

### SECTION-C

**Note:** Long answer type questions. Attempt any three questions. 3x10=30

- Q.3 Explain Industrial applications of LASER.
- Q.4 Differentiate between Gas & Liquid LASER.
- Q.5 Explain PIN diode in detail.
- Q.6 Explain light emitting diode in detail.
- Q.7 Write short note on any two:-
- (i) Photo multiplier Tuber.
  - (ii) Semi Conductor Laser.
  - (iii) Classification of optical fiber.

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**5th Sem. / I&C**

**Subject : OPTO Electronic Devices& Applications**

Time : 3 Hrs.

M.M. : 100

### SECTION-A

**Note:** Very Short Answer type questions. Attempt any 15 parts. (15x2=30)

- Q.1 a) Connectors.
- b) Coupling.
- c) Splicing.
- d) Bandwidth.
- e) Numerical Aperture.
- f) Differentiate between Core & Cladding.
- g) Interference.
- h) LCD.
- i) LDR.
- j) Pyrometer.

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- k) Name any two photo detectors used in optical fiber.
- l) Name any two light sources used in optical fiber.
- m) Polarization.
- n) Expand LASER
- o) Filter.
- p) List two advantages of fiber optic cable over co-axial cable.
- q) Critical Angle.
- r) Polarimeter.

### SECTION-B

**Note:** Short answer type questions. Attempt any ten parts  
10x4=40

- Q.2
- i) Explain principle of light transmission through optical fiber cable.
  - ii) Differentiate between Single mode & multi-mode fiber.

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- iii) Explain LCD in brief.
- iv) Discuss thermal detector.
- v) Discuss vacuum photo diode.
- vi) Explain Infrared thermometer.
- vii) Explain light intensity meter.
- viii) Discuss periscope in brief.
- ix) Explain fundamentals of laser emission.
- x) Explain the use of Laser for Measurement of acceleration.
- xi) Explain the use of laser for the Measurement of length.
- xii) Explain dispersion holograms.
- xiii) Discuss optical pyrometer.
- xiv) Explain Beam Splitters.
- xv) Discuss about X-Ray fluoroscopic Instruments.

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