Total No. of printed pages = 2

Et-603/OFC/6th Sem/2015/M

OPTICAL FIBRE COMMUNICATION

Full Marks - 70

Pass Marks - 28

Time - Three hours

The figures in the margin indicate full marks for the questions.

Answer any *five* questions.

1. Classify optical fibres according to the way light propagates through the fibres. Draw RI profile and transmission nature through them. 14

2. (a) Draw the geometry of an optical fibre and label its different sections.

   (b) Write few applications of optical fibre in communication. 8+6=14

3. With the help of a neat diagram, explain the construction and working of an LED. What are the important materials that may be used for construction of an LED ? 14

[Turn over

4. What is a coupler ? What are the different types of coupler ? Explain any one of them with a diagram. 14

5. Draw the schematic cross-section of photo multiplier tube and explain its operation and working principle. 14

6. What are the different types of optical multiplexing used ? Write in brief about TDM and FDM. 14

7. Draw the block diagram of an optical receiver and describe the function of each block. 14

Or

Draw a block diagram of an optical transmitter and describe the function of each block. 14

8. Write short notes on any *two* : 2×7=14

(a) LASER

(b) Dispersion

(c) Total internal reflection

(d) Connectors.