


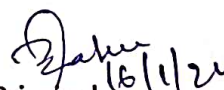
## SYNERGY POLYTECHNIC, BBSR

### The Lesson Plan

Discipline: Mechanical Engg	Semester: 4th	Name of the Teaching Faculty: Soumikh Roy
Subject: Thermal Engg II	No of Days/per week class allotted:	Semester from Date: 01/03/2024 to Date: 31/03/2024 No of Weeks:
Week	Class Day	Theory/Practical Topics
1st	1st	Formation of steam
	2nd	Representation on P-V diagram
	3rd	
	4th	
	5th	
2nd	1st	Representation on T-S, H-S diagram
	2nd	Definition of Steam
	3rd	Properties of Steam
	4th	Use of steam table & mollier chart
	5th	
3rd	1st	Use of steam table & mollier chart
	2nd	Non flow & flow process of vapour
	3rd	P-V, T-S & H-S, diagrams of steam
	4th	Solve simple numericals on steam
	5th	
4th	1st	Study of steam boilers
	2nd	Classification & types of Boiler
	3rd	Understands the Important terms for Boiler
	4th	Understands the Important parts for Boiler
	5th	
5th	1st	Comparison between fire tube & Water tube Boiler
	2nd	Description & working of Cochran boiler
	3rd	Description & working of Lancashire boiler
	4th	
	5th	

  
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Principal 16/1/24

# SYNERGY POLYTECHNIC, BBSR

## The Lesson Plan

Discipline: Mechanical Engg	Semester: 4th	Name of the Teaching Faculty: Soumikh Roy
Subject: Thermal Engg II	No of Days/per week class allotted:	Semester from Date: 01/04/2024 to Date: 30/04/2024 No of Weeks:
Week	Class Day	Theory/Practical Topics
1st	1st	Study Babcock & Wilcox Boiler
	2nd	Study Boiler mountings & accessories
	3rd	Study Carnot cycle with vapour
	4th	Derive work & efficiency of the Carnot cycle
	5th	
2nd	1st	Study of Rankine cycle
	2nd	Derive Work & Efficiency of the Rankine cycle
	3rd	Effect of Various end conditions in Rankine cycle
	4th	Reheat cycle & regenerative Cycle
	5th	
3rd	1st	Modes of Heat Transfer Conduction
	2nd	Modes of Heat Transfer Convection and Radiation
	3rd	Fourier law of heat conduction and thermal conductivity
	4th	Newton's laws of cooling
	5th	
4th	1st	Radiation heat transfer (Stefan, Boltzmann & Kirchoff's law)
	2nd	Black body Radiation
	3rd	Definition of Emissivity
	4th	Definition of absorptivity, & transmissibility
	5th	
5th	1st	
	2nd	
	3rd	
	4th	
	5th	

  
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Lesson  
Discipline  
Mechanical  
Engineering

## SYNERGY POLYTECHNIC, BBSR

### Lesson Plan

Discipline: Mechanical Engg	Semester: 4th	Name of the Teaching Faculty: Soumikh Roy
Subject: Thermal Engg II	No of Days/per week class allotted:	Semester from Date: 01/02/2024 to Date: 29/02/2024 No of Weeks:
Week	Class Day	Theory/Practical Topics
1st	1st	determine efficiencies
	2nd	Numericals on specific fuel consumption
	3rd	
	4th	
	5th	
2nd	1st	Explain functions of compressor
	2nd	Study the industrial use of compressor air
	3rd	Classify air compressor
	4th	Study Axial type compressor
	5th	
3rd	1st	Study the principle of operation of compressor
	2nd	Describe the parts of reciprocating Air compressor
	3rd	Study the working principle of reciprocating Air compressor
	4th	Study bore, stroke, pressure ratio of reciprocating Air compressor
	5th	
4th	1st	Study Volumetric efficiency of reciprocating Air compressor
	2nd	Derive the work done of single stage Air compressor
	3rd	Derive the work done of two stage Air compressor
	4th	Solve simple problems on Air compressor
	5th	
5th	1st	Brief discussion on gas & vapours
	2nd	Difference between gas & vapours
	3rd	
	4th	
	5th	

  
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# SYNERGY POLYTECHNIC, BBSR

## The Lesson Plan

Discipline: Mechanical Engg	Semester: 4th	Name of the Teaching Faculty: Soumik Roy
Subject: Thermal Engg II	No of Days/per week class	Semester from Date: 16/01/2024 to Date: 31/01/2024 No of Weeks:
Week	Class Day	Theory/Practical Topics
3rd	1st	Introduction to IC engine
	2nd	Define mechanical efficiency
	3rd	Define Indicated thermal efficiency
	4th	Calibration formula of Over all efficiency
	5th	
4th	1st	Define Relative Efficiency
	2nd	Understanding brake thermal efficiency
	3rd	Mean effective pressure of IC engine
	4th	Specific fuel consumption in IC engine
	5th	
5th	1st	Define air-fuel ratio
	2nd	Study calorific value of fuel
	3rd	
	4th	
	5th	

  
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