Reg. No. | | | | | | | | | | | | |

Question Paper Code : 11223

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2016

Seventh Semester

Electronics and Communication Engineering

EC 1403 – SATELLITE COMMUNICATION

(Regulations 2008)

Time : Three Hours **Maximum : 100 Marks**

Answer ALL questions.

PART – A (10 × 2 = 20 Marks)

1. State Kepler's second law.
2. What is meant by sidereal time ?
3. Define sun transit outage.
4. What is meant by station keeping ?
5. What are Receiver Feeder losses ?
6. Why is the LNA in a satellite receiving system placed at the antenna end of the feeder cable ?
7. What are the limitations of FDMA-satellite access ?
8. What is preamble ?
9. List the types of map.
10. How many satellite are in the space for providing GPS data ?

PART – B (5 × 16 = 80 Marks)

11. (a) (i) Explain about frequency allocations for satellite services. **(10)**

(ii) Explain about the U.S. Domsats. **(6)**

OR

(b) Explain in detail about the Orbital elements and Orbital perturbations with suitable example. **(16)**

12. (a) Explain the attitude control. Draw its neat sketch. **(16)**

OR

(b) Explain the look angle determination with a neat sketch. **(16)**

13. (a) How does the system noise temperature affect the performance ? Derive the expression for overall system noise temperature at the receiving earth station. **(16)**

OR

(b) (i) With a neat diagram, explain the receive only home TV systems. **(10)**

(ii) Explain the EIRP and Transmission losses. **(6)**

14. (a) Explain the properties of maximum length sequence and give a detailed account on analog voice transmission. **(16)**

OR

(b) Explain the block diagram of TDMA and calculate its uplink power requirements. **(16)**

15. (a) (i) Describe the visual interpretation of satellite images. What are the elements of interpretation? Explain. **(8)**

(ii) Explain the various image enhancement schemes. **(8)**

OR

(b) (i) Explain the significance of integrating GIS and remote-sensing. What are their applications ? **(8)**

(ii) Write a detailed note on GPS and its applications in GIS. **(8)**
