

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- SEMESTER- V EXAMINATION – SUMMER 2026

Subject Code:3151308

Date:30-05-2026

Subject Name: Basics of Remote Sensing & GIS

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.
4. Simple and non-programmable scientific calculators are allowed.

- Q.1** (a) Define Remote sensing. **03**
(b) Explain Remote sensing process. **04**
(c) Explain Image interpretation and its analysis. **07**
- Q.2** (a) What do you mean by Image? **03**
(b) Explain energy interaction with Earth surface. **04**
(c) Enlist and explain types of Sensor. **07**
- OR**
- (c) Write a note on Thermal remote sensing. **07**
- Q.3** (a) What do you mean by Photographic imaging? **03**
(b) Enlist and explain types of Camera. **04**
(c) Differentiate between Photograph and Image. **07**
- OR**
- Q.3** (a) What do you mean by Digital imaging? **03**
(b) Enlist and explain types of Filter. **04**
(c) Explain Hyper-spectral imaging. **07**
- Q.4** (a) Define GIS. **03**
(b) What is the requirement of ground truth data? **04**
(c) Explain working principle of GPS. **07**
- OR**
- Q.4** (a) Define GPS. **03**
(b) Enlist and explain instruments for Ground truthing. **04**
(c) Explain various factors of Spectral measurement. **07**
- Q.5** (a) What do you mean by Ground truth? **03**
(b) Discuss application of remote sensing in Environmental impact assessment. **04**
(c) Explain functions of GIS. **07**
- OR**
- Q.5** (a) What do you mean by Visual interpretation? **03**
(b) Discuss application of remote sensing in Land cover and land use. **04**
(c) Enlist and explain advantages and limitation of GIS. **07**
