

GUJARAT TECHNOLOGICAL UNIVERSITY
BPLAN – SEMESTER 5– • EXAMINATION – SUMMER 2017

Subject Code: 1055505**Date: 08/05/2017****Subject Name: GEO-INFORMATICS FOR PLANNING****Time: 02.30Pm to 04.30PM****Total Marks: 50****Instructions:**

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

Q.1 (a) True or False: 05

- i) Reality can be represented in GIS as a series of layers or objects.
- ii) Attribute data are one type of spatial data.
- iii) Buffer operation is used to determine the area within a set distance from a point, line or area feature.
- iv) Bhuvan is an Indian geo-platform which provides spatial information for various different fields of applications.
- v) Remote sensing makes it possible to collect data on dangerous or inaccessible areas.

(b) Define any five: 05

- i) Swath
- ii) Nadir
- iii) Across track scanning
- iv) Atmospheric window
- v) Geographical Information System
- vi) Database
- vii) Global Positioning System

Q.2 (a) Differentiate between active sensor and passive sensor. 05

(b) Write a brief note on geostationary orbit, sun-synchronous orbit and polar orbit. 05

OR

(b) Describe the electromagnetic spectrum with neat sketch for remote sensing. 05

Q.3 (a) What do you understand by remote sensing? Describe the elements of remote sensing using neat sketch. 05

(b) Explain different types of scattering which takes place between an EMR and an atmosphere. 05

OR

- Q.3** (a) Explain in detail about the digital image processing. **05**
- (b) What do you mean by resolution of a satellite? Explain various types of resolutions. **05**
- Q.4** (a) Discuss the advantages and disadvantages of raster and vector data. **05**
- (b) Explain the main components of GIS in detail. **05**

OR

- Q.4** (a) What are the limitations of typical DBMS? Also discuss the need for GIS. **05**
- (b) Write a short note on: **05**
- i) Indian remote sensing satellites
- ii) Unsupervised classification
- Q.5** (a) What are the roles & objectives of NUIS? **05**
- (b) Explain the features involved in visual interpretation of an image? **05**

OR

- Q.5** (a) Discuss the role of GIS and remote sensing in urban planning. **05**
- (b) Write a short note on: **05**
- i) Georeferencing
- ii) Digitization
