

GUJARAT TECHNOLOGICAL UNIVERSITY
DIPLOMA IN TRANSPORTATION ENGINEERING
Semester: 4

Subject Name Surveying - II

Sr. NO.	Course content
1.	Theodolite 1.1 Use of Theodolite in traverse survey, tacheometry and setting of curves, problems and applications
2.	Total station 2.1 Basics of total station <ul style="list-style-type: none">• Introduction• Advantages of total station• Disadvantages of total station• Measuring angles• Types of total station• Advancement in total station technologies• Automatic target recognition (ATR) 2.2 Surveying using total station <ul style="list-style-type: none">• Introduction• Fundamental parameters of total station<ol style="list-style-type: none">1. Parameters for calculation2. Correction factors and constants• Precautions to be taken while using total station• Field equipment• Setup• Setting up a back sight• Azimuth mark• Measurement with total station• Total station initial setting (General setting)• Field book recording• Radial shooting• Traverse• Survey station description• Occupied point entries• Data retrieval• Field generated graphics

	<ul style="list-style-type: none"> • Construction layout using total station • Overview of computerized survey data system • Data gathering components • Data processing components • Data plotting • Equipment maintenance • Maintaining battery power • Total station job planning and estimating • Error sources • Total survey system error sources and how to avoid them • Controlling error
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Reference Books:

Sr. No.	Name of Books	Author
1.	.Advanced surveying	Satheesh Gopi
2.	Surveying and levelling (Vol. I)	T.P.Kanetkar & S.V.Kulkarni
3.	Surveying (Vol. I)	Dr. B.C.Punmia
4.	Surveying and levelling	Hussain & Nagrani
5.	Surveying	C.L.Kochher