53 (EC 814) STCM

2014

SATELLITE COMMUNICATION

Paper : EC 814

Full Marks : 100

Time : Three hours

The figures in the margin indicate full marks for the questions.

Answer ***any Five*** *questions.*

1. *(a)* How a satellite can be located in its orbit ? 10

   (b) Explain the look angle determination process of a Geostationary satellite. 10

2. *(a)* Explain the attitude and orbit control system of a satellite communication system. 10

   (b) What is the function of a communication subsystem ? Explain the working of 6-4*GHz* transponder. 10

3. *(a)* What is reliability ? Explain reliability theory of a satellite communication system. 10

(b) Explain the basic transmission theory of a satellite communication system. 10

4. *(a)* How system noise temperature and *G/T* ratio of a receiver can be determined ? 10

(b) How intermodulation products are generated in an FDMA system ? 10

5. *(a)* With a suitable example explain the spread spectrum transmission and reception. 10

(b) Explain the tracking system of an earth station receiver. 10

6. *(a)* What are the different types of non-geostationary orbits ? Explain each. 10

(b) How the position of an object can be determined using GPS system ? 10

7. Write short notes on : 10×2=20

(a) GPS receiver

(b) TTC & M system.