Seat No.: _____ Enrolment No._____

# GUJARAT TECHNOLOGICAL UNIVERSITY

**BE- V$^{th}$ SEMESTER–EXAMINATION – MAY/JUNE - 2012**

**Subject code: 150606** **Date: 07/06/2012**

**Subject Name: Disaster Assessment using Geospatial Techniques**

**Time: 02:30 pm – 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.**

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|---|---|---|---|
| **Q.1** | **(a)** | Define Remote Sensing. Explain its advantages and limitations. | **07** |
| | **(b)** | Give a brief idea about GSLV and PSLV. | **07** |
| **Q.2** | **(a)** | What is Sensor? Describe Air Born and Space Born sensors. | **07** |
| | **(b)** | What do you know about IRS series? Explain in brief. | **07** |
| | | **OR** | |
| | **(b)** | Write a note on: i) Weather sensors, ii) Spectrometers | **07** |
| **Q.3** | **(a)** | Explain systematic corrections and non-systematic corrections with example. | **07** |
| | **(b)** | What do you understand by GIS? Give brief explanation of it. Also explain various components of it. | **07** |
| | | **OR** | |
| **Q.3** | **(a)** | Explain different functions and basic working principles of GPS? | **07** |
| | **(b)** | Explain basic concept of Metadata? Mention its importance in GIS in detail. | **07** |
| **Q.4** | **(a)** | Why is it necessary to find out errors of GPS? Explain atmospheric error and satellite clock error in detail. | **07** |
| | **(b)** | What are the advantages of GIS over map and Computer Aided Designs? | **07** |
| | | **OR** | |
| **Q.4** | **(a)** | Describe supervised classification. What are the steps involved in supervised classification? Give detailed explanation of each step. | **07** |
| | **(b)** | Write a short note on: i) ESRI, ii) Network analysis. | **07** |
| **Q.5** | **(a)** | Why analysis of Geospatial Data is required? Enumerate the methods used for the same and explain each method in short. | **07** |
| | **(b)** | What are the data sources of sources of GIS? Give an idea of each of them. | **07** |
| | | **OR** | |
| **Q.5** | **(a)** | Explain Raster data model with its detailed classification. | **07** |
| | **(b)** | "Remote Sensing and GIS software are useful for assessment of Natural Disasters". Prove this statement true with brief description of at least two examples. | **07** |

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