Roll No. ..... Total Pages : 2

BT-8/M-20 **38145**

RADAR ENGINEERING

Paper–ECE-422-N

Option-I

Time Allowed : 3 Hours] [Maximum Marks : 75

Note : Attempt **five** questions in all, selecting at least **one** question from each Unit. All questions carry equal marks.

UNIT–I

1. What do you understand by Radar? What are its applications? Explain its working operation with the help of a Block diagram. 15

2. (a) Derive simple form of Radar equation. Comment to minimum detectable signal. 10

   (b) What are propagation effects in Radar? 5

UNIT–II

3. What is Doppler effect? Differentiate between CW and FM-CW radars. 15

4. What is MTI Radar? What are limitations of MTI performance? Explain MTI from a moving platform. 15

UNIT–III

5. What do you mean by Tracking? Explain two popular types of tracking used in Radar operation. 15

6. Explain monopulse tracking Radar in detail. 15

UNIT–IV

7. (a) Define Noise figure? Describe its use in Radar receivers. 10

   (b) Explain Radar displays. 5

8. Explain radar duplexers and receiver protectors in detail. 15

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