Roll No .....

EC-8004 (3) (CBGS)

B.E. VIII Semester

Examination, May 2019

Choice Based Grading System (CBGS)

Radar Engineering

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.

ii) All questions carry equal marks.

1. a) Derive the radar range equation.
   b) Discuss about prediction of range performance. Also explain integration of radar pulses.

2. a) Explain the principle of doppler effects. Also explain the working of CW radar.
   b) Explain the working of FM CW altimeter.

3. a) Discuss the principle working of MTI radar.
   b) Discuss about MTI radar processor. Also discuss limitations to MTI performance.

4. a) Discuss about radar cross section and scattering cross section.
   b) Explain the effect of polarization on cross section.

5. a) Classify and explain different types of radar signals. Also discuss about duration frequency and bandwidth of signals.
   b) Discuss about ambiguity function and uncertainty functions.

6. a) Explain the working principle of Doppler filter.
   b) Explain the working principle of matched filter.

7. a) Explain briefly about radar antenna and radar resolution.
   b) Explain about type A and PPI representation displays.

8. Write short notes on any two of the following.
   a) FMCW radar
   b) Multifrequency radar
   c) Target scattering matrixes

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