

Q.21 Explain EM Spectrum with suitable diagram.

Q.22 Explain basic optical law.

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SECTION-D

Note: Long answer questions. Attempt any two questions out of three Questions. (2x8=16)

Q.23 Write a note on polarization, reflection, refraction and attenuation?

Q.24 Write a note on scattering and bending losses in optical fibers with possible diagram?

Q.25 Write pros and cons of optical fiber and its potential role in healthcare department?

Time : 3 Hrs.

M.M. : 60

SECTION-A

Note: Multiple Choice Questions. All Questions are compulsory. (6x1=6)

Q.1 Laser was invented in 1960's by :

- a) TH Maiman
- b) Maxwell's
- c) Einstein
- d) Raman

Q.2 Laser is used to breakup kidney or gallstones in process called:

- a) Trbecularplsty
- b) Lithotripsy
- c) Viscocanalostomy
- d) All of these

Q.3 What type of Laser cause if not properly used:

- a) Red Semiconductor
- b) Blue Semiconductor
- c) Excimer laser
- d) None of these

- Q.4 What type of laser is used in CD and DVD:
a) Semiconductor b) YAG
c) Holium d) None of these
- Q.5 What is one way to describe a photon?
a) A wave-packet b) Solid
c) ND-YAG Laser d) None of these
- Q.6 The critical angle is :
a) The Refraction at which the TIR occurs
b) The Reflection at which the TIR occurs
c) The angle of incidence at which TIR occurs
d) None of these
- SECTION-B**
- Note:** Objective/Completion type questions. All questions are compulsory. (6x1=6)
- Q.7 The multimodal step indexed fiber has _____.
Q.8 NA stands for.
Q.9 Multimode step index fiber has a large core diameter of range is _____?
- Q.10 The performance characteristics of multimodal graded indexed fiber are _____.
Q.11 Multimode graded indexed fibers use incoherent source only. (True/False)
Q.12 O.F. stands for _____.

SECTION-C

Note: Short answer type Questions. Attempt any eight questions out of ten Questions. (8x4=32)

- Q.13 Explain laser for Condylomata.
Q.14 Explain CO₂ laser.
Q.15 Write a note on Holium YAG laser with its applications?
Q.16 Which laser is suitable for suture removal, draw its diagram also?
Q.17 Write a note on laser application in Ophthalmology department?
Q.18 Explain LASIK.
Q.19 Write a note on laser role in Dermatology?
Q.20 Explain laser application in dentistry.