Roll No .....

EC-7001 (CBGS)

B.E. VII Semester

Examination, November 2019

Choice Based Grading System (CBGS)

Microwave Engineering

Time : Three Hours

Maximum Marks : 70

Note: i) Attempt any five questions.
ii) All questions carry equal marks.

1. a) Give the general representation of E.M. Field in terms of TEM, TE and TM components. 7
   b) Write the properties of propagating and evanescent modes. 7

2. a) How are waveguide different from normal two wire transmission lines. 7
   b) Explain dominant mode of a rectangular waveguide. 7

3. a) Write the properties of scattering matrix of reciprocal and non-reciprocal passive networks. 7
   b) Explain in brief multi hole directional couplers. 7

4. a) Explain the working of isolator in brief. 7
   b) What is PIN diode? Explain its properties and applications. 7

5. a) Explain the amplification mechanism of parametric amplifier by use its equivalent circuit. 7
   b) Explain the principle of MASER and LASER. 7

6. Compare the working of a two cavity and reflex klystrons. 14

7. a) Explain the working of reflex klystron in short. 7
   b) Explain one method of VSWR measurement in short. 7

8. Write short notes (any two): 14
   a) Microwave frequency measurement
   b) Network analysis
   c) Microwave bench component.

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