Total No. of Questions :8] *[Total No. of Printed Pages : 2*

Roll No .....

EI/IC-801

B.E. VIII Semester

Examination, June 2017

Optical Instruments and Sensors

Time : Three Hours

Maximum Marks : 70

Note: i) Answer any five questions.

ii) All questions carry equal marks.

1. a) Discuss the propagation of light in a cylindrical dielectric rod.
   b) Give a brief review of aberration, comma, acclamation and distortion.

2. a) Explain about chromatics aberration.
   b) Give model analysis of step index fiber.

3. Discuss signal degradation in optical fiber transmission due to dispersion and attenuation.

4. a) Discuss the use of optical fibers as sensors.
   b) Write briefly about optical signal processing.

5. a) Discuss about modulation techniques used in optical fiber sensors.

   b) Discuss the principle working of optical spectrum analyzer.

6. a) Discuss the principle working of optical power meters.
   b) Discuss the principle working of OTDR.

7. a) Discuss the principle working of LASER.
   b) Briefly discuss the principle of photo detectors and explain responsivity.

8. Write short notes on any two of the following
   a) Osages
   b) Stabilized calibrated light sources
   c) Integrated optical devices

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