

**GUJARAT TECHNOLOGICAL UNIVERSITY****BE - SEMESTER-V (OLD) EXAMINATION – WINTER 2018****Subject Code:150606****Date: 30/11/2018****Subject Name: Disaster Assessment Using Geospatial Techniques****Time: 10:30 AM TO 01:00 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) Explain “Vector data model” & “Raster data model” in GIS. **07**  
(b) What is sensor? Describe air born and space born sensors in detail. **07**
- Q.2** (a) What are the advantages of GIS over map and computer aided design? **07**  
(b) Give brief idea about GSLV and PSLV. **07**
- OR**
- (b) Write applications of remote sensing and GIS in disaster assessment? **07**
- Q.3** (a) Draw a sketch to explain how a remote sensing works to capture data and transfer it to the user. State the specific practical application of infrared region of the electromagnetic spectrum. **07**  
(b) Explain the functions of DBMS. **07**
- OR**
- Q.3** (a) Discuss the concept of active and passive microwave remote sensing. Explain the components of RADAR as an active microwave remote sensor. **07**  
(b) Explain the fundamental steps in digital image processing. **07**
- Q.4** (a) Explain the basic concept of GPS along with its components. **07**  
(b) Write a short note on Indian Space Programme **07**
- OR**
- Q.4** (a) Define metadata, attribute data & spatial data. Explain how spatial and attribute data are linked for further analysis in a GIS software. **07**  
(b) Give limitations remote sensing and GIS. **07**
- Q.5** (a) Enlist the natural types of disasters in India? How can geospatial assessment techniques be helpful for minimizing the impact of an earthquake? **07**  
(b) Explain role of GIS and remote sensing in assessing the impact of floods? **07**
- OR**
- Q.5** (a) Explain basics of relief and rescue operation by disaster assessment. **07**  
(b) Give the basic concepts how the damage assessment of agricultural crop will be interpreted using remotely sensed data and a GIS software. **07**

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