

Q.29 Write various application of spectrophotometer.

Q.30 Explain Detector?

Q.31 What are splices & Connectors?

Q.32 What are optical instruments?

Q.33 What re note on any two:

- a) Velocity b) Distance
- c) Acceleration

Q.34 What re transmitter & give the uses of tramsmmitter?

Q.35 Write a short note on beam-splitters.

SECTION-D

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

Q.36 What are the optical instrumentation and also explain any one type of optical Instrumentation in detail.

Q.37 Write a short note on any two

- a) Photo diodes
- b) Polarization
- c) LDR

Q.38 Explain working, principle & construction of LASER.

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6th Sem / Branch : Instrumentation & Control.

Sub. : Opto Electronic Devices and their Applications

Time : 3Hrs.

M.M. : 100

SECTION-A

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

Q.1 The number of depletion layer in a transistor is

- a) 1 b) 2
- c) 3 d) 4

Q.2 Photodiodes operate at

- a) Forward bias b) Breakdown region
- c) Reverse bias d) Saturation region

Q.3 LED works on the principle of

- a) Electromagnetic
- b) Electro Luminescence
- c) Electro chemical
- d) Chemical

Q.4 Velocity = _____

- a) Time/Displacement
- b) Acceleration/Displacement
- c) Acceleration/Time
- d) Displacement/Time

Q.5 What should be the band gap of the semiconductor to be used as LED?

- a) 0.5 ev b) 1 ev
- c) 1.5 ev d) 1.8 ev

Q.6 Full form of LASER

- a) Light absorption solar energy Resource
- b) Light amplification by stimulated Emission of Radiation
- c) Light amplification of singular Emission of radiation
- d) Light absorbent and stimulated Emission of radiation

Q.7 Which of the following loss occurs inside the fiber

- a) Radiative b) Scattering
- c) Absorption d) Attenuation

Q.8 In Dark, the LDR has

- a) High current b) Low resistance
- c) Both A & B d) High Resistance

Q.9 All fiber optic cables have the same type of physical connector?

- a) True b) False

Q.10 LDR stands for

- a) Light dependent resistor
- b) Light diode register
- c) Laser diode register
- d) None

SECTION-B

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

Q.11 What is the efficiency?

Q.12 What is Refraction?

Q.13 Define Dispersion.

Q.14 What re coupling?

Q.15 Write any characteristics of fibres.

Q.16 Define optical fiber.

Q.17 Write the formula of Velocity.

Q.18 Define optical fiber.

Q.19 What are detector?

Q.20 What is reflection?

SECTION-C

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

Q.21 Write a short note on pin diodes.

Q.22 Differentiate between dispersion & Diffraction interference

Q.23 Explain mode of Communication used in optical fiber.

Q.24 What is photoelectric field?

Q.25 Write at least five application of LED.

Q.26 Write the principle of transmission through the fiber.

Q.27 Write a short note on reflection & refraction.

Q.28 Write the application of photo-diode.