PADMASHREE KRUTARTHA ACHARYA INSTITUTE OF ENGINEERING & TECHNOLOGY, BARGARH

LESSON PLAN

Session-2022-2023

Discipline: MECHANICAL Engg. Semester: 5th

Name of the Teaching Faculty: SOUMYA PRAKASH RATH

Scanned by TapScanner

Subject: DME No. of Days/per week class allotted 04

Semester From Date : 15.9.2022 To Date : 22.12.2022 No. of Weeks : 15

Week	Class Day	Theory /Practical Topics
1	1st	Introduction about Machine Design
	2nd	Classification of Machine Design
	3rd	Discuss about Factors governing design of Machine Elements.
	4th	Introduction about Mechanical Engineering Materials
2	1st	Discuss Physical & Mechanical Properties of Materials.
	2nd	Discuss different Types of Stress in Machine Parts.
	3rd	Discuss Factor of Safety & Stress-Strain Curve for mild steel & Cast iron.
	4th	Discuss about Different modes of Failure.
3	1st	Discuss about Stress Concentration and Method of Reducing this.
	2nd	Problems related to variable Stresses in Machine Parts.
	3rd	Describing General Procedure in Machine Design.
	4th	Previous Years Question Solving

Soumya Prakash Rath
Signature of the Faculty

Scanned by TapScanner

Subject: DME No. of Days/per week class allotted 04

Semester From Date : 15.9.2022 To Date : 22.12.2022 No. of Weeks : 15

Week	Class Day	Theory /Practical Topics
4	1st	Introduction about Joints & their classification.
	2nd	Discuss about Welded Joints and its classification.
	3rd	Advantages and Disadvantages of welded Joints over other Joints.
	4th	Design of Welded Joints for axially loaded unsymmetrical welded Section.
5	1st	Design of Eccentrically loaded welded Joints.
	2nd	Solving Numericals from Previous Years Questions on welded Joints.
	3rd	Introduction of Rivet Joint and its classification.
	4th	Describe Modes of Failure of Riveted Joint.
6	1st	Determine Strength and Efficiency of Riveted Joint.
	2nd	Design of Longitudinal and Circumferential Joint for a Boiler
	3rd	Design of Riveted Joints for Pressure vessels.
	4th	Solving Numericals from Previous Years Questions on Rivet Joints.

Soumya Prakash Rath

Signature of the Faculty

Scanned by TapScanner

Subject: DME No. of Days/per week class allotted 04

Semester From Date : 15.9.2022 To Date : 22.12.2022 No. of Weeks : 15

Week	Class Day	Theory /Practical Topics
7	1st	Introduction of Shaft, materials used and its function.
	2nd	Design of Solid and Hollow Shaft to transmit Power on Basis of Strength.
	3rd	Design of Shaft on basis of shear stress.
	4th	Design of shaft on basis of Combined Bending and Twisting moment.
8	1st	Design of shaft on basis of Rigidity.
	2nd	Discuss Standard Size of shaft as Per Indian Standard (IS)
	3rd	Introduction to key, its function & Classification and material used.
	4th	Discuss Failure of key and effect of key ways.
9	1st	Design of Rectangular Sunk key Considering failure against shear and crushing
	2nd	Design of Rectangular Sunk key using emperical relation for given diameter of shaft.
	3rd	Discuss specification of Parallel key, Sib-head key taperness as Per Indian Specification.
	4th	Solving Numericals from Previous Years Question on Design of Shaft and keys.

Soumya Prakash Rath
Signature of the Faculty

Scanned by TapScanner

Subject: DME No. of Days/per week class allotted 04

Semester From Date : 15.9.2022 To Date : 22.12.2022 No. of Weeks : 15

Week	Class Day	Theory /Practical Topics
10	1st	Introduction to Design of Shaft coupling.
	2nd	State Requirements of a good Shaft Coupling.
	3rd	Discuss about types of Shaft Coupling.
	4th	Design of sleeve and muff coupling.
11	1st	Design of clamp and compression coupling.
	2nd	Discuss about Flange coupling.
	3rd	Solving Numericals for Design of Sleeve and muff coupling
	4th	Solving Numericals for Designing clamp and compression coupling.
12	1st	Solving Numericals about Designing Flange Coupling.
	2nd	Solving Previous years Question ~~and~~ about Shaft coupling.
	3rd	Discuss about Flexible coupling.
	4th	Solving numericals of Previous years about coupling.

Soumya Prakash Rath

Signature of the Faculty

Scanned by TapScanner

Subject: DME No. of Days/per week class allotted 04

Semester From Date : 15.9.2022 To Date : 22.12.2022 No. of Weeks : 15

Week	Class Day	Theory /Practical Topics
13	1st	Introduction about Closed coil helical Spring.
	2nd	Classification of Spring
	3rd	Materials used for Helical Spring.
	4th	Discuss Standard Size of Spring wire (SWG)
14	1st	Discuss terms used in Compression Springs.
	2nd	Discuss about stresses in Helical springs of circular wire.
	3rd	Discuss about Deflection of Helical springs of circular wire.
	4th	Discuss Eccentric loading and Buckling of Compression springs.
15	1st	Discuss about Surge in springs.
	2nd	Solve numericals on Design of Closed coiled Helical spring.
	3rd	Solving Previous years Question related to Design of Closed Coil Helical compression spring.
	4th.	Previous Years Questions Discussion related to all chapter of Designing Machine Elements.

Soumya Prakash Rath.
Signature of the Faculty

Scanned by TapScanner