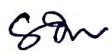


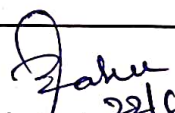
SYNERGY POLYTECHNIC, BBSR

The Lesson Plan

Discipline: Mechanical.	Semester: 3rd.	Name of the Teaching Faculty: S. I. Hazan.
Subject: Engg. Material	No of Days/per week class allotted: 4	Semester from Date: 1.2.24 to Date: 8.11.24 No of Weeks: 14.
Week	Class Day	Theory/Practical Topics
1st	1st	Introduction about Engg. Materials
	2nd	Classification of Materials, Ferrous, Non Ferrous
	3rd	Properties of Materials, Physical, Mechanical
	4th	Chemical properties and uses of Materials
	5th	
2nd	1st	Requirement of Materials depending of Performance
	2nd	Material Reliability Safety.
	3rd	Properties and types of Ferrous Materials
	4th	Low Carbon, Medium Carbon, High Carbon Steels.
	5th	Alloy
3rd	1st	Alloy steel types, Low, high, Stainless.
	2nd	Tool steel and effects of element Cr, Mn
	3rd	Class Test of chapter-1, chapter-2.
	4th	Quiz test, surprise Test.
	5th	
4th	1st	Phase diagram and cooling curves.
	2nd	Iron-Carbon diagram of Iron.
	3rd	Iron Carbon diagram of Steel.
	4th	Question related to chapter discussion.
	5th	
5th	1st	Definition of Crystal, Types of crystal.
	2nd	Ideal Crystal, Crystal Imperfections.
	3rd	Types of crystal Imperfection, Point defect.
	4th	Line defect, volume and surface defect.
	5th	


Sign of Faculty


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Principal 22/6/24

The Lesson Plan

SYNERGY POLYTECHNIC, BBSR

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Discipline:	Semester:	Name of the Teaching Faculty:
Subject:	No of Days/per week class allotted:	Semester from Date:
EM		No of Weeks:
Week	Class Day	Theory/Practical Topics
6 1st	1st	Types of Point defect and Causes.
	2nd	Types of line defect and Causes.
	3rd	Different effects of imperfection of solids
	4th	Slip and Twinning defects.
	5th	
7 2nd	1st	Effect of deformation on Properties.
	2nd	Class Test, Revision.
	3rd	Purpose of Heat Treatment on Metals.
	4th	Different Process of Heat Treatment - Annealing
	5th	
8 3rd	1st	Normalising, Hardening.
	2nd	Tempering, Stress Relieving Measures.
	3rd	Surface Hardening - Carburizing
	4th	Nitriding process.
	5th	
9 4th	1st	on steel.
	2nd	Effect of Heat Treatment Process.
	3rd	Hardenability of Steel.
	4th	Non-ferrous alloys - Aluminium
	5th	Property, usage of Duralumin, Y-alloy.
10 5th	1st	Copper Alloys - Composition, Property, Usage.
	2nd	Copper-Al, Copper-Tin, Babbit Materials
	3rd	Lead alloys,
	4th	Zinc and Nickel alloy.
	5th	

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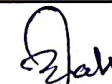
SYNERGY POLYTECHNIC, BBSR

The Lesson Plan

Discipline:	Semester: 3rd.	Name of the Teaching Faculty:
Subject: E.M.	No of Days/per week class allotted:	Semester from Date: 1.2.24 to Date: 8.11.24 No of Weeks:
Week	Class Day	Theory/Practical Topics
11 1st	1st	Low alloy materials P-91, P-22.
	2nd	High alloy material S.S., duplex, super duplex
	3rd	Bearing Materials - Types, Composition
	4th	copper based, Tin based, lead based.
	5th	
12 2nd	1st	Spring material, - Types, composition
	2nd	Properties copper based Tin based
	3rd	Lead based and cadmium based bearing
	4th	Surprise test, Quiz Test.
	5th	
13 3rd	1st	Polymer - Properties and Application
	2nd	Properties of of Elastomer
	3rd	Thermosetting and Thermoplastic polymer
	4th	- Chapter Q and A Discussion.
	5th	
14 4th	1st	Types of Ceramic - definition, Composition
	2nd	Properties and use of FRP Composites
	3rd	Ceramics - definition and types
	4th	Application and Manufacturing of ceramic.
	5th	
15 5th	1st	Semester Question Revision.
	2nd	- do -
	3rd	- do -
	4th	- do -
	5th	


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