ORISSA SCHOOL OF MINING ENGINERRING
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DEPARTMENT OF MINING ENGINEERING

LESSON PLAN

Discipline: MINING ENGINEERING			Semester: 5th	Name of the Teaching faculty: BARUN KUMAR BARIK
Subject: MOM			No of Days/Week class alloted: 4	Semester from Date: 1/08/23 To Date: 30/11/23 No of weeks: 18

Month	Week	No. Period Available	Class Day	Topics	Topics
AUGUST	1st	3	01/08/2023		UNIT 1: STRENTH OF MATERIALS AND POWER TRANSMISSIONS: Define elasticity,Hook's law,limit of propertionality, Young's Modulus, factor of saftey, lateral strain and poission's ratio.
			02/08/2023		Explain sress- strain curve for ductile materials.
			03/08/2023		Explain the effect of axial load on bar of uniform section and variable section.
	2nd	4	07/08/2023		Numerical solve
			08/08/2023		Define bending moment and shear force
			09/08/2023		State types of beam and loading.
			10/08/2023		explain shear force and diagram and bending moment diagram for: 1. cantilever with concentrated loading.
	3rd	3	14/08/2023		Numerical solve
			16/08/2023		2.cantilever with U.D.I over whole span
			17/08/2023		Numerical solve
	4th	4	21/08/2023		3.simply supported beam with concentrated loading.
			22/08/2023		Numerical solve
			23/08/2023		4.simply supported beam with U.D.I over whole span.
			24/08/2023		state bending formula, Define section modulus, Find out section modulus for beam section of simple cases.
	5th	2	28/08/2023		Define torsion and state its effect, state application of torsion formula.
			29/08/2023		explain working of : 1.shaft coupling such as hydraulic and magnetic couplings.
september	1st	3	04/09/2023		2. belt, chain and rope drive 3.simple and compound gear train
			05/09/2023		4. torque converter, state function of flywheel and governors.
			07/09/2023		explain working of watt governor,porter governor.
	2nd	4	11/09/2023		explain working of proel governor.
			12/09/2023		CLASS TEST 1
			13/09/2023		UNIT 2: ELEMENTS OF HYDRAULIC:-state various fluid properties, define pressure of fluid and pressure head
			14/09/2023		state and explain workinf principle of various pressure measuring device such as Piezometer tube.
	3rd	2	18/09/2023		state and explain continuity equation. Numerical solve
			21/09/2023		state and explain Bernoulli's theorem. Numerical solve.
	4th	4	25/09/2023		explain working of venturimeter. Numerical solve.
			26/09/2023		Define and classify orifices. State the formula for discharge for rectangular orifices. Numerical solve
			27/09/2023		define and differentiate between orifice and notch.classify notches.
			28/09/2023		state the formula for discharge through notches. .
october	1st	3	03/10/2023		Numerical solve
			04/10/2023		Numerical solve
			05/10/2023		state and explain law of fluid friction.
	2nd	4	09/10/2023		State and explain loss of head due to friction (Darcy weisbach foemula)
			10/10/2023		explain Hydraulic gradient and energy gradient.
			11/10/2023		Numerical solve
			12/10/2023		Class test 2
	3rd	4	16/10/2023		UNIT 4: INTERNAL COMBUSTION ENGINES: Introduction of engine.
			17/10/2023		explanation of different thermodynamics process
			18/10/2023		Explain various air cycles utilized in IC engines
			19/10/2023		explain Otto cycle.

	4th	2	30/10/2023		Explain diesel cycle.				
			31/10/2023		Explain working principle of 2 stroke and 4 stroke petrol and diesel engines.				
November	1ST	2	01/11/2023		Define IHP, BHP and mechanical efficiency of I/C engine				
			02/11/2023		state various application of I/C engines in Mining field.				
	2ND	4	06/11/2023		UNIT 3: COMPRESSED AIR:- explain introduction of compressed air as a power,				
			07/11/2023		classify compressor and state working principle.				
			08/11/2023		Numerical solve				
			09/11/2023		state the various methods of transmission and storage of compressed air.				
	3rd	4	13/11/2023		state and explainthe advantages of use of compressed air in mines.				
			14/11/2023		explain the working principle of pneumatic machines.				
			15/11/2023		numerical solve,				
			16/11/2023		numerical solve.				
	4th	4	20/11/2023		PREVIOUS YEAR QUESTIONS SOLVE				
			21/11/2023		PREVIOUS YEAR QUESTIONS SOLVE				
			22/11/2023		PREVIOUS YEAR QUESTIONS SOLVE				
			23/11/2023		PREVIOUS YEAR QUESTIONS SOLVE				
	5th	3	28/11/2023		PREVIOUS YEAR QUESTIONS SOLVE				
			29/11/2023		PREVIOUS YEAR QUESTIONS SOLVE				
			30/11/2023		PREVIOUS YEAR QUESTIONS SOLVE				