

Code :R7410409

R7**IV B.Tech I Semester(R07) Supplementary Examinations, May/June 2011
SATELLITE COMMUNICATIONS****(Electronics & Communication Engineering)****Time: 3 hours****Max Marks: 80****Answer any FIVE questions
All questions carry equal marks**

1. (a) Describe the origin of satellite communications briefly.
(b) Discuss the future trends of satellite communications.
2. (a) Define the kepler's laws applicable to satellite communications.
(b) Explain the mechanism of launching a synchronous satellite.
3. (a) Describe the space craft subsystems.
(b) Write short notes on the power systems used for satellite communications.
4. (a) Derive the equation for the power received by an earth station from a satellite transmitter.
(b) Discuss the calculation of system noise temperature associated with satellite communications.
5. (a) What do you mean by multiple access in satellite communications.
(b) Discuss the guard time estimation in TDMA.
6. (a) Write short notes on the antennas used for satellite communications.
(b) Find the gain and beam width of an antenna of diameter 2m. operating at 14 GHz. Assume an aperture efficiency of 60%.
7. Describe the various considerations used in the design of low earth orbit satellite system.
8. (a) What is meant by GPS navigation message? Explain.
(b) Write short notes on differential GPS.
