

Roll No.

--	--	--	--	--	--	--	--	--	--

39

B.E / B.Tech ( Full Time ) DEGREE END SEMESTER EXAMINATIONS, NOV / DEC 2012

**GEOINFORMATIC ENGINEERING BRANCH**

**SIXTH SEMESTER (Regulation 2008)**

**GI9351 Satellite Geodesy**

Time : 3 Hours

Answer ALL Questions

Max. Marks 100

**PART-A (10 x 2 = 20 Marks)**

1. Distinguish between Conventional Inertial System and Conventional Terrestrial system.
2. The average orbital distance of Jupiter is 5.203 times the average orbital distance of the earth. Find the time (in days) for Jupiter to orbit the Sun.
3. Write short note on SECOR transponder.
4. What are the characteristics of NNSS (TRANSIT)?
5. What is Selective availability?
6. Write short notes on PDOP.
7. Why the survey vehicle should be parked at least 25m from the observing station in a static survey?
8. List the merits and demerits of Chock Ring antenna.
9. Compute the orthometric height for a station whose geodetic height is 59.1m if the geoid undulation in the area is -21.3m.
10. How many pseudorange observations will be observed using a 5sec epoch rate, for a total of 1<sup>h</sup> 20<sup>m</sup> 30<sup>s</sup> with 13 GNSS satellites?

**Part – B ( 5 x 16 = 80.marks)**

11. i. Discuss the basic concept of Satellite Geodesy. (6)  
ii. Explain Keplers laws of planetary motion. (10)
12. a) i. Explain the functional diagram of the Doppler receiver. (8)  
ii. Discuss the different types of satellite cameras employed in determination of Direction. (8)  

**OR**

b) What is Doppler effect? Derive the observation equation of position by Doppler shift. (16)
13. a) What are the three segments of GPS? Describe the characteristics of each segment. (16)  

**OR**

b) i. Explain the signal structure in GPS. (12)  
ii. Discuss about European Union Navigation system. (4)

14. a) i. Explain the steps involved in GPS processing software with flow diagram. (12)  
ii. Discuss about real time kinematic survey. (4)
- OR**
- b) i. Explain the different methods used for solving ambiguities. (12)  
ii. Write short notes on RINEX format, (4)
15. a) i. What are the applications of GPS in the field of Geodetic Control and (12)  
Navigation? Explain any one application in detail of above said fields.  
ii. Write short notes on GAGAN. (4)
- OR**
- b) Explain the trilateration adjustment procedure in static survey. (16)