GOVERNMENT POLYTECHNIC JAJPUR

DEPARTMENT OF MINING ENGINEERING

LESSON PLAN

Discipline: MINING	Semester:4th	Name of the Teaching faculty:SOUMYA RANJAN SAMAL
Subject: MINE SURVEY - II	No of Days/Week class alloted: 4	Semester from Date: 14/02/23 To Date: 23/05/23 No of weeks: 16

Week	Class Day	Topics
1st	1st	Define stadia & its principle
	2nd	Define stadia & its principle
	3rd	Explain diaphragm.
	4th	Explain reticules.
2nd	1st	Explain dtacheometer.
	2nd	Explain instruments constants.
	3rd	Find out height & distance from stadia intercepts method.
	4th	Find out height & distance from tangential systems.
3rd	1st	Find out height & distance from movable hair method.
	2nd	State purpose & principle involved in triangulation method.
	3rd	State purpose & principle involved in trilateration method.
	4th	Classify various methods of triangulation.
4th	1st	Explain primary triangulation.
	2nd	Explain triangulation.
	3rd	CLASS TEST-I
	4th	Explain tertiary colliery triangulation.
5th	1st	Develop concept about reconnaissance survey.
	2nd	Describe methods of measuring angle.
	3rd	Types of theodolite used in triangulation survey.
	4th	Describe the methods of base line measurement using E.D.M.
6th	1st	Describe the methods of base line measurement using E.D.M.
	2nd	Define tape correction.
	3rd	State construction of triangulation station of permanent nature.
	4th	State construction of triangulation station of permanent nature.
7th	1st	State direct correlation by traversing methods.
	2nd	State direct correlation by optical methods.
	3rd	Describe orientation by wires in two shafts
	4th	Explain correlation by mines in vertical shafts.
8th	1st	Explain correlation by mines in vertical shafts.
	2nd	INTERNAL -I
	3rd	INTroduction to DGPS.
	4th	Describe weissbach triangle weis-quadrilateral methods.
9th	1st	Explain precise magnetic correlation.
	2nd	State elements of curves.
	3rd	Define designation of curves, simple curves.
	4th	Define designation of curves,compound & reverse curves.

10th	1st	Explain setting out of surface & underground curves by chords & offsets.
	2nd	Explain setting out of surface & underground curves by tangent and offset.
	3rd	Explain setting out of surface & underground curves by plate layers method.
	4th	Describe various setting out by chain & one theodolite, two theodolites
11th	1st	Describe various setting out by chain.
	2nd	Describe various setting out by one theodolite.
	3rd	Describe various setting out by one theodolite.
	4th	Describe various setting out by chain two theodolites.
12th	1st	CLASS TEST-II
	2nd	Describe various setting out by chain two theodolites.
	3rd	Define super elevation, transition and vertical curves
	4th	Define super elevation, transition and vertical curves
13th	1st	Explain tape triangulation, instrumental survey.
	2nd	Explain instrumental survey.
	3rd	Determine stope face.
	4th	Determine stope face.
14th	1st	State preparation of stope planes.
	2nd	State plotting the stope station.
	3rd	INTERNAL-II
	4th	State plotting of stope face to the mine plan.
15th	1st	Find out area of extraction by Planimeter and calculation of triangle thereof
	2nd	Explain the basic principles of global positioning system
	3rd	Explain the basic principles of global positioning system
	4th	Explain the basic principles of total station.
16th	1st	Explain the basic principles of total station.
	2nd	Introduction to DGPS.
	3rd	previous year question disscussion
	4th	Previuos year questions, quiz

Sl. No.	Title of the Book	Name of Authors
1	Surveying Vol I	E.Mason
2	Surveying and Levelling	T.P. Kanetkar
3	Geodetic Surveying Vol I	David Clerk
4	Mineral Economics	Sinha & Sharma

Signature of Faculty