

GUJARAT TECHNOLOGICAL UNIVERSITY
BE- SEMESTER-IV (NEW) EXAMINATION – WINTER 2020

Subject Code:2142202**Date:17/02/2021****Subject Name:Basic Mine Surveying****Time:02:30 PM TO 04:30 PM****Total Marks:56****Instructions:**

1. Attempt any FOUR questions out of EIGHT questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

		MARKS
Q.1	(a) What is surveying? Describe basic principle of surveying. List out instruments used for surveying.	03
	(b) Explain construction of Miner's Dial with neat sketch.	04
	(c) List out various methods for measurements of horizontal angles. Explain repetition method to measure horizontal angle with an example.	07
Q.2	(a) What is leveling? Describe the principle and object of leveling.	03
	(b) Discuss the importance of subsidence survey in mining.	04
	(c) List out different types of theodolite. Explain vernier theodolite with neat sketch.	07
Q.3	(a) Discuss the various characteristics of contours.	03
	(b) Explain temporary adjustment of theodolite.	04
	(c) Explain reduction of data by the use of tacheometric table.	07
Q.4	(a) Describe basic concept of triangulation surveying.	03
	(b) Explain permanent adjustment of theodolite.	04
	(c) Describe the principle of tacheometric surveying. Explain additive and multiplying constants.	07
Q.5	(a) Explain why a theodolite is more accurate than other instruments.	03
	(b) Differentiate between Tubular and through compass.	04
	(c) Explain use, tests and adjustments of Miner's Dial.	07
Q.6	(a) Discuss the general procedure for field work of tacheometric surveying.	03
	(b) Explain the procedure for omitted measurements of traversing.	04
	(c) Explain measurements of vertical angles with theodolite.	07
Q.7	(a) What is closing error? Explain Bowditch's Rule and Transit Rule.	03
	(b) Explain dumpy level with neat sketch.	04
	(c) Explain leveling instruments in brief.	07
Q.8	(a) Discuss the various uses of theodolite in mine surveying.	03
	(b) Explain wye level with neat sketch.	04
	(c) Explain interpolation of contours in brief.	07
