LESSON PLAN FOR THE SESSION MAY - SEPTEMBER 2022-23 (Even Semester)

FACULTY NAME: Mr. SRIVATHSA H U
SUBJECT: ENGINEERING MECHANICS
SEMESTER: 2ND

SUBJECT CODE: BCIVC203
SECTION: E

Chapter Title	Class No	Date planned	Topics proposed to be covered	Portion to be covered in %	Remarks
INTRODUCTION			**Syllabus & Course Outcomes**		
MODULE 1	**Resultant of Coplanar Force System**				
	1		Basic dimensions and units, Idealisations, Classification of force system	**20**	
	2		Principle of transmissibility of a force, composition of forces, resolution of a force		
	3		Problems on coplanar concurrent force system		
	4		Problems on coplanar concurrent force system		
	5		Problems on coplanar concurrent force system		
	6		Moment, couple and related problems		
	7		Principle of moments and related problems		
	8		Problems on coplanar Non-concurrent force system		
	9		Problems on coplanar Non-concurrent force system		
	10		Problems on coplanar Non-concurrent force system		
MODULE 2	**Equilibrium of Coplanar Force System**				
	11		Equilibrium of coplanar concurrent force system, Lami's theorem, Equilibrium of coplanar parallel force system	**40**	
	12		Problems on equilibrium of coplanar concurrent system		
	13		Problems on equilibrium of coplanar concurrent system		
	14		Problems on equilibrium of coplanar concurrent system		
	15		Problems on equilibrium of coplanar concurrent system		
	16		Types of beams, types of loadings, types of supports, Equilibrium of coplanar non-concurrent force system		
	17		Problems on support reaction		
	18		Problems on support reaction		
	19		Problems on support reaction		
	20		Problems on support reaction		
MODULE 3	**Analysis of Truss & Friction**				
	21		Introduction, Classification of trusses, analysis of plane perfect trusses by the method of joints and sections	**60**	
	22		Problems on truss using method of joints		
	23		Problems on truss using method of joints		
	24		Problems on truss using method of sections		
	25		Problems on truss using method of sections		
	26		Introduction, laws of Coulomb friction, equilibrium of blocks on horizontal plane and numerical problems		
	27		Problems on blocks with Horizontal plane		
	28		Problems on blocks with Inclined planes		
	29		Problems on ladder friction		
	30		Problems on Wedge friction		

MODULE 4	**Centroid & Moment of Inertia**				
	31		Introduction, Locating the centroid of rectangle, triangle, circle, semicircle, quadrant and sector of a circle using method of integration	**80**	
	32		Problems on centroid		
	33		Problems on centroid		
	34		Problems on centroid		
	35		Problems on centroid		
	36		Introduction, Rectangular moment of inertia, polar moment of inertia, product of inertia, radius of gyration, parallel axes theorem, perpendicular axis theorem		
	37		Problems on Moment of Inertia		
	38		Problems on Moment of Inertia		
	39		Problems on Moment of Inertia		
	40		Problems on Moment of Inertia		
MODULE 5	**Kinematics & Kinetics**				
	41		Introduction, Displacement, speed, velocity, acceleration, acceleration due to gravity	**100**	
	42		Problems on linear motion		
	43		Problems on linear motion		
	44		Problems on linear motion		
	45		Problems on linear motion		
	46		Introduction, numerical examples on projectiles		
	47		Numerical examples on projectiles		
	48		Introduction, D'Alembert's principle of dynamic equilibrium and its application in-plane motion and connected bodies including pulleys		
	49		Numerical Problems		
	50		Numerical Problems		

LIST OF TEXT BOOKS

1. Bansal R. K., Rakesh Ranjan Beohar and Ahmad Ali Khan, Basic Civil Engineering and Engineering Mechanics, 2015, Laxmi Publications.
2. Kolhapure B K, Elements of Civil Engineering and Engineering Mechanics, 2014, EBPB

LIST OF REFERENCE BOOKS

1. Hibbler R. C., Engineering Mechanics: Principles of Statics and Dynamics, 2017, Pearson Press.
2. Timoshenko S, Young D. H., Rao J. V., Engineering Mechanics, 5th Edition, 2017, Pearson Press.
3. Bhavikatti S S, Engineering Mechanics, 2019, New Age International
4. Reddy Vijaykumar K and Suresh Kumar K, Engineering Mechanics, 2011, BS publication