Code: EC8T2D

IV B.Tech-II Semester–Regular/Supplementary Examinations
May 2022

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) What are GPS segments name them.

b) Define spoofing.

c) How does GPS determine the position?

d) List out GPS orbital parameters.

e) Mention different types of GPS errors.

f) How do you fix GPS errors?

g) List the advantages of Kalman filer.

h) What are the standard algorithms of GPS data processing.

i) Define ambiguity resolution in data processing.

j) What are the software development tools in GPS?

k) List the applications of GPS theory.

PART – B

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

$$3 \times 16 = 48 \text{ M}$$

2. a) Explain the System architecture in detail using control segment.   6 M

   b) Compare the constructional features between GPS and Galileo satellite.   6 M

   c) What are the advantages of Galileo signal structure over GPS?   4 M

3. a) Describe the role of GPS orbital parameters.   8 M

   b) Describe the RINEX format used in GPS.   8 M

4. Describe the following terms of GPS error sources.   16 M
   a) Ionospheric error
   b) Tropospheric error
   c) Multipath

5. a) Discuss about standard algorithms of GPS Data processing.
                                                                                 10 M
   b) Explain the concept of equivalent method of GPS data Processing.   6 M

6. a) Describe the concept of Precise Kinematic positioning.
                                                                                 8 M
   b) Explain the software development using a Data Processing core.   8 M