

UIET, Panjab University, Chandigarh
FIBER OPTICAL COMMUNICATION SYSTEM
BE (ECE) – 6TH Sem (section- 1,2)

Max Marks: 30

Time Allowed: 90 min

Note: All questions are compulsory.

Q1. Explain following

- a) Differentiate WDM and DWDM.
- b) what do you mean by population inversion?
- c) The refractive index of a material used for fabrication of an LED is 3.2. Calculate its external quantum efficiency.
- d) Define radiative recombination and non radiative recombination ? Give examples of the material used.
- f) Write the definition of optical Coupler and splitter. (5x2)

Q2. Discuss Absorption, spontaneous emission and stimulated emission. (5)

Q3. Briefly outline the advantages and disadvantages of the PIN photodiode in comparison with APD for use as an optical detector in optical communication. (5)

Q4. Discuss the advantages and disadvantages of FSO over fiber Optics system. (5)

Q5. Explain point- to- point optical network and also discuss the link power budget in the network. (5)