Roll No.....

EC - 703

B.E. VII Semester

Examination, December 2014

Optical Communication

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?

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?

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