S.B. Roll No……

SATELLITE COMMUNICATION

5th Exam/ETV/0165/May'16

Duration: 3Hrs **Max. Marks:75**

SECTION- A

Note: All questions in this section are compulsory.

Fill in the blanks: **1x15=15**

i. INTELSAT stands for _____
ii. An artificial body that is projected from earth to orbit either earth or another body of solar systems is called _____
iii. For elliptical orbit e lies between _____
iv. The _____ refers to the equipment used to provide the service for which the satellite has been launched.
v. In a communication satellite, the equipment which provides the connecting link between the satellite's transmitting & receiving antennas is referred to as the _____.
vi. The system which allows two way communication is called _____
vii. The microwave radiation which is present through out universe & which appears to originate from matter in any form at finite temperature is called _____.
viii. Only one carrier uses the transponder at one time and this is called _____ multiple access.
ix. The angle between the orbital plane and the earth's equatorial plane is called angle of _____
x. Geostationary satellites follows _____ path.

State true or false

xi. A measure of the fraction of frame time used for the transmission of Traffic is called frame efficiency.
xii. TV transmission is an example of duplex system.
xiii. The multiple access technique suitable for digital transmission is TDMA.
xiv. Point to point communication is example of satellite communication.
xv. Polar orbiting Satellites orbit the earth in such a way as to cover the north & south Polar Regions.

SECTION- B

Attempt any five questions. **5x6=30**

1. Explain advantages of satellite communication.
2. List various parameters that control the design of earth station.
3. Describe TDMA in detail with typical frame format.
4. Explain SCPC in detail.
5. What are tropospheric and Ionospheric effects.
6. Explain any two
   i Uplink
   ii Downlink
   iii Satellite cross link

SECTION –C

Attempt any three: **10x3=30**

1. Write short note on the following
:i VSAT
ii System noise

2. What is erlang congestion formula and discuss application of satellite communication?
3 .Explain the effect of rain and ice on satellite communication?
4. Describe a simplified block diagram of communication satellite transponder. Explain the various limitations of transponder