

Roll No .....

**MEMT-302(A)**

**M.E./M.Tech., III Semester**

Examination, December 2014

**Microwave Transmission System (Elective - II)**

*Time : Three Hours*

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*Maximum Marks: 70*

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

1. a) State and prove Poissons equations.  
b) Determine the solution of Laplace equation in two dimensional space with infinite boundaries.
2. a) Discuss about the surface currents due to polarized plane waves on dielectric discontinuities.  
b) Discuss about the modes on homogeneous uniform guides with singly connected conductor boundaries
3. a) Explain briefly about the circular polarization.  
b) Discuss about the modes on homogeneous uniform guides with multi connected conductor boundaries.
4. a) Discuss about the modal vectors and modal voltages.  
b) Explain briefly about the Non homogeneous guides.
5. a) Discuss about the multimode operation of fiber.  
b) Discuss the principle working of circular and Andry perot resonators.

6. a) Discuss about variational and perturbational method applied to wave-guides.  
b) Discuss about loss less and non reciprocal networks.
7. a) What are the design considerations which should be taken into account while designing circuit with micro strip lines?  
b) State and prove floquet theorem and its applications.
8. Write short notes on any two of the following
  - i) Hybrid modes
  - ii) Microwave filters
  - iii) Periodic and slow wave structures.

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