

Roll No. ....

**22149**

**M. Tech. 2nd Semester (E.C.E.)**

**Examination – May, 2016**

**OPTICAL COMMUNICATION**

**Paper : MEEC-504**

*Time : Three Hours ]*

*[ Maximum Marks : 100*

*Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.*

**Note :** Attempt any *five* questions. All questions carry equal marks.

1. (a) What is the difference between step index and graded index fiber ? 10
- (b) Explain how light propagate in optical fiber. 10
2. (a) What is fiber bending losses ? 10
- (b) Explain dispersion shifted and dispersion flattered fiber. 10

3. (a) Explain the working of SLED and ELED. 10  
(b) Explain the working of PIN photo diodes. 10
4. Describe various types of laser used in optical communication system. 20
5. (a) Describe the working of Avalanche photo detector. 10  
(b) Explain the characteristics of photo detector. 10
6. (a) Explain the LED and Laser drive circuits. 10  
(b) Describe WDM in detail. 10
7. (a) Explain the working of coherent receiver. 10  
(b) What is phase diversity receivers ? 10
8. Write short notes on : 20
- (a) AGC
- (b) Dispersion
- (c) Homodyne detection
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