

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-VII(NEW) EXAMINATION – SUMMER 2019****Subject Code:2170606****Date:10/05/2019****Subject Name:Application of Geoinformatics in Civil Engineering****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 GIS and Remote Sensing. **03**
(b) Enlist and explain advantages of remote sensing **04**
(c) Enlist and explain various components of GIS. **07**
- Q.2** (a) Differentiate between Active and Passive Sensor. **03**
(b) Enlist and explain various softwares used for GIS. **04**
(c) Describe factors affecting GPS **07**
- OR**
- (c) Discuss about supervised and unsupervised classification with suitable example. **07**
- Q.3** (a) Enlist characteristics of Raster Image **03**
(b) Describe about flight planning and factors affecting the flight planning. **04**
(c) Discuss about integrated applications of GIS and Remote sensing. **07**
- OR**
- Q.3** (a) Enlist characteristics of Vector Image **03**
(b) Explain the necessity of Ground truth in Geoinformatics. **04**
(c) Classify and explain various sensors in detail. **07**
- Q.4** (a) Define terms :- (1) Relief displacement (2) Geoinformatics **03**
(b) Explain about Temporal and Spatial resolution. **04**
(c) Describe about Digital image processing. **07**
- OR**
- Q.4** (a) Write about Visual Interpretation of Image . **03**
(b) Explain Surface modeling in GIS. **04**
(c) Describe about GNSS and various applications of GNSS. **07**
- Q.5** (a) Discuss about DEM . **03**
(b) Describe about Microwave remote sensing in brief. **04**
(c) Describe the application of Geoinformatics in the area of Town planning with suitable example. **07**
- OR**
- Q.5** (a) Explain about spectral reflectance curve in brief. **03**
(b) Explain about overlay analysis. **04**
(c) Describe the application of Geoinformatics in the area of Disaster management with suitable example. **07**
