

Code: EC8T2D

**IV B.Tech-II Semester–Regular/Supplementary Examinations–
March 2020**

**GLOBAL POSITIONING SYSTEM
(ELECTRONICS AND COMMUNICATION ENGINEERING)**

Duration: 3 hours

Max. Marks: 70

PART – A

Answer *all* the questions. All questions carry equal marks

11x 2 = 22 M

1.

- a) Define Trilateration.
- b) Define anti spoofing capability of GPS.
- c) What is IOC and FOC?
- d) List the GPS orbital parameters.
- e) What are the two kinds of coded information in GPS receiver?
- f) What is PRN code?
- g) Classify the GPS errors.
- h) What is multipath effect?
- i) What is relative positioning in GPS data processing?
- j) State the differences between equivalent and non-equivalent algorithms.
- k) List the software development tools in GPS system.

PART – B

Answer any **THREE** questions. All questions carry equal marks.

3 x 16 = 48 M

2. a) Explain in detail about GPS functional segments. 8 M
- b) Compare the characteristics of GPS and GALILEO Satellites. 8 M
3. a) What are the various GPS formats and explain about RINEX format. 8 M
- b) Briefly explain how many satellites are required to compute receiver position in 2D and 3D Planes with the help of diagrams. 8 M
4. a) Explain about multipath errors and satellite clock errors. 8 M
- b) Write short notes on ionospheric and tropospheric delay. 8 M
5. a) Discuss briefly about steps in the preparation of GPS data processing. 8 M
- b) Explain kalman filtering using velocity information for GPS data processing. 8 M
6. a) Discuss functional library and data platform for GPS software development. 8 M
- b) Explain the concept of flight state monitoring for GPS system. 8 M