

### LESSON PLAN (WINTER-23)

**Discipline: Mining Engineering**

**Semester: 3<sup>rd</sup> semester**

**Name of the Teaching Faculty: MRS.SAMAPIKA DASH**

**Subject: Mine Geology - I**  
**Sub code: Th.3**

**No of days /week class allotted: 02/week**

**Semester from Date: 01/08/2023 to 30/11/2023**  
**No of weeks: 19**

**Month**   **Week**   **No of periods available**

**Class Day**

**Theory topics to be covered**

AUGUST

1<sup>st</sup>

01P

02.08.2023

**Briefing about the Syllabus.**  
Introduction about Geology and different branches of geology and scope of Geology for Mining Engineering

2<sup>nd</sup>

02P

07.08.2023

**Elements of Mineralogy**  
Minerals and rock forming and ore forming minerals with examples  
Physical properties of minerals  
Color, streak, luster, Hardness, Moh's hardness scale,

09.08.2023

Physical properties of minerals;  
Cleavage, fracture, tenacity, habit, odor, feel.

3<sup>rd</sup>

02P

14.08.2023

Physical properties of minerals;  
Specific gravity, fluorescence, phosphorescence, magnetism.

16.08.2023

**Petrology**  
Rocks and minerals with Example.  
Igneous rocks and its types & how Igneous Rocks are formed?

4<sup>TH</sup>

2P

21.08.2023

Sedimentary rocks and its types & how Sedimentary rocks are formed?

23.08.2023

Metamorphic rocks and its types. & How Metamorphic Rocks formed?

5<sup>TH</sup>

1P

28.08.2023

Texture and Various textures found in Igneous rocks

6<sup>TH</sup>

NA

NA

NA

7<sup>TH</sup>

01

04.09.2023

Porphyritic and poikilitic texture with diagram.

8<sup>TH</sup>

02P

11.09.2023

Description of Various structures found in Igneous rocks.

13.09.2023

**Monthly Test-01**

9<sup>TH</sup>

1P

18.09.2023

Description of Various structures found in sedimentary rocks.

10<sup>TH</sup>

2P

25.09.2023

**Monthly test results and discussion.**

27.09.2023

Description of Various structures found in metamorphic rocks.

SEPTEMBER

OCTOBER

11 <sup>TH</sup>	1P	4.10.2023	<b>Structural Geology</b> Introduction to structural Geology and Description of Outcrop, bed, Dip, Strike, True dip and apparent dip with diagram
12 <sup>TH</sup>	02P	09.10.2023	<b>Internal Assessment/Class Test</b>
13 <sup>TH</sup>	02P	11.10.2023	
13 <sup>TH</sup>	02P	16.10.2023	
		18.10.2023	Fold and different parts of fold with diagram.
14 <sup>TH</sup>	1P	30.10.2023	<b>Revision and Doubt Clearing class</b> Description of different types of fold. <ul style="list-style-type: none"> <li>• Types based on symmetry of fold</li> <li>• Based on Thickness of fold</li> </ul> Types based on appearance in cross-section

NOVEMBER

15 <sup>TH</sup>	01P	01.11.2023	Description of different types of fold. <ul style="list-style-type: none"> <li>• Based on interlimb angle</li> <li>• Based on Attitude of fold</li> </ul> Special types of fold.
16 <sup>TH</sup>	02P	06.11.2023	Faults and terminology of fault
		08.11.2023	Description of different types of Faults with diagram. Recognition of faults in the field.
17 <sup>TH</sup>	02P	13.11.2023	Joints and its types.
		15.11.2023	Unconformity and how the unconformities have been formed in nature.
18 <sup>TH</sup>	02P	20.11.2023	Study of different types of unconformities <ul style="list-style-type: none"> <li>• Angular Unconformity</li> <li>• Disconformity</li> <li>• Para unconformity</li> <li>• Non -conformity</li> </ul>
		22.11.2023	<b>Revision &amp; Previous year question &amp; Answer discussion.</b>
19 <sup>TH</sup>	01P	29.11.2023	<b>VERY SIMILAR TEST/MOCK TEST</b>

*Dash*  
31/7/2023

**PREPARED BY**  
**SAMAPIKA DASH**  
**SENIOR LECTURER**  
**MATH AND SC. (GEOLOGY)**  
**OSME, KEONJHAR**

*HOD*  
31/7/23

**MINING ENGINEERING**  
**OSME, KEONJHAR**

*Principal*  
31.7.23

**PRINCIPAL**  
**OSME, KEONJHAR**