

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.