Discipline:- Mechanical Engg.	Semester:- 5th	Name of the Teaching Faculty:- Er. Snigdharani Sahu	
Subject:- DESIGN OF MACHINE ELEMENTS	No. Of days/week class allotted - 05	Semester from: 15.09.2022 To: 22.12.2022	
		No. Of weeks:- 15	
Week	**No. Of Period**	**Theory Topics**	
15.09.2022 To 17.09.2022	1st	Introduction to Machine Design and Classify it .	
	2nd	**Vishwakarma Puja**	
19.09.2022 To 24. 09.2022	1st	Different mechanical engineering materials used in design .	
	2nd	With their uses and their mechanical and physical properties.	
	3rd	Define working stress, yield stress, ultimate stress & factor of safety.	
	4th	Stress –strain curve for M.S & C.I.	
	5th	Modes of Failure (By elastic deflection, general yielding & fracture).	
26.09.2022 To 01.10.2022	1st	State the factors governing the design of machine elements.	
	2nd	Describe design procedure. Joints and their classification.	
	3rd	State types of welded joints . State advantages of welded joints over other joints.	
	4th	State types of riveted joints and types of rivets.	
	5th	Design of welded joints for eccentric loads	
03.10.2022 To 08.10.2022	**DURGA PUJA HOLIDAYS**		
10.10.2022 To 15.10.2022	1st	Describe failure of riveted joints.	
	2nd	Determine strength & efficiency of riveted joints.	
	3rd	Design riveted joints for pressure vessel.	
	4th	Continuation of previous topic.	
	5th	Solve numerical on Welded Joint.	
17.10.2022 To 22.10.2022	1st	Solve numerical on Reveted Joint.	
	2nd	State function of shafts. State materials for shafts.	
	3rd	Design solid & hollow shafts to transmit a given power at given rpm based on Strength and Rigidity.	
	4th	Continuation of previous topic.	
	5th	State standard size of shaft as per I.S.	

Week	No. Of period	Theory Topics
24.10.2022 To 29.10.2022	1st	**Diwali**
	2nd	State function of keys, types of keys & material of keys.
	3rd	Continuation of previous topic.
	4th	Describe failure of key, effect of key way.
	5th	Design rectangular sunk key.
31.10.2022 To 05.11.2022	1st	Considering its failure against shear & crushing.
	2nd	Design rectangular sunk key by using empirical relation for given diameter of shaft.
	3rd	State specification of parallel key, gib-head key, taper key as per I.S.
	4th	Revision the chapter
	5th	Numericals on parallel key.
07.11.2022 To 12.11.2022	1st	**Last Monday Of Kartika**
	2nd	**Kartika Purnima**
	3rd	Solve Numericals onGib-head key and tapper key.
	4th	Solve numerical on Design of Shaft and keys
	5th	Numericals
14.11.2022 To 19.11.2022	1st	Revision of types of joint.
	2nd	Design of shaft coupling.
	3rd	**Prathamastami**
	4th	Revision of the chapter
	5th	Types of coupling.
21.11.2022 To 26.11.2022	1st	Design of Sleeve or Muff-Coupling.
	2nd	Design of Clamp or Compression Coupling.
	3rd	Solve simple numerical on above.
	4th	Solve numerical on Welded Joint.
	5th	Numericals on Shaft.
28.11.2022 To 3.12.2022	1st	Revision
	2nd	Numericals on key.
	3rd	Materials used for helical spring
	4th	Standard size spring wire. (SWG)
	5th	Terms used in compression spring.

Week	No.of period	Theory Topics
5.12.2022 To 10.12.2022	1st	Revision
	2nd	Stress in helical spring of a circular wire.
	3rd	Deflection of helical spring of circular wire.
	4th	**Last Thursday of Margasira**
	5th	Revision
12.12.2022 To 17.12.2022	1st	Design of Sleeve or Muff-Coupling
	2nd	Deflection of helical spring of circular wire
	3rd	Surge in spring.
	4th	Solve numerical on design of closed coil helical compression spring.
	5th	Continue..
19.12.2022 To 24.12.2022	1st	Revision
	2nd	Revision and previous year question discussion
	3rd	Solve previous year numerical. Discuss prev. Year question.