

COURSE TITLE : SURVEY PRACTICAL-1
COURSE CODE : 2019
COURSE CATEGORY : B
PERIODS/WEEK : 3
PERIODS/SEMESTER: 45
CREDITS : 2

TIME SCHEDULE

Module	Topics	Period
1	Chain surveying	9
2	Plane table surveying	12
3	Chain and compass traverse	9
4	Fundamentals of Levelling	15
TOTAL		45

COURSE OUTCOME

Sl.	Sub	Student will be able to
1	1	Use the different types of surveying instruments
	2	Take linear and angular measurements
	3	Find the area of a given land
2	1	Prepare the lay out and map of an area
	2	Find the elevations of ground points

SPECIFIC OUTCOME

Upon completion of the study, the student should be able to:

1.1.0 Perform survey in the field using chain, tape and accessories for a small civil Engineering work

- 1.1.1 Identify the instruments for chain survey.
- 1.1.2 Select convenient stations
- 1.1.3 Conduct chain survey in the field and record the observations in the field book
- 1.1.4 Conduct triangulation survey in the field and to calculate the area.
- 1.1.5 Conduct cross staff survey and find the area

2.1.0 Perform plane table survey

- 2.1.1 Identify the accessories of plane table
- 2.1.2 Set up and orient the plane table
- 2.1.3 Conduct survey in the field to plot the objects by radiation method and intersection method.

3.1.0 Perform survey in the field by chain and compass

- 3.1.1 Identify the prismatic compass
- 3.1.2 Perform the survey work using compass and record it the field book
- 3.1.3 Compute the included angles, bearings of survey lines
- 3.1.4 Plot the traverse and fill the details

3.1.5 Find horizontal distance between two points by taking bearing

4.1.0 Perform Levelling practice

4.1.1 Identify the leveling instrument

4.1.2 Perform temporary adjustments for taking observations

4.1.3 Conduct simple leveling and compound levelling

4.1.4 Take fly levels for establishing a bench mark

CONTENT DETAILS

CHAIN SURVEYING

Study of instruments used in chain surveying -Plotting of a building using chain survey -
Measurement of area of a given plot by cross staff survey and triangulation

PLANE TABLE SURVEYING

Plotting various objects in a given field using Radiation method -Determination of horizontal
distance between two inaccessible points by intersection method

COMPASS SURVEYING

Plotting of a given traverse - Determination of the horizontal distance between two inaccessible
points (cosine rule).Determination of the horizontal distance between two inaccessible points by
baseline method.

LEVELLING

Study of leveling instrument and simple levelling- Determination of RL of given stations with respect
to a given BM (including inverted reading) -Determination of level difference between two given
points by differential leveling (HC method)- Establishing bench mark by taking fly levels by rise and
fall/height of collimation method.