

- Q.27 What are the different types of connection used in optical fibre communication?
 - Q.28 Describe structure of multimode steps index fiber?
 - Q.29 List any four comparisons between PIN diode & APD.
 - Q.30 Differentiate between step index and grade index fiber.
 - Q.31 Explain the working of directional coupler.
 - Q.32 What is Photomultiplier? Explain.
 - Q.33 Write a note on attenuators.
 - Q.34 Write application of optical fiber.
 - Q.35 Write a note on distributed feedback laser diode.

SECTION-D

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

- Q.36 What is the principle of laser? What are different types of lasers?

Q.37 Explain the Electromagnetic spectrum used in optical fiber communication.

Q.38 Explain numerical aperture with the help of suitable diagram. What is the importance of numerical aperture in optical fiber communication?

No. of Printed Pages : 4
Roll No.

120965B/30965B

**6th Sem / Branch : Elect./EI/Elect & Eltx. Engg.
Sub. : Optical Fibre Communication**

Time : 3Hrs.

M.M. : 100

SECTION-A

Note: Multiple choice questions. All questions are compulsory (10x1=10)

- Q.1 The bandwidth of a fiber is limited by _____

a) Mode b) Wavelength
c) Dispersion d) Frequency

Q.2 What are two type of optical detectors

a) LEDs and APDs
b) PIN diode and APDs
c) APDs and Laser dioders
d) Laser diodes and PIN diodes

Q.3 The spreading of a light pulse as it travels along the fiber is caused by what mechanism _____

a) Diffraction b) Attenuation
c) Dispersion d) Absorption

Q.4 Fibre optics used which medium to send information _____

a) Light b) Water
c) Electrons d) Phonons

- Q.5 Light traveling in optical fiber follows which of the following principles.
 a) Huygen's principle b) Reflection theory
 c) Light theory d) All
- Q.6 In optical fibers, light propagates mainly along the _____
 a) Cladding b) Core
 c) Buffer d) Jacket
- Q.7 The attenuation losses are measured in terms of _____:
 a) Bel b) Decibel
 c) Del d) None
- Q.8 The refractive index of the core in comparison of cladding is _____:
 a) Higher b) Lower
 c) Same d) None
- Q.9 The light emitted diode is usually made from _____:
 a) Gallium arsenide b) Silicon
 c) Aluminium d) Germanium
- Q.10 In spontaneous emission _____ are emitted in random manner
 a) Electrons b) Photons
 c) Protons d) None

SECTION-B

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

- Q.11 PVC stands for _____ ?
 Q.12 Unit of dispersion is _____ ?
 Q.13 SOA stands for _____ ?
 Q.14 LED stands for _____ ?
 Q.15 APD stands for _____ ?
 Q.16 LED is a coherent source of light (True/False)?
 Q.17 _____ responsible for blue colour of the sky.
 Q.18 Define Bit rate.
 Q.19 Unit of frequency is _____.
 Q.20 WDM _____ ?

SECTION-C

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

- Q.21 Draw and explain basic structure of optical fiber.
 Q.22 Define Snells law.
 Q.23 What is principle of photo detection.
 Q.24 Write short note on bending losses.
 Q.25 Explain the operating characteristics of LED.
 Q.26 Write short note on Avalanche Photo diode. (APD)