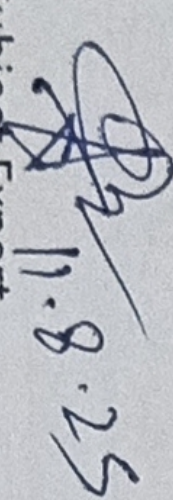


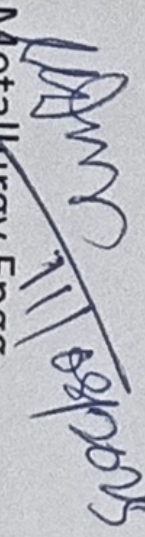
GOVT. POLYTECHNIC MAYURBHANJ LESSON PLAN OF HEAT TRANSFER, FLUID FLOW & FURNACES ACADEMIC YEAR (2025-26) WINTER				
Discipline: Metallurgy engineering.	Semester: 5th	Name of the Teaching Faculty: SUBRAT KUMAR BEHERA		
Subject : HEAT TRANSFER, FLUID FLOW & FURNACES, Course code: Th 2	No. of Days / per week class allotted : 04	Semester From date: 14.07.2025 To Date: 15.11.2025		
MONTH	Week	Day	Unit	Topics
AUGUST	2nd	1st	UNIT-1	Briefing about the Syllabus
		4th		Discuss types of fluids
		5th		Properties of fluid
		5th		Properties of fluid
	3rd	1st		State and explain Bernoulli's equation
		4th		Independence Day HOLIDAY
		5th		Independence Day HOLIDAY
		5th		Explain about orifices, Pitot tube and venturies
	4th	1st		Explain about orifices, Pitot tube and venturies
		4th		Explain about orifices, Pitot tube and venturies
		5th		Explain about orifices, Pitot tube and venturies
		5th		Define and calculate loss of head (friction loss) in straight pipes, in bends and channel with sudden enlargement and sudden contraction.
	5th	1st		Define and calculate loss of head (friction loss) in straight pipes, in bends and channel with sudden enlargement and sudden contraction.

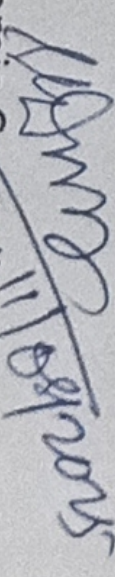
		4th	1 st Monthly Test NUAKHAI HOLIDAY Define and calculate loss of head (friction loss) in straight pipes, in bends and channel with sudden enlargement and sudden contraction. Define and calculate loss of head (friction loss) in straight pipes, in bends and channel with sudden enlargement and sudden contraction. Define and calculate loss of head (friction loss) in straight pipes, in bends and channel with sudden enlargement and sudden contraction. Birthday of Prophet Mohammed HOLIDAY Birthday of Prophet Mohammed HOLIDAY Discuss the elementary idea on different modes of heat transfer. Define and derive the Fourier's law Explain & calculate the steady state heat conduction through flat walls Define and derive the Fourier's law Explain & calculate the steady state heat conduction through flat walls Define Convection Define and differentiate between natural and forced convection State the natural and forced heat transfer co-efficient (equation only, no derivation State the Stefan Boltzmann's law Define emissivity of black bodies and grey bodies Classify the furnaces based on use, heat source and material movements.	
		5 th		
	1 st			
	4th			
	5 th			
	5 th			
	1 st			
	4th			
	5 th			
	5 th			
	2nd		UNIT-2	
		1 st		
		4th		
		5 th		
		5 th		
		5 th	UNIT-2	
		1 st		
		4th		
		5 th		
		5 th		
SEPTEMBER		5 th		

4 th	5 th	UNIT -5	Discuss on heat losses, heat balance and furnace efficiency
	5 th		Discuss on heat losses, heat balance and furnace efficiency
	1 st		Discuss on heat losses, heat balance and furnace efficiency
	4 th		DIWALI HOLIDAY
	5 th		
	5 th		Revision & Doubt Clearing Class
	5 th		Revision & Doubt Clearing Class

5th	1st	UNIT-5	Discuss on heat losses, heat balance and furnace efficiency
			Discuss on heat losses, heat balance and furnace efficiency
			2 ND Monthly Test
			Revision & Doubt Clearing Class
			Discuss on heat losses, heat balance and furnace efficiency
2nd	1st	UNIT-6	Revision & Doubt Clearing Class
			Explain the types of "waste heat recovery system such as regenerators and recuperates
			Explain the types of "waste heat recovery system such as regenerators and recuperates
			Revision & Doubt Clearing Class
			Explain the types of "waste heat recovery system such as regenerators and recuperates
3rd	1st	UNIT-6	3 RD Monthly Test
			Revision & Doubt Clearing Class
			Revision & Doubt Clearing Class
			Revision & Doubt Clearing Class
			Revision & Doubt Clearing Class


 Subject Expert
 Metallurgy Engg.


 HOD, Metallurgy Engg.
 Govt. Polytechnic Mayurbhanj


 Academic Co-ordinator
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