

- Q.26 Explain splicing techniques.
 Q.27 Give the basic construction detail of optical fiber cable.
 Q.28 Differentiate between LED and LASER.
 Q.29 Explain in detail about PIN diode.
 Q.30 Describe LED & It's different structures.
 Q.31 Write short note on acceptance angle and total internal reflection.
 Q.32 Explain different types of noise in detectors.
 Q.33 Explain the difference between mono mode optical fiber & multimode optical fiber.
 Q.34 Describe material dispersion in detail.
 Q.35 Describe different types of optical amplifiers.

Section-D

Note: Long answer questions. Attempt any two question out of three Questions. (2x10=20)

- Q.36 Explain in detail about the material and absorption losses in optical fibers. What is the cause of material absorption losses.
 Q.37 What do you mean by optical light source? Explain in detail about the different types of optical light source.
 Q.38 Write short note on
 a) Fusion splicing
 b) Single mode optical fiber

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**5th Sem., Branch : Eltx., Power Eltx.
Subject : Optical Fiber Communication**

Time : 3 Hrs.

M.M. : 100

SECTION-A

Note: Multiple type Questions. All Questions are compulsory. (10x1=10)

- Q.1 If the bandwidth of a Communication system is very high, then what is the effect of the information carrying capacity.
 a) Decreases b) Increases
 c) No Effect d) None
 Q.2 The necessary condition for the phenomenon of total internal reflection is
 a) Angle of incidence should be greater than critical angle
 b) Angle of incidence should be equal to critical angle
 c) Angle of incidence should be lower than critical angle
 d) None
 Q.3 From the given parameters which is an example of permanent joint
 a) Connectors b) Splice
 c) Couplers d) None

- Q.4 What is full form of LED
 a) Light Emitter Diode b) Light Emitting Diode
 c) Light Emission Diode d) None
- Q.5 Which one gives better optical property
 a) Homo-junction b) Hetero-junction
 c) p-n junction d) None
- Q.6 An optical light source converts
 a) Electrical signal to optical signal
 b) Optical signal to electrical signal
 c) Both
 d) None
- Q.7 What is the principle of light emission in a LED.
 a) Stimulated Emission b) Spontaneous Emission
 c) Absorption d) None
- Q.8 APD stands for
 a) Avalanche Photo Diode
 b) Average Photo Diode
 c) Avalanche Photo Detector
 d) None
- Q.9 EDFA stands for
 a) Erbium Doped Fiber Application
 b) Erbium Doped Fiber Atom
 c) Erbium Doped Fiber Amplifier
 d) None
- Q.10 The stimulated Raman scattering belongs to the
 a) Linear scattering b) Non Linear scattering
 c) Both d) None

Section-B

Note: Objective type questions. All questions are compulsory. **(10x1=10)**

- Q.11 Define Numerical Aperture.
- Q.12 What are two types of material absorption losses?
- Q.13 Give full form of LASER.
- Q.14 Give full form of SOA.
- Q.15 Write any two advantages of optical light source.
- Q.16 What do you mean by optical light source?
- Q.17 Define acceptance angle.
- Q.18 Define absorption loss.
- Q.19 Write any two characteristics of optical light source.
- Q.20 Explain the process of spontaneous emission.

Section-C

Note: Short answer type Question. Attempt any twelve questions out of fifteen Questions. **(12x5=60)**

- Q.21 What are the advantages of optical fiber communication.
- Q.22 Explain Mie scattering.
- Q.23 Describe bending losses in optical fiber.
- Q.24 Give the principle of RAMAN Amplifier.
- Q.25 Define graded index fiber.