

ARYAN SCHOOL OF ENGINEERING & TECHNOLOGY, BHUBANESWAR

Discipline:	Mining Engg.	Semester: 3rd	Name of the Teaching Faculty Subhrajit Khuntia	
Subject:	Mine Geology-I	No of Days/Week Class Allotted: _____	Semester From date: 01, 10, 21 To date 18, 01, 22	No. of Weeks:
WEEK	Class Day	Theory Topics		
1st	1st	Introduction to Geology		
	2nd	Origin of the Earth, Age of Earth		
	3rd	Internal Constitution of the Earth.		
	4th	Surface-Features of the Globe.		
	5th			
2nd	1st	Weathering & types of weathering		
	2nd	Factors affecting weathering, Agents of weathering.		
	3rd	Exfoliation, crystal growth, Frost Shattering.		
	4th	Chemical weathering (Oxidation, Carbonation)		
	5th			
3rd	1st	Biological weathering (Bio-physical, chemical)		
	2nd	Erosion (Transportation, Deposition)		
	3rd	Geological Action of River.		
	4th	Mechanical Erosion (Abrasion, Attrition)		
	5th			

4 th	1st	Hydraulic Action (Abrasion, Attrition, Cavitation)
	2nd	wind erosional features, Deposition features.
	3rd	wind Deposition (Sand Dunes, Loess, sea low mud)
	4th	Chemical Erosion, bacteria abstracting CE.
	5th	
5 th	1st	Difference bet ⁿ Glacier & Iceberg.
	2nd	Erosional & depositional features produced by Glacier.
	3rd	⊙ Moraine, Its formation, Types of moraine.
	4th	Complete revision of the physical geology.
	5th	
6 th	1st	Description of Rock & mineral
	2nd	Identification & Discrimination of Rock & mineral.
	3rd	Igneous rock, Its formation, examples
	4th	Sedimentary rock, Its formation, example
	5th	

Discipline: Mining		Semester: 3rd	Name of the Teaching Faculty Subhradut Kumar	
Subject: Mine Geology		No of Days/Week Class Allotted: _____	Semester From date: _____ To date _____	No. of Weeks: _____
WEEK	Class Day	Theory Topics		
7 th	1st	metamorphic rock, Its formation, example		
	2nd	various texture & structure bound on Igneous rock.		
	3rd	do do		
	4th	Important structures of Sedimentary rock		
	5th			
8 th	1st	Illustration of structure & texture of Sedimentary rock		
	2nd	Structure & texture of metamorphic rock.		
	3rd	do do		
	4th	Pictures of various structure & textures of rock through power point presentation		
	5th			
9 th	1st	Hade, Dip, Strike, Throw, Heave, net slip.		
	2nd	True Dip & Apparent dip		
	3rd	Strike, Hinge, Axial plane, Anticline.		
	4th	Fold, (Crest, Trough, crystal planes)		
	5th			

WEEK	Class Day	Theory Topics
10 th	1st	Limb, Interlimb Angle, Inflection Point.
	2nd	Types of Fold (Antiform, Synform)
	3rd	Anticline, Syncline, Anticlinorium, Synclinorium
	4th	monocline, structural Terrace
	5th	
11 th	1st	Symmetric Fold, Asymmetric Fold.
	2nd	Recumbent Fold, Overturned Fold,
	3rd	Based on Interlimb Angle (Isoclinal fold, Tight fold, closed fold, open fold)
	4th	Based on Thickness (parallel fold, similar fold, Supratenuous fold)
	5th	
12 th	1st	Based on Attitude (plunging folds, non plunging folds, Chevron fold, Fan folding)
	2nd	Faults, Terminology, Hanging wall & Foot wall.
	3rd	Types of Fault (Normal Fault, Reverse fault)
	4th	Dip fault, Strike fault, Bedding fault, oblique fault, Tear fault)
	5th	

Discipline:	mining	Semester: 3rd	Name of the Teaching Faculty: Subhransu Kumar	
Subject:	mine geology	No of Days/Week Class Allotted: _____	Semester From date: _____ To date: _____	No. of Weeks: _____
WEEK	Class Day	Theory Topics		
13th	1st	unconformity, stages of unconformities, types.		
	2nd	_____ do _____		
	3rd	Joints, types of joints (tension, shear, strike, DIP, oblique)		
	4th	_____ do _____		
	5th	_____ do _____		
14th	1st	Introduction class for crystal.		
	2nd	one dimensional crystal structures.		
	3rd	Two dimensional crystal structures.		
	4th	Examples of symmetry axes of three dimensional figures.		
	5th	_____		
15th	1st	Symmetry Various polygonal structures of mineral.		
	2nd	Symmetry axes of a set of points.		
	3rd	Conventional cell for the trigonal system.		
	4th	Miller indices for two dimensional crystal.		
	5th	_____		