Course :- L & AT

Class : - Second Year (Autonomous)

Course Outcome

CO 1 **Find** Laplace transform of the given function. (BL-I)

CO 2 **Make Use of** complex number to find roots, separate complex quantities and establish relation between circular and hyperbolic functions. (BL-III)

CO 3 **Apply** the matrix technique (Linear algebra) to find solutions of system of linear equations arising in many engineering problem.(BL-III)

CO 4 **Select** and use appropriate probability distribution to find probability. (BL-III)
CO 5 **Solve** higher order linear differential equations and apply them in electric and mechanical system. (BL-III)

CO 6 **Apply** Inverse Laplace transforms to initial value problems. (BL-III)

Mapping of Course Outcomes with Program Outcomes

CO	PO 1	PO2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO 10	PO 11	PO 12
CO1	2	1	-	-	-	-	-	-	-	-	-	-
CO2	2	1	-	-	-	-	-	-	-	-	-	-
CO3	2	1	-	-	-	-	-	-	-	-	-	1
CO4	2	1	-	-	-	-	-	-	-	-	-	1
CO5	2	1	-	-	-	-	-	-	-	-	-	-
CO6	2	1	-	-	-	-	-	-	-	-	-	-
Average	2	1	-	-	-	-	-	-	-	-	-	1

Mapping of Course Outcomes with Program Specific Outcomes

CO	PSO 1	PSO 2	PSO 3
CO1	-	1	-
CO2	-	-	-
CO3	1	-	-
CO4	-	-	1
CO5	1	-	-
CO6	-	1	-
Average	1	1	1

Course:-Strength of Materials

Class : - Second Year (Autonomous)

Course Outcomes

CO1: Define the concept of mechanical stress-strain, bending, and deflection of beam, thin shells, principal stresses, and torsion, strain energy.

CO2: Illustrate stress-strain relationship and elastic constants, pure bending, Mohr's theorem, shear force and bending moment diagram, circumferential and longitudinal stresses, direct and bending stress, torsion equation, Castigliano's theorem and strain energy due to various loads.

CO3: Solve problems of stress in simple and compound bars, shear force, and bending moment diagram, stress in thin shells, stress in an oblique plane and combined stresses, stress due to torsion and strain energy due to various loading.

CO4: Analyze the volumetric stresses in bars, slope and deflection of beam, core of section, eccentrically loaded short struts and torsion moment diagram

CO5: Determine the temperature stresses and strains, slope and deflection of beam using various methods, shear stresses in beams, volumetric strains in thin shells and stresses in shaft due to combined effect of torsion and bending.

CO6: Discuss the concept of surface stresses, bending of beam with composite cross section, effect of internal fluid pressure on thin shells, Mohr's circle for two dimensional stresses, effect of equivalent torque on shaft and Castigliano's theorem.

Mapping of Course Outcomes with Program Outcomes

CO No.	PO 1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO 1	3	-	-	-	-	-	-	-	-	-	-	3
CO 2	3	-	-	-	-	-	-	-	-	-	-	2
CO 3	3	3	3	-	-	-	-	-	-	-	-	-
CO 4	3	3	-	-	-	-	-	-	-	-	-	-
CO 5	3	3	3	-	-	-	-	-	-	-	-	-
CO 6	3	3	3	-	-	-	-	-	-	-	-	-
Avg.	3	3	3	-	-	-	-	-	-	-	-	2.5

Mapping of Course Outcomes with Program Specific Outcomes

CO No.	PSO 1	PSO 2	PSO 3
CO 1	-	-	-
CO 2	-	-	-
CO 3	3	-	-
CO 4	-	-	-
CO 5	3	1	-
CO 6	3	-	-
Avg.	3	1	-

Class : S.Y. Mechanical Engineering

Course: Fluid Mechanics and Fluid Machines

Course Outcomes

CO1	Describe the fluid and flow properties of fluids.
CO2	Apply conservation laws to fluid flow problems in engineering applications
CO3	Classify the fluid flow and hydraulic Machines
CO4	Compute the Discharge Major and Minor losses and forces exerted by the jet in various conditions.
CO5	Design the working proportions of hydraulic machines.
CO6	Evaluate the performance of hydraulics machines with operating conditions

CO-PO-PSO Mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2	PSO3
CO1	3	-	2	2	--	--	--	--	--	--	--	2	--	2	--
CO2	3	2	2		--	--	--	--	--	--	--	-	--	2	--
CO3	3	1	3	2	2	--	--	--	--	--	--	1	--		--
CO4	3	1	3	2	--	--	--	--	--	--	--	2	--	2	--
CO5	3	2	2	-	--	--	--	---	---	--	--	2	1	1	--
CO6	2	2		3	2	--	--	--	--	--	--	2	--	2	---
Avg	2.83	1.6	2.4	2.25	2.0	--	---	----	--	--	--	1.8	1	1.8	--

Course:-Manufacturing Process

Class : - Second Year (Autonomous)

Course Outcomes

CO1: Recall classification, advantages, disadvantages and applications of various manufacturing processes.

CO2: Explain the working principle of different conventional and unconventional manufacturing processes.

CO3: Describe construction, working and specifications of machine tools required for manufacturing.

CO4: Identify process variables affecting the product quality in manufacturing processes.

CO5: Choose the appropriate manufacturing processes for producing a given component.

CO6: Calculate machining time of turning, drilling and milling operations for producing given component

Mapping based on content of COs contributed to attain POs

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3											
CO2	1		3									
CO3	3									1		
CO4	3		2									
CO5	1		3									
CO6	3											
Avg.	2.33	-	2.66							1		

Mapping of Course Outcomes with Program Specific Outcomes

COs	PSO1	PSO2	PSO3
CO1			3
CO2			3
CO3			3
CO4			3
CO5			3
CO6			3
Average			3

Course:-Metrology and Quality Control

Class : - Second Year (Autonomous)

CO No.	Statement
CO 1	Recall the basics knowledge of metrology and measuring devices.
CO 2	Explain different linear and angular measuring precise instruments and apply the acquired knowledge for the accurate and precise measurement.
CO 3	Apply knowledge of various tools and techniques used to determine geometry and dimensions of components to produce quality products.
CO 4	Analyze the data of measurement for understanding the concept of quality and Statistical Quality Control.
CO 5	Examine the deviation and surface finish of the measured parts with measuring tools.
CO 6	Discuss the concept of Quality, principles of Statistical Quality Control, seven quality control tools and acceptance sampling

Mapping based on content of COs contributed to attain POs

COs	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO1	3	2		1	1							
CO2	1	2	1	2								
CO3		1	3	1	2							
CO4	1	2	1	2								
CO5			3									
CO6		3		1								

Mapping of Course Outcomes with Program Specific Outcomes

CO	PSO1	PSO2	PSO3
CO1	-	-	-
CO2	-	-	1
CO3	-	-	3
CO4	-	-	3
CO5	-	-	1
CO6	-	-	-
Average	-	-	-
Mapping Strength	-	-	1.33

Course:- **Constitution Of India**

Class : - Second Year (Autonomous)

COURSE OUTCOMES

At the end of the course students will be able to...

CO1 - Understand the meaning and importance of Constitution

CO2 – Explain the importance of Preamble of the Indian Constitution and its significance.

CO3 - Explain the Salient (Outstanding) features of Indian Constitution.

CO4 - Identify the importance of fundamental rights as well as fundamental duties.

CO5 - Explain the uses of directive principles of state policy.

CO6 – Explain the structure and functioning of Union and state executives and election commission.

Mapping based on content of COs contributed to attain POs

CO No.	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO 1	-	-	-	-	-	3	-	3	-	-	-	-
CO 2	-	-	-	-	-	3	-	3	-	-	-	-
CO 3	-	-	-	-	-	3	-	3	-	-	-	-
CO 4	-	-	-	-	-	3	-	3	-	-	-	-
CO 5	-	-	-	-	-	3	-	3	-	-	-	-
CO 6	-	-	-	-	-	3	-	3	-	-	-	-