

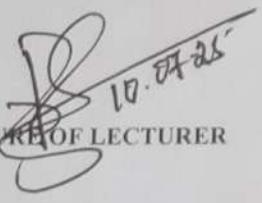
LESSON PLAN

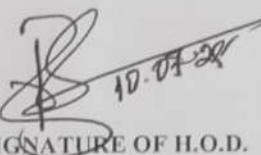
Total No. of Periods : 60

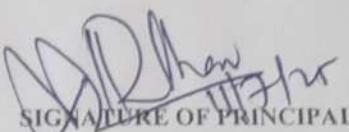
No. of Weeks : 15

CHAPTER	WEEK	TOPIC TO BE COVERED
INTRODUCTION	1ST	INTRODUCTION TO MACHINE DESIGN AND ITS CLASSIFICATION. DIFFERENT MECHANICAL ENGINEERING MATERIALS USED IN DESIGN WITH THEIR USES PHYSICAL AND MECHANICAL PROPERTIES OF ENGINEERING MATERIALS WORKING STRESS, YIELD STRESS, ULTIMATE STRESS & FACTOR OF SAFETY
	2ND	NUMERICALS ON WORKING, YIELD AND ULTIMATE STRESS. STRESS - STRAIN CURVE FOR MLS & C.I AND SALIENT POINTS MODES OF FAILURE BY ELASTIC DEFLECTION MODES OF FAILURE BY GENERAL YIELDING
	3RD	MODES OF FAILURE BY FRACTURE FAILURE OF MACHINE ELEMENTS DUE TO FATIGUE AND CREEP. FACTORS GOVERNING THE DESIGN OF MACHINE ELEMENTS. DESIGN PROCEDURE
	4TH	JOINTS AND THEIR CLASSIFICATION. TYPES OF WELDED JOINTS . ADVANTAGES OF WELDED JOINTS OVER OTHER JOINTS.
	5TH	DESIGN OF WELDED JOINTS FOR NORMAL LOADS. DESIGN OF WELDED JOINTS FOR ECCENTRIC LOADS. NUMERICALS ON DESIGN OF WELDED JOINTS TYPES OF RIVETED JOINTS AND TYPES OF RIVETS.
	6TH	FAILURE OF RIVETED JOINTS STRENGTH & EFFICIENCY OF RIVETED JOINTS. NUMERICALS ON DESIGN OF RIVETED JOINTS
	7TH	DESIGN OF RIVETED JOINTS FOR PRESSURE VESSEL. NUMERICALS ON DESIGN OF RIVETED JOINTS FUNCTION OF SHAFTS. MATERIALS OF SHAFTS
	8TH	DESIGN SOLID & HOLLOW SHAFTS TO TRANSMIT A GIVEN POWER AT GIVEN RPM BASED ON STRENGTH NUMERICALS ON DESIGN OF SOLID SHAFTS AND HOLLOW SHAFTS BASED ON STRENGTH
	9TH	DESIGN SOLID & HOLLOW SHAFTS TO TRANSMIT A GIVEN POWER AT GIVEN RPM BASED ON RIGIDITY NUMERICALS ON DESIGN OF SOLID SHAFTS AND HOLLOW SHAFTS BASED ON RIGIDITY. STANDARD SIZE OF SHAFT AS PER I.S.
DESIGN OF SHAFTS & KEYS	10TH	NUMERICAL ON DESIGN OF SHAFTS FUNCTION OF KEYS, TYPES OF KEYS & MATERIAL OF KEYS. FAILURE OF KEY, EFFECT OF KEY WAY DESIGN OF RECTANGULAR SUNK KEY CONSIDERING ITS FAILURE AGAINST SHEAR & CRUSHING AND NUMERICALS
		DESIGN RECTANGULAR SUNK KEY BY USING EMPIRICAL RELATION FOR GIVEN DIAMETER OF SHAFT AND NUMERICALS
		SPECIFICATION OF PARALLEL KEY, GIB-HEAD KEY, TAPER KEY AS PER I.S.
		NUMERICAL ON KEYS

DESIGN OF COUPLING	11TH	SHAFT COUPLING, DIFFERENCE BETWEEN CLUTCH AND COUPLING	
		REQUIREMENTS OF A GOOD SHAFT COUPLING	
DESIGN A CLOSED COIL HELICAL SPRING		ADVANTAGES OF USING SHAFT COUPLINGS	
		TYPES OF COUPLING.	
		DESIGN OF SLEEVE OR MUFF-CO尤PLING.	
		12TH	
		NUMERICALS ON DESIGN OF SLEEVE COUPLING	
		NUMERICALS ON DESIGN OF SLEEVE COUPLING	
		DESIGN OF CLAMP OR COMPRESSION COUPLING	
		NUMERICALS ON CLAMP COUPLING	
		13TH	
		MATERIALS USED FOR HELICAL SPRING.	
		STANDARD SIZE SPRING WIRE. (SWG).	
		TERMS USED IN COMPRESSION SPRING	
		STRESS IN HELICAL SPRING OF A CIRCULAR WIRE.	
		14TH	
		NUMERICALS OF STRESS ON HELICAL SPRINGS OF CIRCULAR WIRE.	
		NUMERICALS OF STRESS ON HELICAL SPRINGS OF CIRCULAR WIRE.	
		DEFLECTION OF HELICAL SPRING OF CIRCULAR WIRE.	
		NUMERICALS ON DEFLECTION OF SPRINGS	
		15TH	
		NUMERICALS ON DEFLECTION OF SPRINGS	
		SURGE IN SPRING.	
		NUMERICAL ON DESIGN OF HELICAL SPRING	
		NUMERICAL ON DESIGN OF HELICAL SPRING	


10.07.26
SIGNATURE OF LECTURER


10.07.26
SIGNATURE OF H.O.D.


10.07.26
SIGNATURE OF PRINCIPAL