

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-IV (NEW) - EXAMINATION – SUMMER 2017****Subject Code: 2142202****Date: 06/06/2017****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.

		MARKS
Q.1	Short Questions	14
	1 What is leveling?	
	2 List out the name of instrument uses in surveying?	
	3 What is main principle of Triangulation?	
	4 What is base line?	
	5 What is the method of base line measurement?	
	6 Define: Line of Collimation.	
	7 What is Contouring?	
	8 Write the formula of Bowditch's Rule.	
	9 Define: Closing error.	
	10 What is full form of EDM.	
	11 What is function of clip screw?	
	12 What are the fundamental lines of a theodolite?	
	13 Define the following term: Level line	
	14 What is mining theodolite?	
Q.2	(a) What are the purposes of traverses?	03
	(b) Explain various Leveling instruments.	04
	(c) What is Triangulation method? Give the classification of Triangulation system.	07
OR		
	(c) Find out additive and multiplying constants of a tachometer.	07
Q.3	(a) Write a short note on: Subsidence Survey.	03
	(b) Differentiate between Tubular and through compass.	04
	(c) Write a note on miner's dial with a neat sketch.	07
OR		
Q.3	(a) Write a short note on Bowditch's Rule.	03
	(b) Write a short note on general procedure for field work.	04
	(c) What is Theodolite? Write a note on Vernier theodolite with a neat sketch.	07
Q.4	(a) What are the principle and object of leveling?	03
	(b) Define following terms: (1) Parallax (2) change point (3) back sight.	04
	(c) Explain the procedure of the leveling to establish underground bench mark.	07
OR		
Q.4	(a) Write a note on Omitted measurement.	03
	(b) Write a note on Gyro – theodolite.	04
	(c) Compare Miner's Dial with Prismatic compass.	07

- Q.5** (a) Explain characteristics of contours with ketch sketch. **03**
(b) Differentiate between external focusing and internal focusing telescope. **04**
(c) Explain in brief method of measuring depth of a vertical shaft. **07**

OR

- Q.5** (a) Write a note on dumpy level. **03**
(b) Write a note on Permanent adjustment of theodolite. **04**
(c) Write various uses of theodolite in mine surveying. **07**
