

**DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY,
LONERE**

Question Bank

Course: T.Y. B. Tech in Instrumentation Engineering

Sem: VI

Subject Name: Fiber Optic Laser Instruments

Subject Code: BTINE606

Unit-I

- Q.1 Explain with the block diagram fiber optic communication system.
- Q.2 Explain losses in optical fiber.
- Q.3 Explain the classification of optical fiber.
- Q.4 Explain the dispersion in optical fiber.
- Q.5 Explain the propagation of light in optical fiber.
- Q.6 Explain the transmission characteristics of fiber.

Unit-II

- Q.1 Explain the level of laser.
- Q.2 Explain the sources and detector in optical fiber.
- Q.3 Distinguish between LED and LASER.
- Q.4 Explain splicers and connectors in optical fiber.
- Q.5 Explain the diode used in optical fiber.

Unit-III

- Q.1 Explain the measurement of attenuation in optic fiber.
- Q.2 Derive the expression for Numerical Aperture.
- Q.3 Write short notes on OTDR.
- Q.4 Explain the measurement of pressure in optical fiber.
- Q.5 Explain the measurement of temperature in optical fiber.
- Q.6 Explain the measurement of displacement in optical fiber.
- Q.7 Explain the measurement of acceleration in optical fiber.

Unit-IV

- Q.1 Write short notes on fiber optic sensors.
- Q.2 Explain in detail fiber grating in optical fiber.
- Q.3 Explain in detail fiber bragg grating in optical fiber.
- Q.4 Explain distributed optical fiber sensing.

Unit-V

- Q.1 Write short notes on beam splitters in optical fiber.
- Q.2 Explain in detail directional coupler.
- Q.3 Write short notes on opto isolators in optical fiber.
- Q.4 Explain optical switches in details.
- Q.5 Explain multicode interference coupler(MMIC).
- Q.6 Explain fiber modulators and optical amplifier.

Unit-VI

- Q.1 Explain Holographic interferometry in detail.
- Q.2 Explain the medical application of laser.
- Q.3 Explain the industrial application of laser.
- Q.4 Explain the components of remote sensing.
- Q.5 Explain in detail Electro Magnetic Radiation (EMR).
- Q.6 Write short notes on remote sensing.