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COLLEGE OF ENGINEERING, GUINDY
ANNA UNIVERSITY – CHENNAI – 600 025

B.E (GEOINFORMATICS) VI Semester

END SEMESTER EXAMINATION, OCTOBER 2011

GI 9351 SATELLITE GEODESY

Time : 3.00 hrs

Max. Mark : 100

Instructions:

1. Answer all questions under PART–A and PART-B respectively
2. Draw neat sketches wherever desirable
3. Assume suitable data wherever necessary

PART – A

10 x 2 = 20 Marks

1. What are the perturbing forces acting on Celestial body?
2. List the applications of satellite geodesy.
3. What are the methods for determining the direction of satellite?
4. Write the basic concept of a Doppler receiver.
5. What are the two intentional degradations?
6. What is differential mode?
7. Define Double differencing?
8. Define PDOP and what is the desirable PDOP for accurate observation?
9. List the advantages of GPS for Engineering survey application.
10. What is the concept of satellite altimetry?

PART – B

5 x 16 = 80 Marks

11. Describe in detail about the structure of GPS satellite signals with neat sketch. **16**

12. a. State the laws of Keplerian motion and discuss in detail about Kepler's law of planetary motion. **16**
- (or)**
- b. Describe the historical development of GPS and configuration of NAVSTAR. **16**
13. a.i. Explain the procedure for determination of direction of satellite. **10**
- ii. Write short note on TRANSIT. **6**
- (or)**
- b. What is Doppler method of survey? Explain its principle? **16**
14. a.i. What are the various methods of GPS surveying, Explain any three in detail. **12**
- ii. List the GPS data processing software. **4**
- (or)**
- b. Explain different sources of errors in GPS surveying. **16**
15. a.i. List the advantages of GPS for Engineering survey application. **3**
- ii. Describe in detail about the application of GPS in the fields of surveying, photogrammetry and remote sensing. **13**
- (or)**
- b.i. Compare GLONASS and NAVSTAR. **6**
- ii. Explain in detail about satellite Laser Ranging System. **10**