

- Q.27 Draw the block diagram of basic communication system.
- Q.28 Explain the construction of optical fibre.
- Q.29 Explain the construction of multimode fibers.
- Q.30 What are different types of distortion in wave guide?
- Q.31 Explain the principle of photo detection.
- Q.32 What are advantages of graded index fibre?
- Q.33 What are different types of optical fibre cables? Explain.
- Q.34 Briefly explain Step Index fibres and graded index fibers.
- Q.35 Explain in detail about dispersion phenomenon.

Section-D

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

- Q.36 Explain numerical aperture with the help of suitable diagram. What is the importance of numerical aperture in optical fibre communication?
- Q.37 What are optical sources. Explain various types of light sources.
- Q.38 What is the principle of laser? What are different types of lasers?

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6th Sem,
Branch : Electronics Engg.
Subject : Optical Fiber communications

Time : 3 Hrs. M.M. : 100

SECTION-A

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

- Q.1 Attenuation in an optical fiber is caused by
 a) Absorption b) Scattering
 c) Bending Losses d) All above
- Q.2 The core diameter of a single mode optical fiber is _____.
 a) 50um b) 9 um
 c) 12.5 um d) None
- Q.3 A device which convert electrical energy in the form of current into optical energy is called
 a) Optical source b) Coupler
 c) Adder b) Optical isolator
- Q.4 The PIN diode operates in
 a) Reverse biased region
 b) Forward biased region
 c) Depletion region
 d) none

- Q.5 The most common photo detector is
 a) Photocell b) APD
 c) PIN d) LED
- Q.6 The attenuation losses are measured in terms of _____
 a) Bel b) Decibel
 c) Del d) None
- Q.7 When the optical fibers bend, they suffer from the
 a) Absorption losses b) Scattering losses
 c) Bending losses 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 In optical fibers, light propagates mainly along the _____.
 a) Core b) Cladding
 c) Buffer d) Jacket
- Q.10 Optical fiber has generally shape of a _____.
 a) Rectangle b) Square
 c) Hexagon d) Circle

Section B

- Note:** Objective types Questions. All Questions are compulsory. (10x1=10)
- Q.11 Give one advantage of optical fiber communication.
 Q.12 Define Refractive index.
 Q.13 Define dispersion.
 Q.14 Expand LASER.
 Q.15 Name any two optical fibre components.
 Q.16 What is use of Star connector.
 Q.17 Write any two advantages of step index fibre.
 Q.18 Name any two types of LEDs..
 Q.19 Define stimulated emission.
 Q.20 Define optical isolator.

Section-C

- Note:** Short answer type Questions. Attempt any twelve Questions out of fifteen Questions. (12x5=60)
- Q.21 Explain the advantages and disadvantages of optical fiber communication.
 Q.22 Explain Absorption losses in optical cable.
 Q.23 What is splicing? What are different types of splicing?
 Q.24 Explain the working of directional coupler.
 Q.25 Explain wave length division multiplexing.
 Q.26 Explain the working of APD diode.