Seat No.: _____ Enrolment No._____

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: i) Indian remote sensing satellites ii) Unsupervised classification	**05**
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: i) Georeferencing ii) Digitization	**05**

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