

GUJARAT TECHNOLOGICAL UNIVERSITY**M.E –IIst SEMESTER–EXAMINATION – JULY- 2012****Subject code: 1722704****Date: 12/07/2012****Subject Name: Global Positioning System****Time: 10:30 am – 13:00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

Q.1 (a) What is GPS? Give comparison of Ground based and Space based Radio Navigation System and also Enumerate Primary functions of GPS. **07**

(b) Describe GPS constellation and its evolution. **07**

Q.2 (a) Explain Control Segment Locations. Describe physical characteristics and Orbital parameters of the Global Positioning Satellite. **07**

(b) How does GPS work? Describe space segment. **07**

OR

(b) Describe GPS Resolution-code phase. Justify “if both C/A-code and P-code operate the same way and so why not go for the higher accuracy P-code?” **07**

Q.3 (a) Describe GPS Terminology. **07**

(b) Write short note on GPS reference system WGS84. **07**

OR

Q.3 (a) Describe fundamental and derived frequencies for GPS. **07**

(b) Describe various types of GPS observables. **07**

Q.4 (a) List the applications of GPS and explain any two. **07**

(b) Describe GPS Time Measurement and Discuss the Relationship Between Pseudo-range and True-range. **07**

OR

Q.4 (a) Write short note on GPS Denial of Accuracy. **07**

(b) Describe GPS Error Budget and explain Ionospheric and tropospheric refraction. **07**

Q.5 (a) Enumerate Dilution of Precision (DOP) and explain concept of DOP in brief. **07**

(b) Which are the Important tasks of a GPS receiver? Explain how GPS receiver Decode navigation data bits. **07**

OR

Q.5 (a) Write short note on GPS antenna. **07**

(b) What is the Carrier tracking? Explain how GPS receiver Calculate pseudoranges. **07**
