

Roll No.

Total Pages : 2

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BT-7/D09

MICROWAVE ENGINEERING

Paper : ECE-407(E)

Time : Three Hours]

[Maximum Marks : 100

Note : Attempt *five* questions, selecting at least *one* question from each unit.

UNIT-I

1. For what purpose we are using waveguide resonators ? What are the various types of resonators ? Explain the expressions of resonant frequencies for rectangular and circular cavity resonator. 20
2. With block diagram and suitable theory, explain how we can measure VSWR, Impedance and Insertion loss using slotted section. 20

UNIT-II

3. With suitable block diagram, explain the working of Magnetron. Also explain the bunching process in Magnetron. 20
4. With suitable block diagram, explain the working of TWT. 20
5. Write short notes and find scattering parameters for the following :
 - (a) Directional coupler.
 - (b) Circulator. 20

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6. Write short notes on the following :

- (a) Phase shifters.
- (b) Isolators.
- (c) Microwave filters.
- (d) Wave meters.

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UNIT-IV

7. Write a short note on Gunn diode. Also explain V-I characteristics of Gunn diode. 20

8. Explain construction, working and V-I characteristics of the following :

- (a) IMPATT Diode.
- (b) TRAPATT Diode.

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