

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-IV EXAMINATION – SUMMER 2025

Subject Code:3142202

Date:12-05-2025

Subject Name:Mine Surveying - I

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

MARKS

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|------------|---|-----------|
| Q.1 | (a) Write the application of surveying in mining. | 03 |
| | (b) What is theodolite? Write its types. | 04 |
| | (c) List out the different types of level. Explain Dumpy Level with neat sketch. | 07 |
| Q.2 | (a) Name the instruments are used in mine surveying. | 03 |
| | (b) Discuss the principle and objectives of leveling. | 04 |
| | (c) Discuss the miner's dial with its construction. Also write its uses in mining fields. | 07 |
| OR | | |
| | (c) Explain the reduction of data with the help of a tacheometry table. | 07 |
| Q.3 | (a) Define the following term: Plans, Maps and Scales. | 03 |
| | (b) Discuss the classification of triangulation survey. | 04 |
| | (c) What do you mean by traversing? Describe the methods of traversing. | 07 |
| OR | | |
| Q.3 | (a) Write the different parts of theodolite. | 03 |
| | (b) Narrate the merit and demerit of contouring. | 04 |
| | (c) List out the different methods of measurement of horizontal angle. Explain repetition method. | 07 |
| Q.4 | (a) Define land surveying. List out the instruments used in land surveying. | 03 |
| | (b) Write a short note on Planimeter. | 04 |
| | (c) Explain the profile levelling with neat sketch. | 07 |
| OR | | |
| Q.4 | (a) What is compass? Classified it. | 03 |
| | (b) Explain omitted measurements and their calculations. | 04 |
| | (c) Discuss the temporary adjustment of theodolite with neat sketch. | 07 |
| Q.5 | (a) What is tacheometry surveying? | 03 |
| | (b) Describe various methods of contouring. | 04 |
| | (c) Write a brief note on plane table surveying. | 07 |
| OR | | |
| Q.5 | (a) Write the principles involved in a triangulation survey. | 03 |
| | (b) Write a short note on closing error of traversing. | 04 |
| | (c) Explain the stadia method with neat sketch. | 07 |
