

GOVERNMENT POLYTECHNIC JAIPUR
DEPARTMENT OF MINING ENGINEERING
LESSON PLAN

Discipline: MINING	Semester: 6TH	Name of the Teaching faculty: SAAHIL EJAZ	
Subject: MH&L	No of Days/Week class allotted: 4	Semester from Date: 10/03/22	To Date: 10/06/22 <i>Extended upto 30/6/22</i>
No of weeks: 15			
Week	Class Day	Topics	
1st	1st	Introduction to surface & underground haulage system	
	2nd	Introduction to surface & underground haulage system	
	3rd	Classify underground & surface haulage system	
	4th	Classify underground & surface haulage system	
2nd	1st	State factors affecting design of a haulage system	
	2nd	State factors affecting design of a haulage system	
	3rd	Find out the capacity of a haulage system in a given production	
	4th	Find out the capacity of a haulage system in a given production	
3rd	1st	Classification of Conveyors	
	2nd	State factors affecting design of belt conveyor, cable belt conveyor and steel cord conveyors.	
	3rd	State factors affecting design of belt conveyor, cable belt conveyor and steel cord conveyors.	
	4th	Find out carrying capacity of belt conveyor, cable belt conveyor & steel cord conveyor.	
4th	1st	Find out carrying capacity of belt conveyor, cable belt conveyor & steel cord conveyor.	
	2nd	Describe constructional features of belt conveyor & cable belt conveyor	
	3rd	CLASS TEST-I	
	4th	Describe formula to calculate drive capacity of belt conveyor & cable belt conveyor.	
5th	1st	Describe formula to calculate drive capacity of belt conveyor & cable belt conveyor.	
	2nd	State different types of locomotive haulage.	
	3rd	State different types of locomotive haulage.	
	4th	Describe basic constructional features of trolley wire, compressed air, diesel & battery locomotives.	
6th	1st	Describe basic constructional features of trolley wire, compressed air, diesel & battery locomotives.	
	2nd	Describe basic constructional features of trolley wire, compressed air, diesel & battery locomotives.	
	3rd	State applicability, merits & demerits of locomotives	
	4th	State applicability, merits & demerits of locomotives	
7th	1st	Describe safety devices of diesel locomotive including flame trap around exhaust conditioner box.	
	2nd	Describe safety devices of diesel locomotive including flame trap around exhaust conditioner box.	
	3rd	Describe safety devices of diesel locomotive including flame trap around exhaust conditioner box.	
	4th	Solve numerical problems	
8th	1st	Solve numerical problems	
	2nd	INTERNAL-I	
	3rd	Classify aerial ropeways	
	4th	State applicability of aerial ropeways.	

9th	1st	Describe constructional features of bicable and twin cable ropeways.
	2nd	Describe loading, unloading & angle stations bicable & thin cable ropeways.
	3rd	Describe loading, unloading & angle stations bicable & thin cable ropeways.
	4th	Define hydraulic transportation.
10th	1st	Design the hydraulic transportation system.
	2nd	Discuss theory of hydraulic transportation of solids in mines (without derivation)
	3rd	State applicability, advantages & disadvantages of hydraulic transportation in Mines.
	4th	State applicability, advantages & disadvantages of hydraulic transportation in Mines.
11th	1st	State capability of spiral chutes.
	2nd	State capability of spiral chutes.
	3rd	State applicability, advantages & disadvantages of hydraulic transportation in Mines.
	4th	State applicability, advantages & disadvantages of hydraulic transportation in Mines.
12th	1st	CLASS TEST-II
	2nd	State capability of spiral chutes.
	3rd	Explain working principle of spiral chutes
	4th	Describe constructional features of spiral chutes
13th	1st	State installation of bore hole pump
	2nd	Explain flow of materials in bins & bunkers
	3rd	Explain flow of materials in bins & bunkers
	4th	Design bunkers & bins for a given production.
14th	1st	Design bunkers & bins for a given production.
	2nd	Discuss the Pipe line layout.
	3rd	INTERNAL-II
	4th	Previous years questions discussion.
15th	1st	REVISION/DOUBT CLEARING CLASS
	2nd	REVISION/DOUBT CLEARING CLASS
	3rd	REVISION/DOUBT CLEARING CLASS
	4th	REVISION/DOUBT CLEARING CLASS

RECOMMENDED BOOKS

SL NO.	Name of Author	Title of Books
1		Material Handling in Mines IIT Kharagpur journal
2	T.Bryson	Winning and Working of Iron Ore
3	D.J.Desmukh	E.M.T. Vol.-III

Signature of Faculty