

## **ECMC1L1: Fiber Optics Measurements Lab**

### **List of Experiments:**

**Any 10 experiments from A, B, C & D (Minimum 2 from each)**

#### **A. Measurements on fiber optic passive components.**

1. Experiment on fiber optic coupler.
2. Experiment on fiber optic Isolators.
3. Experiment on fiber optic Attenuator.
4. Experiment on fiber optic WD Multiplexers.

#### **B. Measurements on fiber optic active components.**

1. Measurements of
  - i. Dark current of Photo Diode Detector.
  - ii. Raise and Fall time of Photo Diode detector.
2. Measurements of
  - i. Dark current of avalanche Photo Diode Detector.
  - ii. Raise and Fall time of avalanche Photo Diode Detector.
3. Experiment to understand the operating principles of EDFA.
4. Experiment to study the characteristics of EDFA.

#### **C. Measurements on Fiber Optic Systems & Instruments**

1. Study of WDM in dual window (1310nm-1550nm)
2. Measurement of Isolation in optical dual window (1310nm-1550nm)
3. To study the working of OTDR (Optical Time Domain Reflectometer)
4. Measurements of chromatic dispersion.

#### **D. Measurements of fiber characteristics & connectorization**

1. Experiment to study and measure single mode fiber characteristics.
2. Experiment to study and measure multi mode fiber characteristics.
3. Experiment on connectorization of optical fiber – Loss measurement.
4. Experiment on slicing of optical fiber – Loss measurement.