

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-IV (NEW) EXAMINATION – WINTER 2021****Subject Code:2142202****Date:24/12/2021****Subject Name:Basic Mine Surveying****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 are the fundamental lines of a theodolite?	03
	(b) Write a note on dumpy level.	04
	(c) Describe construction and various uses of Miners dial.	07
Q.2	(a) Give the use of prismatic compass.	03
	(b) Differentiate between external focusing and internal focusing telescope.	04
	(c) Explain the procedure of the leveling to establish underground bench mark.	07
OR		
	(c) List out various types of Theodolite. Explain any one of them in brief with neat sketch.	07
Q.3	(a) What is the method of base line measurement?	03
	(b) Write a note on Omitted measurement.	04
	(c) Describe closing error and it's adjustment.	07
OR		
Q.3	(a) Give the name of types of levels according to their general arrangement.	03
	(b) Write note on characteristics of contours.	04
	(c) Write a note on measurement of Horizontal Angles and Vertical Angles.	07
Q.4	(a) Write the types of errors in dial surveying.	03
	(b) Explain test and adjustments of Miners dial.	04
	(c) Explain tubular compass with neat sketch.	07
OR		
Q.4	(a) Explain any three Leveling Instruments with sketch.	03
	(b) Describe various types of tacheometry in short.	04
	(c) What is surveying? Give basic principle of surveying and name all the instruments used for it.	07
Q.5	(a) Write note on principle of Tachometric Surveying.	03
	(b) What is leveling? Explain fly leveling.	04
	(c) Write a short note on Interpolation of contours.	07
OR		
Q.5	(a) Write a note on subsidence survey.	03
	(b) Write a brief note on latest equipments used for surveying.	04
	(c) Write note on Additive and Multiplying constants.	07
