SECTION-D

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

Q.23 What are the optical sources used in optical communication. Explain the principle and operation of laser diode.

Q.24 Draw the block diagram of optical fiber communication and explain its all blocks.

Q.25 Explain the different types of dispersion losses and how to reduce its effects.

5th Sem / ECE, ECE (For Speech and Hearing Impaired)

Subject : Optical Fiber Communication

Time : 3 Hrs. M.M. : 60

SECTION-A

Note: Multiple choice questions. All questions are compulsory (6x1=6)

Q.1 The source of light for optical transmission is_____

a) LED b) Lamp

c) Mercury lamp d) Incandesced lamp

Q.2 The fiber cable used for "fiber to home" installation are_____.

a) Multimode graded b) Multimode step

c) Multi axies d) single mode

Q.3 The PIN diode operates in

a) Reversed biased region

b) Forward biased region

c) Depletion Region

d) None

Q.4 An optical light detector converts

a) Electrical signal into optical signal

b) Optical signal into electrical

c) Optical Signal into light signal

d) None

Q.5 In a multi mode of optical fiber_____

a) Bandwidth is lower (100MHz)

b) short communication

c) V is greater than 2.402

d) all of these

Q.6 The spectral width in LED in comparison of LASER is_____

a) Broad b) Narrow

c) very narrow d) none of these

SECTION-B

Note: Objective/ Completion type questions. All questions are compulsory. (6x1=6)

Q.7 Write the full form LASER

Q.8 Write the full form LED

Q.9 Write the full form EDFA

Q.10 What is acceptance angle in optical fiber?

Q.11 What is the main disadvantage of optical fiber cable?

Q.12 V - number stands for_____.

SECTION-C

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

Q.13 Write the comparison between EDFA and Raman amplifier.

Q.14 Write the characteristics of PIN.

Q.15 Write a short note on optical amplifier.

Q.16 Write the characteristics of LED.

Q.17 Write the comparison between single mode fiber and multimode fiber.

Q.18 Write the advantages of optical fiber communication.

Q.19 Write the short note on electromagnetic spectrum.

Q.20 Write the short note on bending losses in optical fiber.

Q.21 What are advantages of semiconductor amplifier in optical communication.

Q.22 Write a short note on noise in detectors.