

Roll No.....

EC - 703**B.E. VII Semester**

Examination, December 2014

Optical Communication

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*Time : Three Hours**Maximum Marks : 70*

Note : Attempt five questions selecting any two parts from each unit. Each question carries equal marks.

Unit - I

1. a) Describe the various vapor deposition techniques that are used to fabricate high quality silica fibers.
- b) What do you understand by fiber assessment? Draw the schematic diagram of basic laboratory fiber test equipment.
- c) Give comparison details between optical fibers and conventional electrical transmission lines.

Unit - II

2. a) How light emitting diode can be used as a light source for fiber cable? Discuss structure and efficiency.
- b) Discuss the method of source to fiber power launching. Also explain about fiber to fiber joints.
- c) What do you understand by heterostructures?

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Unit - III

3. a) What do you understand by signal distortion in optical fibers?
- b) What are the factors in optical fiber that causes attenuation in the signal? Mention the alternatives to reduce attenuation?
- c) What do you understand by wave guide dispersion and polarization mode dispersion? Explain in brief.

Unit - IV

4. a) Discuss in detail the digital receiver performance in optical communication.
- b) Write in brief on the following
 - i) Homodyne and heterodyne receiver
 - ii) Burst mode receiver
- c) What do you understand by refractive index profiles.

Unit - V

5. a) What are the basic test equipment used in optical communication? Discuss each in brief.
- b) Write in brief on the following
 - i) Eye diagram test
 - ii) Reflectometer
- c) What is concept of optical performance monitoring?
