

SECTION-C

Note: Long answer type questions. Attempt any three questions. $3 \times 10 = 30$

- Q.3 Explain construction and working of optical filters.
- Q.4 Classify fibers and explain characteristics of fibers.
- Q.5 Explain optical transmitters and detectors used in optical fibers.
- Q.6 Explain working of infra-red thermometer and opto-isolators.
- Q.7 Write a note on
- i) Industrial applications of Laser.
 - ii) Photo-electric field in fibers.

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Roll No.

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6th Sem. / IC

Subject : Opto Eltx. Devices & Theu. Application

Time : 3 Hrs.

M.M. : 100

SECTION-A

Note: Very Short Answer type questions. Attempt any 15 parts. $(15 \times 2 = 30)$

- Q.1 a) Refraction
b) PIN diode
c) Optical fibers
d) Laser
e) Optical pyrometer
f) Dispersion
g) LDR
h) Power LED
i) Beam splitters

- j) Connectors
- k) Step index fibre
- l) Semiconductor laser
- m) Light intensity meter
- n) Optical detectors
- o) Couplers
- p) Types of lasers
- q) Spontaneous Emission
- r) Optical instruments
- iii) What are splices. Explain any one splicing method in detail.
- iv) Explain the characteristics of LEDs.
- v) Write a short note on beam splitters.
- vi) What are various applications of optical fibers.
- vii) Write a short note on laser diodes.
- viii) What should be properties of a good conductor.
- ix) Explain the transmitter in optical fiber system.
- x) Why optical couplers are used.
- xi) Write a note on phototransistors.
- xii) Explain the use of laser in measurement of acceleration.
- xiii) Write a note on light intensity meter.
- xiv) Explain infra-red and ultra violet sources.
- xv) How light travels in fiber.

SECTION-B

Note: Short answer type questions. Attempt any ten parts $10 \times 4 = 40$

- Q.2 i) Write a note on polarization.
 ii) Explain principle of avalanche photodiodes.

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