

Roll No .....

**MEVD-301(A)**

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

Examination, December 2016

**Opto-Electronics Integrated Circuits**

(Elective - IV)

Time : Three Hours

Maximum Marks : 70

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

1. a) Discuss the principle working of optical one dimensional planar wave guides.  
b) Discuss about wave guide modes and its cut off condition.
2. a) Discuss about vacuum deposition and solution deposition methods used in wave guide fabrication.  
b) Discuss about shaping of wave guides by wet and dry etching.
3. a) Explain about epilaxial growth of III-V compound semiconductor materials.  
b) Discuss about radiation and bending loss.
4. a) Discuss the working of Transverse couplers and Prism couplers.  
b) Explain the working of directional couplers and their applications.

5. Explain about the electro-optic, acousto-optic and magneto-optic effects.
6. a) Discuss the principle working of laser diodes.  
b) Discuss the principle working of distributed feedback lasers.
7. a) Discuss the principle of tunable laser diodes.  
b) Write a brief note on optical integrated circuits.
8. Write short notes on any two of the following :
  - a) Grating coupler
  - b) Wave guide modulators and switches
  - c) Measurement of wave guide losses

\*\*\*\*\*