I M.Tech-I Semester-Regular Examinations-April 2013

FIBER OPTIC COMPONENTS, MEASUREMENTS AND NETWORKS
(MICROWAVE & COMMUNICATION ENGINEERING)

Duration: 3 hours   Marks: 5x14=70

Answer any FIVE questions.   All questions carry equal marks

1 (a) Derive the expression for Internal Quantum efficiency
     of LED.   6 M

  (b) Draw & explain the GaAIAs double heterostructure LED.
                                                               8 M

2 (a) Explain the brief description on the principle of optical
     detectors.   9 M

  (b) What do you understand by Response time? Explain. 5 M

3. Write short notes on
     (a) Fusion splices   4 M

     (b) Mechanical splices   5 M

     (c) Multiple splices.   5 M

4 (a) Explain in detail about Rare earth doped fiber amplifiers.

8 M

(b) Explain about Four port couplers. 6 M

5. Discuss about Periodic structures for filters and injection lasers. 14 M

6 (a) Explain in detail about the Extrinsic and Intrinsic optical sensors. 7 M

(b) Explain the principles of pressure and temperature measurements using optical Fibers. 7 M

7 (a) What is an optical fiber network? Explain various blocks in it. 7 M

(b) Write about optical isolators and switches. 7 M

8 (a) Write about Optical CDMA in detail. 7 M

(b) Explain about wavelength routed networks. 7 M