

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-IV (NEW) EXAMINATION – WINTER 2023****Subject Code:3142202****Date:17-01-2024****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
Q.1	(a) What is Surveying? Name the instruments are used in mine surveying.	03
	(b) Write a short note on (i) Plans and Maps and (ii) Scales	04
	(c) Write a brief note on plane table surveying.	07
Q.2	(a) Write a short note on contour gradient.	03
	(b) Define the terms: (i) Line of collimation (ii) Telescope normal (iii) Transiting (iv) Face right observation	04
	(c) Discuss in brief the principles of surveying.	07
	OR	
	(c) Discuss in brief the temporary adjustment of theodolite with neat sketch.	07
Q.3	(a) What is theodolite? Write its types.	03
	(b) Write a short note on closing error of traversing.	04
	(c) Explain the profile levelling with neat sketch.	07
	OR	
Q.3	(a) What is compass? Classified it.	03
	(b) Explain the different parts of theodolite.	04
	(c) How to measure a baseline? How to do the selection of site for it?	07
Q.4	(a) Write a short note on Planimeter.	03
	(b) Define leveling. Discuss the principle and objectives of leveling.	04
	(c) Explain the stadia method with neat sketch.	07
	OR	
Q.4	(a) Narrate the merit and demerit of contouring	03
	(b) What is traversing? Describe methods of traversing.	04
	(c) Describe a miner's dial with its construction, adjustments and use in mining fields.	07
Q.5	(a) Define land surveying. List out the instruments used in land surveying.	03
	(b) List out the methods of determining areas and explain any one from it with sketch.	04
	(c) List out different types of level. Explain Dumpy Level with neat sketch.	07
	OR	
Q.5	(a) Discuss the selection of triangulation stations.	03
	(b) What is tacheometry surveying? How is it helpful?	04
	(c) List out the different methods of measurement of horizontal angle. Explain repetition method.	07