

B.TECH SEM - VIII (2007 COURSE) (E & TC ENGG.) :
WINTER - 2017

SUBJECT: FIBER OPTIC & SATELLITE COMMUNICATION SYSTEMS

Day: **Monday**
Date: **20/11/2017**

W-2017-2711

Time: **02.30 PM TO 05.30 PM**
Max. Marks: 80

N.B.:

- 1) **Q. No. 1** and **Q. No. 5** are **COMPULSORY**. Out of the remaining attempt any **TWO** questions from each section.
 - 2) Figures to the right indicate **FULL** marks.
 - 3) Answers to both the sections should be written in **SEPARATE** answer book.
 - 4) Use of non programmable **CALCULATOR** is allowed.
-

SECTION-I

- Q.1** Describe any two methods of fiber material fabrication. **(14)**
- Q.2** Explain how OTDR operates and its uses in the testing of long distance fiber cable. **(13)**
- Q.3** What is WDM? Compare WDM and CWDM. **(13)**
- Q.4** What is rise time budget? For a length of 6 km using multimode fiber, $t_m = 0.5\text{ns/km}$ and $t_{im} = 3.5\text{ ns/km}$. The source is LED with rise time of 15 ns and receiver rise time is 14 ns. Calculate overall total rise time of link system and BW for RZ coded pulse transmission. **(13)**

SECTION-II

- Q.5** Give overview of different types of antennas used in Satellite Communication. **(14)**
- Q.6** Describe BPSK/ QPSK bit error rates. **(13)**
- Q.7** Discuss rain effect. **(13)**
- Q.8** Explain VSAT system. **(13)**

* * * *