ORISSA SCHOOL OF MINING ENGINERRING
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DEPARTMENT OF MINING ENGINEERING
LESSON PLAN

Discipline: MINING	Semester: 3rd	Name of the Teaching faculty: P. S DASH	
Subject: MINE SURVEY - I	No of Days/Week class alloted: 4	Semester from Date: 1/10/2021 To Date: 8/1/2022	
		No of weeks: 16	

Week	Class Day	Topics
1st	1st	Give survey conventional signs, abbreviation used.
	2nd	Give survey conventional signs, abbreviation used.
	3rd	Give standards of lining, inking and coloring.
	4th	Describe selection of scales used.
2nd	1st	Explain principle of chain surveying.
	2nd	Describe instruments used and checking their correctness.
	3rd	Describe instruments used and checking their correctness.
	4th	Explain ranging and chaining of a line.
3rd	1st	Calculate errors in chaining.
	2nd	Explain obstruction while chaining.
	3rd	Describe chaining along a sloping ground.
	4th	Describe chaining along a sloping ground.
4th	1st	Describe use of optical square
	2nd	Describe use of line range and checking optical square for correctness.
	3rd	Describe offsets and their measurements.
	4th	Give reference sketches of stations.
5th	1st	Give reference sketches of stations.
	2nd	Give procedure of chain surveying.
	3rd	Explain field booking
	4th	plotting of chain survey.
6th	1st	Describe prismatic compass, its adjustments and use.
	2nd	Explain true meridians.
	3rd	Explain magnetic meridian, grid line meridian and arbitrary meridian
	4th	CLASS TEST 1, Previous year questions, quiz test
7th	1st	Explain W.C.B. and Q.B. and conversion from one to other
	2nd	Explain Q.B. and W.C.B conversion from one to other
	3rd	Find out fore and back bearing and their conversion.
	4th	Find out fore and back bearing and their conversion.
8th	1st	Compute angles from bearing and bearing angles
	2nd	Define local alteration

	3rd	Determine local alteration and necessary correction to the bearing.
	4th	Explain closed and open compass surveying and its plotting.
9th	1st	Explain closed and open compass surveying and its plotting.
	2nd	Give procedure of field booking in compass and chain traverses.
	3rd	Explain adjustment of closing error in compass traversing.
	4th	Describe surveyor compass(miner's dial),its adjustment and use
10th	1st	Compare prismatic compass with surveyor compass.
	2nd	Fundamentals of Plane Table Survey.
	3rd	Explain two point problems.
	4th	Explain three point problems and its solution by tracing paper method.
11th	1st	Explain three point problems and its solution by tracing paper method.
	2nd	Describe advantages of plane table.
	3rd	Describe disadvantages of plane table.
	4th	Explain methods of determining areas.
12th	1st	Find out areas from offset to a base line using Mid ordinate rule
	2nd	Find out areas from offset to a base line using Average ordinate rule
	3rd	Find out areas from offset to a base line using Trapezoidal rule
	4th	CLASS TEST 2, Previous year questions, quiz
13th	1st	Find out areas from offset to a base line using Simpson's rule
	2nd	Compute area by Planimeter and from graph paper.
	3rd	Define benchmark M.S.L. Dumpy level.
	4th	Adjust dumpy level, modern levels (Auto Level & etc.), and precise staff.
14th	1st	Describe methods of leveling- Rise & fall method, height of instrument.
	2nd	Errors in ordinary leveling.
	3rd	Explain reciprocal leveling, subsidence leveling, setting out gradient, trigonometric leveling, geometrical leveling, and physical leveling.
	4th	Classify reserves.
15th	1st	Evaluate reserves by exploratory .
	2nd	Calculate primary ore reserve by material balance method
	3rd	Calculate primary ore reserve by decline curve method.
	4th	Describe temporary and permanent adjustment of Theodolite.
16th	1st	Describe the principles of operation & describe different parts.
	2nd	Measure Horizontal & Vertical angles.
	3rd	Describe setting of the instrument & Traversing with Theodolite.
	4th	CLASS TEST 3, Previuos year questions, quiz

Parth Sarathi Dash
Signature of Faculty   1·10·22