Roll No. | | | | | | | | | | | | |

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(ECE) (2011 Batch E-II)
B.Tech.(ETE) (2011 Onwards E-II)
(Sem.–7,8)

SATELLITE COMMUNICATION

Subject Code : BTEC-910
Paper ID : [A3004]

Time : 3 Hrs. **Max. Marks : 60**

INSTRUCTION TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

Q1 Answer briefly :

a) Mention the different services of satellite systems.

b) State Kepler's second law

c) Define duplexer.

d) What is CSSB?

e) Define S/N ratio.

f) What is multiple access technique?

g) Write down Erlang call congestion formula.

h) Compare TDMA and FDMA.

i) List the difference between LEO and GEO satellites.

j) What is meant by frequency Reuse?

SECTION-B

Q2 Briefly describe the ways in which demand assignment may be carried out in FDMA network.

Q3 Derive satellite Link Design Equation.

Q4 Explain combined uplink and downlink C/N ratio.

Q5 Explain atmospheric losses and ionospheric losses for satellite.

Q6 Describe the steps involved in launching a satellite.

SECTION-C

Q7 Write a short note on :

a) VSAT and Its Applications

b) LANDSAT

Q8 What is Mobile Satellite Service? Explain briefly any two such systems.

Q9 What is satellite transponder? With neat diagram, explain the overall frequency arrangement of a typical c-band communication satellite.