Paper ID [A0336]

(Please fill this Paper ID in OMR Sheet)

B.Tech. (Sem. - 7th/8th)

SATELLITE COMMUNICATION (DE - 3.3)

Time : 03 Hours   **Maximum Marks : 60**

Instruction to Candidates:

1) Section - A is **Compulsory**.

2) Attempt any **Four** questions from Section - B.

3) Attempt any **Two** questions from Section - C.

Section - A

Q1)   *(10 × 2 = 20)*

a) What is the difference between active and passive satellites.

b) List some advantages of satellite communication.

c) List some of the important parameters to specify a particular earth station.

d) What are very small aperture terminals (VSATs)?

e) What is meant by tracking in satellite communication.

f) Describe Head end equation.

g) Why the uplink frequency is different from downlink frequency.

h) What do you mean by orbital spacing? Why it is required?

i) Define TDMA frame efficiency.

j) Explain briefly how satellites can be helpful in forecasting weather.

Section - B

Q2) Discuss in detail the current state of satellite communication in India.

Q3) Compare different types of digital modulation techniques.

Q4) Discuss fixed - assigned FDMA format for satellite communications.

Q5) Describe a simplified block diagram of a communications satellite transponder.

Q6) Describe interleaving of bursts in a TDMA satellite.

Section - C

(2 × 10 = 20)

Q7) Describe in detail a typical TDMA frame format.

Q8) Describe and compare DA - FDMA and DA - TDMA systems.

Q9) Write short notes on the following:

(a) Irlang call congestion formula.

(b) CATV system.