

GOVERNMENT POLYTECHNIC JAIPUR

A/ P: Ragadi, Block: Korei, Dist.: Jajpur, Odisha- 755019

Website: <https://www.gpjajpur.org> E-mail: principalgpjajpur@yahoo.co.in Contact: 9437155107**DEPARTMENT OF MINING ENGINEERING****LESSON PLAN**

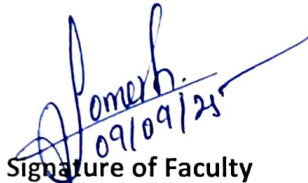
Discipline: MINING	Semester:3RD	Name of the Teaching faculty: SOMESH JENA
Subject: MINING GEOLOGY-I	No of Days/Week class allotted: 3	Semester from Date: 14/07/25 To Date: 15/11/25 No of weeks: 15
Week	Class Day	Topics
1st	1st	geology for mining engineering, branches, scope, and application Define weathering and erosion. internal structure of the earth. and composition, layers in atmosphere.
	2nd	weathering and erosion. Explain with suitable sketches the erosional and depositional land forms produced by Wind.
	3rd	Explain with suitable sketches the erosional and depositional land forms produced by Wind./Explain with suitable sketches the erosional and depositional land forms produced by Wind.
2nd	1st	Explain with neat sketches the erosional and depositional land forms produced by River.
	2nd	Explain with neat sketches the erosional and depositional land forms produced by River.
	3rd	Explain with neat sketches the erosional and depositional land forms produced by River./Differentiate between Glacier and Iceberg.
3rd	1st	Describe the erosional and depositional features produced by glacier.
	2nd	Describe the erosional and depositional features produced by glacier.
	3rd	Describe the erosional and depositional features produced by glacier. Define moraine. Describe the different type of moraine with sketches.
4th	1st	Define moraine. Describe the different type of moraine with sketches
	2nd	Define moraine. Describe the different type of moraine with sketches
	3rd	Define Igneous, Sedimentary, Metamorphic rocks. Describe the various textures and structures found in Igneous rocks.
5th	1st	CLASS TEST
	2nd	Describe the various textures and structures found in Igneous rocks.
	3rd	Describe the various textures and structures found in Igneous rocks. Describe some important structures of sedimentary rocks along with neat sketches.

6th	1st	Describe some important structures of sedimentary rocks along with neat sketches.
	2nd	Describe various structure found in metamorphic rocks. vacancies ,interstitial and impurities,types and cause of line defect,edge dislocation,screw dislocation.
	3rd	effect of deformation on material properties,deformation by slip, twinning
7th	1st	Define Dip. Distinguish between true dip and apparent dip.
	2nd	Define strike.
	3rd	Define folds. Classify folds and describe them.
8th	1st	Define faults. Describe the various types of fault.
	2nd	Define joints. Describe various joints.
	3rd	Define joints. Describe various joints.Define a crystal.
9th	1st	INTERNAL - I
	2nd	Define a crystal.Explain Miller's indices.
	3rd	Explain Miller's indices
10th	1st	Describe the symmetry elements and forms present in the normal class of Isometric system.
	2nd	Describe the symmetry elements and forms present in the normal class of Isometric system.
	3rd	Describe the symmetry elements and forms present in the normal class of Isometric system.Define a mineral.
11th	1st	Enumerate and describe the physical properties of minerals.
	2nd	Enumerate and describe the physical properties of minerals.
	3rd	Enumerate and describe the physical properties of minerals. Describe various optical properties of minerals.
12th	1st	Describe various optical properties of minerals.
	2nd	Explain briefly the silicate structures along with diagrams.
	3rd	Explain briefly the silicate structures along with diagrams.
13th	1st	Classify minerals.
	2nd	Classify minerals.Describe mineralogy and physical properties of olivine group of minerals.
	3rd	INTERNAL - II
14th	1st	Describe mineralogy and physical properties of Feldspar group of minerals.
	2nd	Describe mineralogy and physical properties of Pyroxene group of minerals.
	3rd	Describe mineralogy and physical properties of quartz group of minerals.
	1st	REVISION, Doubt clearing class (DC)

15th	2nd	REVISION, Doubt clearing class (DC)
	3rd	REVISION

RECOMMENDED BOOKS

SL NO.	Name of Author	Title of Books
1	Perbin Singh	Engineering Geology
2	P.k. Mukharjee	The text book of Geology
	G.B. Mohapatra	
3	S. K. GHOSH	Structural Geology
4	G.B. Mohapatra	Physical Geology
5	Dana's	Text book of Mineralogy
	Rutley's	Elements of Mineralogy
6	B.S. Rathhore	Basic of Crystallography and Mineralogy


09/09/25
Signature of Faculty