

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech. (ECE) (PIT) (Sem.-6)
OPTICAL FIBRES AND COMMUNICATION

Subject Code : UC-BTEC-603-18

M.Code : 80052

Date of Examination : 05-07-22

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

1. Write briefly :

- a) Enlist various windows in optical communication system.
- b) What do you mean by acceptance angle?
- c) Define absorption in optical fibers.
- d) Explain recombination process.
- e) What is the basic principle of amplifiers?
- f) Explain scattering.
- g) Differentiate between general PN diode and LED?
- h) What is intrinsic absorption?
- i) Draw the various LED's structures.
- j) Explain fiber bend loss.

SECTION-B

2. Draw and explain electromagnetic spectrum.
3. Derive the expression for attenuation in optical fibers.
4. Describe Vertical Cavity Semiconductor Lasers in detail.
5. Draw and explain various types of optical amplifiers.
6. Explain various types of fiber couplers.

SECTION-C

7. Explain Scattering, its types, effects and preventive measures in optical communication system.
8. Design optical receiver with expression for receiver Noise; Noise Mechanism and Sensitivity.
9. Draw and explain Fiber Optic Networks and point to point links.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.