Q.27 What are the different types of connectors used in optical fibre communication?

Q.28 Explain the principle of operation of LED.

Q.29 Compare PIN diode & APD.

Q.30 Differentiate between step index and graded index fiber.

Q.31 Explain the working of directional coupler.

Q.32 Write a short note on "Dispersion".

Q.33 What is the principle of laser?

Q.34 Explain numerical aperture with the help of suitable diagram.

Q.35 Explain the Electromagnetic spectrum used in optical fibre communication.

SECTION-D

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

Q.36 What are different types of optical fibre cables? Explain.

Q.37 Explain different types of dispersion and distortion in optical fibres.

Q.38 Explain construction of optical fiber?

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6th Sem / Branch : Electrical, 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 unit of frequency is _____

a) Hertz b) Ohm

c) Volt d) None

Q.2 ____is responsible for blue color of the sky

a) Dispersion b) Reflection

c) Rayleigh scatteing d) None

Q.3 The core is the _____ part of the fiber, which guides light

a) Inner b) Outer

c) Medium d) None

Q.4 Light traveling in optical fiber follows which of the following principles.

a) Huygen's principle b) Reflection theory

c) Light theory d) All

Q.5 In single mode fiber, which is the most beneficial index profile?

a) Step index b) Graded index

c) Multimode d) Coaxial Cable

Q.6 Transmission media used in low frequency band are_____

a) Air b) Water

c) Copper d) All

Q.7 Fibre optics used which medium to send information _____.

a) Air b) Light

c) Electrons d) Phonons

Q.8 The distribution or combination of optical signals among fibers uses which type of fibre optic connection in any____.

a) Splice b) Coupler

c) Connector d) None

Q.9 In spontaneous emission _____ are emitted in random manner

a) Electrons b) Photons

c) Protons d) None

Q.10 The loss of optical fibre as light travels along a fibre is called_____

a) Attenuation b) Scattering

c) Dispersion d) Absorption

SECTION-B

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

Q.11 Define splice?

Q.12 Define connectors___?

Q.13 SOA stands for _____.

Q.14 LED stands for _____.

Q.15 WDM stands for _____.

Q.16 LED is a incoherent source of light (True/False)

Q.17 Define star coupler

Q.18 Define Numerical Aperture.

Q.19 Define Electromagnetic waves.

Q.20 Define dispersion.

SECTION-C

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

Q.21 What is advantages of Optical communication.

Q.22 What is semiconductor photodiode?

Q.23 What is principle of photo detection.

Q.24 Write a short note on Absorption Losses.

Q.25 Explain wave length division multiplexing

Q.26 What are advantages of graded index fibre?