

Reg. No. :

Name :



**VII Semester B.Tech. Degree (Reg./Sup./Imp. – Including Part Time)
Examination, November 2015
(2007 Admn. Onwards)**

PT 2K6/2K6EC 705(B) : SATELLITE COMMUNICATION

Time : 3 Hours

Max. Marks : 100

Instruction : Answer all questions.

PART – A

1. Explain the calculation of azimuth angle and elevation angle.
2. Explain Kepler's law of planetary motion.
3. Write a short note on telemetry and monitoring system of satellite.
4. Explain the working of single conversion transponder with a block diagram.
5. Explain the TDMA frame structure. What is the use of guard time ?
6. Briefly explain FDM-FM-FDMA is implemented in satellite channels.
7. Write a short note on uplink design.
8. Write a short note on GPS navigation message. (8×5=40)

PART – B

9. a) Write a short note on orbital perturbations. 8
 - b) How solar eclipse effects the working of satellite ? 7
- OR
10. a) Explain launch sequence of satellite with a diagram. 8
 - b) Explain the procedure for placing satellite into geostationary orbit. 7



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11. a) Explain in detail about attitude and orbit control system. **10**
b) Explain about reliability of a satellite subsystem. **5**

OR

12. a) With a neat block diagram explain general configuration of earth station. **5**
b) Explain the different types of antenna configurations used in earth station with diagrams. **10**

13. Explain direct sequence spread spectrum CDMA spreading and despreading method in detail. **15**

OR

14. a) Write a short note on DAMA. **5**
b) Explain the FDMA with block diagram of transmitter and receiver. What is overall (C/N_0) ratio? **10**

15. a) With necessary steps derive the link equation. **10**
b) Write a short note on system noise temperature. **5**

OR

16. a) Explain GPS position location procedure. **8**
b) Explain the working of GPS receiver with a block diagram. **7**
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