Bhoj Reddy Engineering College for Women

Department of General Engineering

Class: I B Tech Branch: EEE

Subject: Engineering Mechanics Lectures Per Week: 4

Lecture Number	Topics to be covered	Date (s)
UNIT – 1: Introduction to Mechanics		
1.	Engineering Mechanics Introduction	01 August 2017
2.	Basic definition of Mechanics	02 August 2017
3.	Free body diagrams	03 August 2017
4.	Algebra and Trigonometric Functions	05 August 2017
5.	Parallelogram and Triangular law of forces	08 August 2017
6.	Problems in parallelogram law of forces	09 August 2017
7.	Problems in Triangular law of forces	10 August 2017
8.	Resolution of forces	12 August 2017
9.	Problem of resolution of forces	16 August 2017
10.	Inclined resolution of forces	17 August 2017
11.	Multiple forces resolution	19 August 2017
12.	Moment of force Introduction	22 August 2017
13.	Clockwise and anticlockwise moments	23 August 2017
14.	Couples and equilibrium of system of forces	24 August 2017
15.	Spatial Systems Introduction	26 August 2017
16.	Problems in Spatial Systems	29 August 2017
Unit – II: Frictions		
17.	Types of Friction	30 August 2017
18.	Limiting Friction	31 August 2017
19.	Laws of Friction	05 September 2017
20.	Static Frictions and Dynamic Frictions	06 September 2017
21.	Motion of Bodies and Wedge Screw	07 September 2017
22.	Screw jack and Differential screw jack	09 September 2017
Unit – III: Centroid and Center of Gravity & Area moments of Inertia		
23.	Introduction of Centroid and Central Gravity	12 September 2017
24.	Centroid of lines and Centroid of area	13 September 2017
25.	Centroid of Composite figures	14 September 2017
26.	Theorem of Pappus	16 September 2017
27.	Center of Gravity of Bodies and Volumes	19 September 2017
28.	Introduction to moment of Inertia	03 October 2017
29.	Polar moment of Inertia	04 October 2017
30.	Radius of gyration	05 October 2017
31.	Transfer theorem for moment of inertia	07 October 2017
32.	Moments of Inertia by integration	10 October 2017

33.	Moments of Inertia by integration	11 October 2017
34.	Moments of Inertia of composite figures	12 October 2017
Unit – IV: Mass Moment of Inertia		
35.	Introduction to mass moment of inertia of mass	14 October 2017
36.	Radius of gyration	17 October 2017
37.	Mass moment of inertia of bodies	19 October 2017
38.	Parallel axis theorem	21 October 2017
39.	Transfer Formula for mass moments of inertia	24 October 2017
40.	Mass moment of Inertia by integration	25 October 2017
41.	Mass moment of Inertia by integration	26 October 2017
42.	Mass moment of Inertia of composite bodies	28 October 2017
43.	Mass moment of Inertia of composite bodies	31 October 2017
Unit – V: Kinetics		
44.	Kinetics of a particle	01 November 2017
45.	D' Alemberts Principle – motion in a curved path	02 November 2017
46.	Introduction to work	07 November 2017
47.	Work-Energy equations	08 November 2017
48.	Work, energy and power	09 November 2017
49.	Principle of conservation of energy	11 November 2017
50.	Kinetics of rigid body in translation	14 November 2017
51.	Rotation – work done	15 November 2017
52.	principle of work – energy	16 November 2017
53.	Impulse and Momentum	18 November 2017
54.	Revision of Unit 1 and 2	21 November 2017
55.	Revision of Unit 3,4 and 5	22 November 2017

Text Books:

1. Engineering Mechanics – Pakirappa
2. Engineering Mechanics – N H Dubey

Name of the faculty: N. Ravinder Reddy

Signature of the faculty:

Name and signature of Head of the Department: P. Anagha Deshpande