



Discipline : Mining Engg.	Semester: 3rd	Name of the Teaching Faculty: ER . D.S. PRADHAN
Subject: Mine Geology	No. of Days/per week class allotted: 4	Semester From Date: 01/ 08/2023 To Date: 09/12/2023 No. of Weeks: 15
<b>Week</b>	<b>Class Day</b>	<b>Theory/Practical Topics</b>
1 <sup>st</sup>	01	Give survey conventional signs, abbreviation used.
	02	Give standards of lining, inking and coloring.
	03	Describe selection of scales used.
	04	Explain principle of chain surveying.
2 <sup>nd</sup>	01	Describe instruments used and checking their correctness.
	02	Explain ranging and chaining of a line.
	03	Calculate errors in chaining.
	04	Explain obstruction while chaining. Describe chaining along a sloping ground.
3 <sup>rd</sup>	01	Describe use of optical square and line range and checking optical square for correctness.
	02	Describe offsets and their measurements. Give reference sketches of stations. Give procedure of chain surveying. Explain field booking and plotting of chain survey.
	03	Describe prismatic compass, its adjustments and use.
	04	Explain true meridians, magnetic meridian, grid line meridian and arbitrary meridian.
4 <sup>th</sup>	01	Explain W.C.B. and Q.B. and conversion from one to other
	02	Find out fore and back bearing and their conversion. Compute angles from bearing and bearing angles
	03	Define local alteration. Determine local alteration and necessary correction to the bearing.
	04	Give procedure of field booking in compass and chain traverses. Explain adjustment of closing error in compass traversing.
5 <sup>th</sup>	01	Describe surveyor compass(miner's dial),its adjustment and use Compare prismatic compass with surveyor compass.
	02	Describe surveyor compass(miner's dial),its adjustment and use Compare prismatic compass with surveyor compass.
	03	Fundamentals of Plane Table Survey.
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6 <sup>th</sup>	01	Explain two point problems
	02	Explain two point problems
	03	Explain three point problems and its solution by tracing paper method.
	04	Explain three point problems and its solution by tracing paper method.
7 <sup>th</sup>	01	Explain three point problems and its solution by tracing paper method.
	02	Describe advantages and disadvantages of plane table.
	03	Explain different methods of determining areas

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8 <sup>th</sup>	01	Find out areas from offset to a base line using Mid ordinate rule
	02	Find out areas from offset to a base line using Average ordinate rule
	03	Find out areas from offset to a base line using Trapezoidal rule
	04	Find out areas from offset to a base line using Simpson's rule
9 <sup>th</sup>	01	Find out areas from offset to a base line using Simpson's rule
	02	Compute area by Planimeter and from graph paper.
	03	Define benchmark M.S.L. Dumpy level.
	04	Adjust dumpy level, modern levels (Auto Level & etc.), and precise staff.
10 <sup>th</sup>	01	Adjust dumpy level, modern levels (Auto Level & etc.), and precise staff.
	02	Describe methods of leveling- Rise & fall method,
	03	Describe methods of leveling- Rise & fall method,
	04	Describe methods of leveling by height of instrument.
11 <sup>th</sup>	01	Describe methods of leveling by height of instrument.
	02	Errors in ordinary leveling.
	03	Explain reciprocal leveling, subsidence leveling, setting out gradient,
	04	Explain trigonometric leveling, geometrical leveling, and physical leveling.
12 <sup>th</sup>	01	Classify reserves.
	02	Evaluate reserves by exploratory .
	03	Evaluate reserves by exploratory .
	04	Calculate primary ore reserve by material balance method
13 <sup>th</sup>	01	Calculate primary ore reserve by material balance method
	02	Calculate primary ore reserve by decline curve method.
	03	Calculate primary ore reserve by decline curve method.
	04	Describe temporary and permanent adjustment of Theodolite.
14 <sup>th</sup>	01	Describe temporary and permanent adjustment of Theodolite.
	02	Describe the principles of operation & describe different parts.
	03	Describe the principles of operation & describe different parts.
	04	Measure Horizontal & Vertical angles.
15 <sup>th</sup>	01	Measure Horizontal & Vertical angles.
	02	Describe setting of the instrument
	03	Explain Traversing with Theodolite.
	04	Explain Traversing with Theodolite.