

Roll No

MEDC-302(B)

M.E./M.Tech. III Semester

Examination, June 2016

Optical Instrumentation and Measurement

(Elective-I)

Time : Three Hours

Maximum Marks : 70

- Note:** i) Attempt any five questions.
ii) All questions carry equal marks.
iii) Assume suitable data wherever necessary.

1. a) Explain optical coherence reflect meter. 7
b) Derive the relation for Boxcar average. 7
2. a) Explain CCD. 7
b) Derive the relation for optical power and energy. 7
3. a) Explain Beam splitters. 7
b) Derive the relation for fibre laser. 7
4. a) Explain magnetic field sensors. 7
b) Derive the relation for electric field sensor based on polarization. 7
5. a) Explain Nondestructive loss measurement. 7
b) Explain and derive two relation for differential mode delay. 7

6. a) Explain single mode fibre and attenuation for its. 7
b) Derive the relation for Equivalent Step Index (ESI). 7
7. a) Explain Refractive Index profile and numerical aperture. 7
b) Derive the relation for scattering loss and differential loss. 7
8. Write a short notes on any two 14
a) Mode field diameter for single mode fiber
b) Wavelength filters
c) Ellipsometer
