

DEPARTMENT OF MINING ENGINEERING

LESSION PLAN

Discipline: MINING	SEMESTER: 3RD	Name of the Teaching Faculty: PARTHA SARATHY DASH
Subject: MINE SURVEY- II	No. of Days/ week class allotted: 3	Semester from date: 01.07.2026 to Date- 05.11.2026 No of weeks- 15
Week	Class Day	Topics
1st	1st	Chain Survey- Its introduction, conventional signs, abbreviations, standard of lining
	2nd	Principle of chain surveying, instruments & correctness.
	3rd	Ranging & Chaining of a line, Errors in Chaining, obstructions in chaining. Chaining along a sloping ground. Use of Optical square & Line ranger
2nd	1st	Offsets & their measurements.
	2nd	Procedure of chain surveying. Field booking.
	3rd	Compass Survey – Its introduction,
3rd	1st	its adjustment
	2nd	& uses.
	3rd	True & magnetic meridian.
4th	1st	Grid line & arbitrary meridian.
	2nd	1st INTERNAL ASSESSMENT
	3rd	WCB (whole circle bearing)
5th	1st	QB(Quadrantal bearing)
	2nd	& its conversion.
	3rd	Bearing angles
6th	1st	Fore & Back bearing & their conversion.
	2nd	Local attraction
	3rd	& its correction to the bearing.
7th	1st	Closed & Open compass surveying & its plotting.
	2nd	Field booking in compass & chain traverses
	3rd	Adjustment of closing error in compass traversing.
8th	1st	Surveyor compass (miner's dial),
	2nd	Its adjustment & use.
	3rd	Comparison between Prismatic & Surveyor compass
9th	1st	Plane Table Survey – Fundamentals of plane table survey.
	2nd	Two points problem
	3rd	Three-point problem.
10th	1st	Advantages & Disadvantages of plane table survey.
	2nd	Computation of areas – Methods of determining areas,
	3rd	Methods of determining areas from offset to a base line using Mid Ordinate rule.
11th	1st	Trapezoidal rule.
	2nd	Simpson's rule.
	3rd	Computation of area by Planimeter.
12th	1st	Calculation of ore reserve – Define Reserve, Reserve by Exploratory method.
	2nd	Primary ore reserve by Material balance method
	3rd	Primary ore reserve by Curve decline method

13th	1st	Theodolite – Its Principle & use
	2nd	Temporary & Permanent adjustment of theodolite.
	3rd	Its operation
14th	1st	Horizontal & Vertical angle.
	2nd	Setting of the instrument.
	3rd	Different parts Theodolite.
15th	1st	Traversing with Theodolite.
	2nd	2nd INTERNAL ASSESSMENT
	3rd	CLASS TEST & DOUBT CLEARING CLASS


 PARTHA SARATHY DASH
 SENIOR LECTURER