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5 Sem. / ECE, ECE

(For speech and Hearing Imparied)

Subject : Optical Fibre Communication

Time : 3 Hrs. M.M. : 60

SECTION-A

Note: Multiple Choice Questions. All Questions are compulsory. (6x1=6)

Q.1 The attenuation losses are measured in terms of (CO2)

a) Bel b) Decibel

c) Del d) None

Q.2 The PIN diode operates in (CO4)

a) Reverse biased region

b) Forward biased region

c) Depletion region

d) None

Q.3 The necessary condition phenomenon to Total internal reflection is (CO1)

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.4 EDFA stands for (CO5)

a) Erbium doped Fiber application

b) Erbium doped Fiber atom

c) Erbium doped Fiber amplifier

d) None

Q.5 A connector consists of (CO2)

a) Plug b) Adapter

c) Both A & B d) None

Q.6 ILD is a (CO3)

a) Coherent source of light

b) None coherent source of light

c) None

d) None coherent source of light

SECTION-B

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

Q.7 The index of refraction of cladding materials is less then that of core material. (True/False) (CO2)

Q.8 LASER stands for _____. (CO3)

Q.9 Fiber optic communication is used for _____ range communication. (CO1)

Q.10 The unit of attenuation is _____. (CO2)

Q.11 APD stands for _____. (CO4)

Q.12 Thermal detectors respond to the total energy absorbed. (True/False) (CO4)

SECTION-C

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

Q.13 Explain the principle of Light penetration in Optical Fiber cables. (CO1)

Q.14 Explain stimulated emission. (CO3)

Q.15 Explain PIN. (CO4)

Q.16 Explain in brief Single Mode graded index fiber. (CO2)

Q.17 What do you mean by scattering losses? How many types of scattering losses are there? (CO2)

Q.18 Write a short note on edge emitting LED. (CO3)

Q.19 Explain in brief about the acceptance angle.(CO3)

Q.20 Explain SOA. (CO5)

Q.21 Explain the principle of Total Internal Reflection. (CO1)

Q.22 Explain in brief the performance characteristics of photodiode. (CO4)

SECTION-D

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

Q.23 What do you mean by optical light source? Explain in detail about the different types of optical light source. (CO3)

Q.24 What do you mean by optical splicing? Explain in detail about the fusion splicing method. (CO2)

Q25 Discuss briefly the RAMAN amplifer. (CO5)