GUJARAT TECHNOLOGICAL UNIVERSITY
BE- SEMESTER–IV (NEW) EXAMINATION – WINTER 2024

Subject Code:3142202   **Date:21-11-2024**
Subject Name: Mine Surveying - I
Time:02:30 PM TO 05:00 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)	List out any six instruments used in surveying.	03
	(b)	Explain principles of surveying.	04
	(c)	Define surveying and write its objectives.	07
Q.2	(a)	List out any six parts of theodolite.	03
	(b)	Explain temporary adjustments of theodolite.	04
	(c)	Describe procedure to measure horizontal angle by repetition method.	07
		OR	
	(c)	Define contour and explain its characteristics.	07
Q.3	(a)	Give classification of surveying.	03
	(b)	Explain permanent adjustments of theodolite.	04
	(c)	Explain various method of contouring.	07
		OR	
Q.3	(a)	Define open traverse and close traverse.	03
	(b)	Explain tabular and through compass.	04
	(c)	Explain closing error and its adjustment for traverse survey.	07
Q.4	(a)	Define levelling and list out any two-levelling instrument.	03
	(b)	Define tacheometry and its uses.	04
	(c)	Explain interpolation of contours.	07
		OR	
Q.4	(a)	Explain basic concept of triangulation.	03
	(b)	Explain determination of tacheometry constants.	04
	(c)	Explain the general procedure for fieldwork in tacheometric surveying.	07
Q.5	(a)	Explain use of planimeter and clinometer.	03
	(b)	Draw neat sketch of dumpy level.	04
	(c)	Give classification of triangulation survey.	07
		OR	
Q.5	(a)	List out various method of plane table surveying.	03
	(b)	Explain measurement of area and volume by Simpson's rule.	04
	(c)	Explain construction, use and adjustment of Miner's dial.	07

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