

Roll No.

Total No. of Pages : 01

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M.Tech. (ECE) EL-II (2018 & Onwards Batch) (Sem.-1)

OPTICAL COMMUNICATION SYSTEM

Subject Code : MTEC-PE2Y-18-5

M.Code : 75181

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTIONS TO CANDIDATES :

1. Attempt any FIVE questions out of EIGHT questions.
2. Each question carries TWELVE marks.

- Q1. List and explain briefly the losses in optical fiber.
- Q2. a) Explain single mode and multi-mode fibers in detail.
b) Write a brief note on plastic glass fibers.
- Q3. a) Explain PN junction diode theory in detail.
b) Give comparison between LED and Laser diode.
- Q4. Explain in detail the amplification mechanism with energy level diagram in an EDFA.
- Q5. a) With a neat sketch explain WDM technique.
b) Explain briefly the mechanical splicing technique.
- Q6. With suitable diagram describe SONET/SDH optical network function.
- Q7. a) Write a brief note on problem associated with optical OFDM.
b) Describe briefly the significance of fiber cut-off wavelength in optical fiber measurement.
- Q8. a) Explain various applications associated with OFDM.
b) Write a short note on the following :
a. Numerical aperture
b. Total internal reflection
c. Peak to average power ratio

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.