



## ARYAN SCHOOL OF ENGINEERING & TECHNOLOGY

Discipline:	Mining Engg.	Semester: 6th	Name of the Teaching Faculty Jagan Khatol
Subject:	Mineral Dressing.	No of Days/Week Class Allotted: _____	Semester From date: 10/03/22 To date 18/6/22 No. of Weeks: _____
WEEK	Class Day	Theory Topics	
From 14/03/22 to 19/03/22	1st	Introduction to mineral dressing	
	2nd	Objective & Scope of application of mineral dressing in surface & underground mining	
	3rd	Crushers (primary, secondary, tertiary)	
	4th	Blake jaw crusher (principle, Advantages, disadvantages).	
	5th		
From 20/03/22 to 26/03/22	1st	Dodge jaw crusher (principle, Advantages, disadvantages).	
	2nd	Cylindrical crusher (working principle, diagram)	
	3rd	Cone crusher (working principle, diagram)	
	4th	Roll crusher (working principle, diagram)	
	5th		
From 27/03/22 to 02/04/22	1st	What is Grinding or milling (Tertiary crusher)	
	2nd	Ball mill operation	
	3rd	Open circuit grinding	
	4th	Close circuit grinding	
	5th		

WEEK	Class Day	Theory Topics
From 09/04/22 to 09/04/22	1st	Dry & wet grinding
	2nd	What are the procedures for size analysis.
	3rd	Use of standard screen for size analysis.
	4th	Various screening techniques employed.
	5th	
From 11/04/22 to 16/04/22	1st	Introduction to industrial screening
	2nd	Principle of Industrial Screening.
	3rd	Type of screening
	4th	Explanation of operation of classifier
	5th	
From 18/04/22 to 23/04/22	1st	Application of operation classifier
	2nd	Circuity Concentration (Introduction)
	3rd	General principles of Willy table & its operation.
	4th	Elementary idea regarding the operation figs.
	5th	

Class Day	Theory Topics
1st	Principle of Jigging
2nd	Differential acceleration
3rd	Consolidation trucking
4th	Heavy media separation (Introduction)
5th	
1st	Sink & Float separation process
2nd	Constructional feature of H.M.S
3rd	Description of various parts working on H.M.S.
4th	Magnetizing blocks & medium thickener
5th	
1st	Diverging chute, medium circulating pump.
2nd	Divided washing screen, Finished float/sink product
3rd	Flotation (Introduction, Applications)
4th	Principle of Froth Flotation
5th	

FROM 25/04/22 TO  
 30/04/20

22/11/22

WEEK	Class Day	Theory Topics
	1st	Processes of froth flotation (Roughing)
	2nd	" " " " (cleaning)
	3rd	" " " " (Scavenging)
	4th	Function of Flotation Reagents.
	5th	
	1st	Classification of Flotation Reagents.
	2nd	Flotation mechanism
	3rd	Role of collectors & Frothers, modifiers, depressants.
	4th	Flotation with petroleum Sulphonate
	5th	
	1st	Advanced Flotation techniques & Salient results on processing of Iron ores.
	2nd	Magnetic & Electrostatic separators.
	3rd	magnetic separation (Principles, uses)
	4th	Common Ferrromagnetic & paramagnetic minerals
	5th	

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WEEK	Class Day	Theory Topics
	1st	Types of m.s (wet & Dry)
	2nd	Holding type & pick up type
	3rd	Drum separator
	4th	magnetic pulley separator
	5th	
	1st	Induced roll separator
	2nd	Electrostatic separation
	3rd	Disadvantages of electrostatic separator.
	4th	Describe the application of separators in mineral dressing.
	5th	
	1st	
	2nd	
	3rd	
	4th	
	5th	