

IV B.Tech I Semester Supplementary Examinations, November 2005
LASER AND FIBER OPTICS IN MEDICINE
(Bio-Medical Engineering)

Time: 3 hours

Max Marks: 80

Answer any FIVE Questions
All Questions carry equal marks

1. Explain the following characteristics of laser:
 - (a) Diffraction
 - (b) coherence
 - (c) Monochromaticity
 - (d) high power [16]
2. Explain the principles of laser applications in medicine and Biology. [16]
3. Discuss the laser application in the field of ophthalmology. [16]
4. Describe the use of fibre optics in gastroentrology. Discuss the applications in gastroentrology. [16]
5. Describe the concept of surgical instrumentation of Argon Ion laser. Mention its applications in medical field. [16]
6. Pertaining to dentistry: explain
 - (a) laser induces carrier inhibition
 - (b) laser effects on soft tissues. [16]
7. Explain the laser hazards, safety, regulations and precautions regarding the use of laser in treatment. [16]
8. Explain the terms:
 - (a) Endoscope
 - (b) laser photocoagulators. [8 x 2]
