

Code: EC8T2D

IV B.Tech - II Semester - Regular Examinations - March 2018

**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) Classify the blocks of GPS satellites.
- b) List the major functions of control segment.
- c) List the three signal components of GPS.
- d) Give the different data files of RINEX format.
- e) What is the information associated with GPS navigation message?
- f) State the effects of satellite and receiver clock errors.
- g) Define ionospheric delay.
- h) Give the expression for satellite clock error for GPS pseudo range model.
- i) Discuss about GPS Doppler measurement.
- j) What is flight state monitoring?
- k) List the major functions of data processing core.

PART – B

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

3 x 16 = 48 M

2.a) Explain about basic principle of GPS and various generations of GPS satellites. 8 M

b) Write a short notes on anti-spoofing and selective availability of GPS. 8 M

3.a) Discuss briefly about GPS orbital parameters and constellations. 8 M

b) Explain about the GPS signal structure with necessary diagrams. 8 M

4.a) Write short notes on GPS error sources. 8 M

b) Explain ionospheric error estimation using dual frequency GPS receiver. 8 M

5.a) Describe the equivalence theorem of GPS data processing. 8 M

b) Compare single point positioning and relative positioning in GPS systems. 8 M

- 6.a) Explain the concept of data processing core in GPS software development. 8 M
- b) Discuss briefly about the concept of precise kinematic positioning. 8 M