R16

Reg. No: | | | | | | | | | | |

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR
(AUTONOMOUS)
B.Tech IV Year II Semester Regular Examinations September 2020
RADAR & NAVIGATIONAL AIDS
(Electronics & Communication Engineering)

Time: 3 hours   Max. Marks: 60

(Answer all Five Units **5 x 12 = 60** Marks)

UNIT-I

1 Derive the radar equation in terms of minimum detectable power and transmitting and receiving antenna gains.   **12M**

OR

2 a Explain the operation of radar with neat block diagram.   **7M**
   b Briefly explain few applications of Radar.   **5M**

UNIT-II

3 Explain the function of the RF amplifier and its components in the radar communication.   **12M**

OR

4 a Explain the operation of travelling wave tubes with neat block diagram.   **8M**
   b Write short notes on balanced type duplexers   **4M**

UNIT-III

5 a Explain in detail about FM CW radar with a block diagram.   **8M**
   b Write short notes on delay line cancellers?   **4M**

OR

6 a Explain MTI radar with a neat block diagram.   **8M**
   b Write short notes on range and angle tracking?   **4M**

UNIT-IV

7 a Explain how the goniometer is used in the RADAR Navigation.   **7M**
   b Explain about the loop antenna.   **5M**

OR

8 How the MF four course radio ranges are used to detect the errors in the RADAR?   **12M**

UNIT-V

9 a Explain hyperbolic system of navigation.   **7M**
   b Write short notes on Loran-A system?   **5M**

OR

10 What is mean by DMA and how it is operated in the navigation?   **12M**

*** END ***