Enrolment No/Seat No.: _____

R.N.G.PATEL INSTITUTE OF TECHNOLOGY-RNGPIT

(An Autonomous Institute U/s UGC Act 1956)

B.Voc. SEMESTER-I, SEMESTER END EXAMINATION – WINTER 2025

SUBJECT CODE: 1BCT103 **DATE: 22-12-2025**

SUBJECT NAME: SURVEYING 1

TIME: 11:00 AM to 01:00 PM **TOTAL MARKS: 50**

Instructions

1. It is **compulsory** for students to write **Enrolment No. /Seat No.** on the question paper.
2. Attempt all questions in the question paper.
3. The figures to the right of each question indicate full marks. Make suitable assumptions with proper justification wherever required.
4. Simple, non-programmable scientific calculators are permitted.
5. BL - Cognitive Level (As per Revised Bloom's Taxonomy) (R-Remember, U-Understanding, A –Application, N –Analyze, E – Evaluate, C -Create), CO - Course Outcomes.

			Marks	BL	CO
Q.1	**(a)**	What is surveying? Explain the scope of surveying in detail.	**05**	**U**	**1**
	(b)	Give the classification of the compass. Explain any one in detail.	**05**	**U**	**1**
Q.2	**(a)**	Which equipment and accessories are used in plane table surveying? Explain any two in detail.	**05**	**U**	**2**
	(b)	Give the advantages and disadvantages of the plane table surveying.	**05**	**R**	**2**
		OR			
Q.2	**(a)**	What is the principle of the plane table surveying?	**05**	**U**	**2**
	(b)	What are the general errors of the plane table surveying? Give the applications of the plane table.	**05**	**A**	**2**
Q.3	**(a)**	What are the temporary and permanent adjustments of the theodolite?	**05**	**U**	**3**
	(b)	Give the difference between transit theodolite and non-transit theodolite.	**05**	**U**	**3**
		OR			
Q.3	**(a)**	Explain the parts of the theodolite. Give the applications of the theodolite on the field.	**05**	**U**	**3**
	(b)	Write a short note on the Gale's Traverse table.	**05**	**U**	**3**

Q.4	**(a)**	Explain the planimeter in detail. Also give the applications of the planimeter.	**05**	**U**	**4**
	(b)	What are the different methods of the finding out the computation of the area?	**05**	**U**	**4**

OR

Q.4	**(a)**	Differentiate between the Trapezoidal and Simpson's methods for area computation with suitable diagrams.	**05**	**U**	**4**
	(b)	How the prismoidal corrections are carried out for computation of the area and volume?	**05**	**U**	**4**
Q.5	**(a)**	Explain the different types of errors encountered in fieldwork. Give suitable examples.	**05**	**U**	**5**
	(b)	Describe the principle of least squares and its importance in error adjustment.	**05**	**R**	**5**

OR

Q.5	**(a)**	Write short notes on: (a) Residual error, (b) Probable error	**05**	**R**	**5**
	(b)	Define most probable value. Explain how it is determined from a set of observations.	**05**	**U**	**5**

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