Code No. 2314

FACULTY OF ENGINEERING

B.E. 4/4 (ECE) II-Semester (Main) Examination, April / May 2013

Subject : Global Positioning System
(Elective - II)

Time : 3 Hours **Max. Marks: 75**

Note: Answer all questions of Part - A and answer any five questions from Part-B.

PART – A (25 Marks)

1. Name any four satellite navigation systems other than GPS. (2)
2. Compare different types of DOPs. (3)
3. Define WES-84 datum and explain all the parameters to define it. (3)
4. How, we can overcome signal multipath while calculating a positional value? (2)
5. Explain briefly about ephemeris data. (2)
6. Give any three real applications of GPS that you come across in your life. (3)
7. Explain briefly various types of GPS augmentation systems. (3)
8. Discuss about DGPS accuracies. (2)
9. Mention the new GPS signals and their frequencies that are planned to be introduced in near future. (3)
10. Briefly explain about software improvements in GPS. (2)

PART – B (5x10=50 Marks)

11.(a) Discuss various steps involved in the satellite position determination. (5)
(b) List out the importance of DOP and explain when we will get good GDOP. (5)

12.(a) Discuss in detail the various errors affecting the GPS accuracy and methods to overcome or minimize the errors. (7)
(b) Discuss the terms Geoid, Ellipsoid and Datums. (3)

13.(a) Explain GPS signal structure with neat block diagram mention the modulation scheme used with GPS. (6)
(b) Differentiate between spoofing and antispoofing. (4)

14. Explain about GAGAN architecture and its implementation. Draw the neat sketch for GAGAN TDS configuration. (10)

15.(a) Differentiate between GLONASS and Galileo systems. (4)
(b) Discuss various types of GPS integration systems. (6)

16.(a) With the help of mathematical expressions explain about carrier phase observation and pseudo range observation. (5)
(b) Bring out the salient features of Galileo with respect to space segment, control segment and signal structure. (5)

17. Write short notes on the following: (10)
(a) UERE
(b) Future GPS satellite and new signals
(c) LAAS Vs WAAS

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