# VEER SURENDRA SAI UNIVERSITY OF TECHNOLOGY, BURLA

Semester: **2ND** **LESSON PLAN** Subject **SURVEYING AND LEVELLING**

Session: **Jan 2017 – May 2017** Theory / ~~Sessional~~

Branch/Course: **Architecture** Name of the Faculty Member:**Er. Sanchita Behera**

| Period | Module/ Number | Topic to be covered | Remarks/ Sign. of Faculty Member |
|---|---|---|---|
| 1-2 | I | Introduction, Definitions, Basic principles of surveying, classification of survey, uses of survey | |
| 3-4 | | scales and symbols, sources of errors in survey, linear measurement, accurate and approximate methods, duties of surveyor | |
| 5-6 | | Chain surveying, introduction, types of chains and tapes, Instruments for chaining and taping, ranging cross staffs, offsets | |
| 7 | | obstacles in chain surveying, errors and corrections, standardization | |
| 8 | | composition of areas (trapezoidal rule, average ordinate, simpson rule) | |
| 9 | II | Compass Surveying, Introduction, prismatic compass and surveyors compass, types of bearings | |
| 10 | | designation of bearings, fore bearing and back bearing, types of traverse, temporary adjustment of prismatic compass, local attraction, corrections, precautions, errors, | |
| 11 | | Plane Table survey, Introduction, types of plane tables and their assessories, setting up the plane table | |
| 12 | | traversing, radiation method, intersection method | |
| 13-14 | | resection method (two point problem), three point problem | |
| 15-16 | III | Leveling- Introduction, definition of terms used in levelling, principles of levelling, classifications | |
| 17-18 | | temporary adjustments of dumpy level, RL's by height of instrument and rise and fall method | |
| 19 | | Contouring and their characteristics, uses, errors in levelling, | |
| 20 | | Theodolite- Introduction- vernier Theodolite, users of Theodolite, Temporary adjustments, Traversing | |
| 21 | IV | Automated Surveying, Introduction to use of Digital Surveying, | |
| 22 | | Instruments such as distomat, total station, Electronic Theodolite, GPS, Site studies | |
| 23 | | Plot, site, land and regions, size and shape of site, Analysis of accessibility, topography, Climate, land forms | |
| 24 | | Surface drainage, Soil, Water vegetation, ecology, and visual aspects | |

*Signature of the Faculty Member :*

*Date:*

Counter Signature of H.O.D.