

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VII (NEW) - EXAMINATION – SUMMER 2018

Subject Code:2170606

Date:28/04/2018

Subject Name:Application of Geoinformatics in Civil Engineering(Departmental Elective - II)

Time:02.30 PM to 05.00 PM

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Define geoinformatics and enlist various application of geoinformations in civil engineering. **03**
- (b) Explain principles of remote sensing. **04**
- (c) Discuss various applications of GIS in brief. **07**
- Q.2** (a) Write advantages of remote sensing **03**
- (b) Discuss the following terms in briefly:- (a) GNSS (b) GPS **04**
- (c) Describe elements of visual image interpretation. **07**
- OR**
- (c) Draw the flowchart and explain digital image processing in detail. **07**
- Q.3** (a) Write short note on:- Active and passive sensors **03**
- (b) Write about input and output devices in GIS. **04**
- (c) Discuss the wave model of electromagnetic energy used for remote sensing with the help of a sketch. **07**
- OR**
- Q.3** (a) Differentiate between raster and vector model. **03**
- (b) What are the key components of GIS? **04**
- (c) Explain in brief application of GIS in town planning **07**
- Q.4** (a) Enlist various map projection **03**
- (b) Show the importance of microwaves. **04**
- (c) What is photogrammetric survey? List factors affecting selection of flying altitude. **07**
- OR**
- Q.4** (a) Which are the softwares used for remote sensing? **03**
- (b) What are the limitations of GIS? **04**
- (c) Explain different resolution with their significance. **07**
- Q.5** (a) Write about digitization. **03**
- (b) Write short note on flight planning. **04**
- (c) Explain energy interaction with the earth's surface. **07**

OR

- Q.5** (a) What are the atmosphere window? **03**
- (b) What is the concept of layers in GIS? **04**
- (c) Discuss a spectral reflectance curve. **07**
