

Roll No

MEVD-301(A)

M.E./M.Tech. III Semester

Examination, December 2014

Opto-Electronics Integrated Circuits (Elective-IV)

Time : Three Hours

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Maximum Marks : 70

- Note:** 1. Attempt any five questions.
2. All questions carry equal marks.

1. a) Discuss the theory of optical waveguide using two dimensional wave guide system.
b) Discuss the mode cut off conditions.
2. a) Explain the process of waveguide fabrication using solution deposition method.
b) Explain about the epitaxial growth of III -V compound semiconductor materials.
3. a) Discuss the radiation and bending losses of optical waveguides.
b) How to measure the waveguide losses?
4. a) Discuss the principle working of grating couplers.
b) Discuss the principle working of Directional couplers and its applications.

5. a) Discuss about the electro optic and acousto optic effects of wave modulators.
b) Discuss the principle of optical switches.
6. a) Discuss the principle of distributed feedback lasers.
b) Explain the principle working of Integrated optical detectors.
7. a) Discuss the principle working of tunable laser diodes.
b) Give an over view of optical Integrated circuits.
8. Write short notes on any two of the following:
 - a) Diffused waveguides
 - b) Wet and dry etching techniques
 - c) Magneto - optic effect.

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