

S.B. Roll No.....

OPTICAL FIBER COMMUNICATION
5th Exam/ECE/2617/Feb'2021
(For 2018 Batch onwards)

Duration: 1.15Hrs.

M.Marks:25

SECTION-A

Q1. Attempt any three questions.

3x5=15

- i. Define numerical aperture. State its significance for fiber optics.
- ii. Explain intermodal dispersion in optical fibers. How can it be avoided?
- iii. Describe the basic structure and working principle of light emitting diode.
- iv. Explain the construction and working principle of avalanche photodiode.
- v. Differentiate between step index and graded index fibers.
- vi. Explain Erbium-doped Fiber amplifiers in detail.
- vii. Explain the various types of noises found in optical detectors.

SECTION-B

Q2. Attempt any one question.

1x10=10

- a. Explain the block diagram of optical fiber communication system. State the advantages and disadvantages of optical fiber communication.
- b. What is scattering? Discuss various types of scattering phenomena in fiber optics.
- c. Discuss in detail the phenomenon of dispersion and its types in fiber optics.
- d. What do you mean by splicing? Explain its various types.