

Roll No.

Total Pages : 02

BT-7/M-20

37036

MICROWAVE AND RADAR ENGG.

EEcT-405-E (Opt. I)

Time : Three Hours]

[Maximum Marks : 100

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit.

Unit I

1. With suitable block diagram explain the working of Magnetron. Also explain the bunching process in Magnetron. **20**
2. (a) Explain with suitable reasons why we cannot use vacuum tubes at high frequencies. **10**
(b) Mention characteristic features and applications of Microwaves. **10**

Unit II

3. Write short notes on the following :
 - (a) Parametric Amplifier
 - (b) IMPATT DIODE. **10×2**

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4. (a) With suitable diagram explain the construction, V-I characteristic of TRAPTT Diode. **10**
(b) Write a short note on Masers. **10**

Unit III

5. (a) What do you understand by TE, TM, TEM modes in rectangular wave guide. **7**
(b) For what purpose we are using resonators ? Explain different types of resonators with their resonating frequency. **13**
6. Write short notes on the following : **20**
(i) Attenuator
(ii) Isolators
(iii) Directional Coupler.

Unit IV

7. For what purpose we are using CW Radar ? Explain the working of CW radar with suitable diagram. What are limitations of CW Radar and how can they be removed ? **20**
8. Write short notes on the following :
(i) Non-coherent MTI radar
(ii) Radio aids to navigation. **20**

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