

THEORY OF MACHINE
4th semester

Sl. No.	Lect. No.	Module	Lecture Details	Left Date	Status
1.	1/1	Simple Mechanism	Link kinematic chain, Mechanism Machine	14/02/23	Completed
2.	1/2	— do —	Link, kinematic chain, Mechanism Machine	15/02/23	Completed
3.	1/3	— do —	Inversion, four bar link Mechanism and its inversion	16/02/23	Partial Completed
4.	1/4	— do —	Inversion, four bar link Mechanism and its inversion	17/02/23	Completed
5.	1/5	— do —	Lower pair and higher pair	21/02/23	partial Completed
6.	1/6	— do —	Lower pair and higher pair	22/02/23	Completed
7.	1/7	— do —	Com and Followers	23/02/23	Partial Completed
8.	1/8	— do —	Com and Followers	24/02/23	Completed
9.	2/1	Friction	Friction between nut and Screw for Square thread, Screw Jack	28/02/23	Partial Completed
10.	2/2	— do —	Friction between nut and Screw for Square thread Screw Jack	1/03/23	Completed
11.	2/3	— do —	Bearing and its Classification, Description of roller, needle roller & ball bearings	2/03/23	Partial Completed
12.	2/4	— do —	Bearing and its Classification, Description of roller, needle roller & ball bearings	3/03/23	Completed

Exp. Log. Module

Lecture Details

Update

Status

13.	2/5	Friction	Torque transmission in flat pivot & conical pivot bearings	1/03/23	Partial
14.	2/6	do	Torque transmission in flat pivot & conical pivot bearings.	10/03/23	Completed
15.	2/7	do	Flat collar bearings of single and multiple types.	14/03/23	Partial
15.	2/8	do	Flat collar bearings of single and multiple types.	15/03/23	Completed
17.	2/9	do	Torque transmission for single and multiple clutches.	16/03/23	Partial
18.	2/10	do	Torque transmission for single and multiple clutches.	17/03/23	Completed
19.	2/11	do	Working of simple frictional brakes.	21/03/23	Partial
20.	2/12	do	Working of simple frictional brakes, Working of Absorption type of dynamometer	22/03/23	Completed
21.	3/1	Power Transmission	Concept of power transmission	23/03/23	Completed
22.	3/2	do	Type of drives, belt gear and chain drive.	24/03/23	Completed
23.	3/3	do	Computation of velocity ratio length of belts (open and cross) with and without slip.	28/03/23	Partial
24.	3/4	do	do	29/03/23	Completed

Sy. No.	Lect. No.	Module	Lecture Details	Next Date	Status
1	25	3/5 Power Transmission	Ratio of belt tensions, Centrifugal tension and critical tension.	31/03/23	Completed
2	26	3/6	Power transmitted by the belt.	01/04/23	Completed
3	27	3/7	Determine belt thickness and width for given permissible stress for open and crossed belt considering centrifugal tension.	05/04/23	Partial Completed
4	28	3/8	do	06/04/23	Completed
5	29	3/9	V-belts and V-belts Pulleys.	11/04/23	Completed
6	30	3/10	Concept of Crowning of Pulleys.	12/04/23	Completed
7	31	3/11	Gear drives and its terminology.	13/04/23	Completed
8	32	3/12	Gear drives (Gear trains, Working Principle of simple, Compound, reverted and epicyclic gear trains.	18/04/23	Completed
9	33	4/1	Function of Governor and Flywheel	17/04/23	Completed
10	34	4/2	Classification of governor	20/04/23	Completed
11	35	4/3	Working of Watt, Porter, Proell and Hartnell governors.	21/04/23	Partial Completed
12	36	4/4	do	25/04/23	Completed
13	37	4/5	Conceptual explanation of Sensitivity and isochronisms. stability.	26/04/23	Partial Completed



Sl. No.	Module	Lecture Details	Next Date	Status
38.	Governors and flywheel	Conceptual explanation of sensitivity, stability and isochronisms.	27/04/23	Complete
39.	do	Function of flywheel.	28/04/23	Partial Complete
40.	do	do	25/123	Complete
41.	do	Comparison between flywheel & governor.	31/5/23	Partial Complete
42.	do	do	4/5/23	Complete
43.	do	Fluctuation of energy and Coefficient of speed.	9/5/23	Partial Complete
44.	do	do	11/5/23	Complete
45.	Balancing of Machine	Concept of static and dynamic balancing.	15/5/23	Partial Complete
46.	do	do	15/5/23	Complete
47.	do	Static balancing of rotating parts.	15/5/23	Complete
48.	do	Principles of balancing of reciprocating parts.	15/5/23	Partial Complete
49.	do	do	10/5/23	do
50.	do	Causes and effect of Unbalance	15/5/23	P.L.C
51.	do	do	16/5/23	P.L.C
52.	do	Difference between static and dynamic balancing	11/073	P.L.C

Syr. V. No.	Module	Lecture Details	Lect. Date	Status
53. 6/1	Vibration of Machine parts	Introduction to Vibration and related terms (Amplitude, time period and frequency, cycle)	11/5/23	P.C
54. 6/2	-do-	-do-	12/5/23	P.C
55. 6/3	-do-	Classification of Vibration.	15/5/23	P.C
56. 6/4	-do-	-do-	16/5/23	P.C
57. 6/5	-do-	Basic Concept of natural, forced & damped Vibration.	15/5/23	P.C
58. 6/6	-do-	-do-	17/5/23	P.C
59. 6/7	-do-	Torsional and longitudinal vibration	17/5/23	P.C
60. 6/8	-do-	Causes & remedies of Vibration.	17/5/23	P.C

THIRD SEMESTER
THERMAL ENGINEERING



Lect. No. Module Lecture Date Lecture Status

1	1/1	Performance of I.C engine.	Define Indicated thermal efficiency,	14/02/23	Completed
2	1/2	—do—	Define Relative thermal efficiency, brake efficiency.	15/02/23	Completed
3	1/3	—do—	Define overall efficiency, Mean effective Pressure & specific fuel consumption.	17/02/23	Completed
4	1/4	—do—	Define air-fuel ratio & calorific value of fuel.	21/02/23	Partial Completed
5	1/5	—do—	Define air-fuel ratio & calorific value of fuel	23/02/23	Completed
6	1/6	—do—	Work out Problems to determine efficiencies & specific fuel consumption.	24/02/23	Partial Completed
7	1/7	—do—	Work out Problems to determine efficiencies & specific fuel consumption.	25/02/23	Partial Completed
8	1/8	—do—	Work out Problems to determine efficiencies & specific fuel consumption	28/02/23	Completed
9	1/9	Air compressor	Explain Functions of Compressor & industrial use of compressor air	1/03/23	Partial Completed
10	1/10	—do—	—do—	2/03/23	Completed
11	1/11	—do—	Classify air compressor & principle operation.	4/03/23	Partial Completed
12	1/12	—do—	—do—	9/03/23	Completed

Lecture Details

Lecture Status
Date

Sl. No.	Topic	Date	Status
13	Air Compression Describe the parts and Working Principle of reciprocating Air compressor.	11/03/23	Partial Completed
14	do	14/03/23	Completed
15	do Explain the terminology of reciprocating compressor such as bore, stroke pressure ratio free air delivered & Volumetric efficiency.	15/03/23	Partial Completed
16	do	16/03/23	Completed
17	do Derive the Work done of single stage & two stage compressor with and without clearance.	18/03/23	Partial Completed
19	do	21/03/23	Partial Completed
19	do Derive the Work done of single stage & two stage compressor with and without clearance.	22/03/23	Completed
20	do Solve simple problems (without clearance) (only)	23/03/23	Completed
21	Properties of steam	25/03/23	Completed
22	do Formation of steam.	28/03/23	Partial Completed
23	do	29/03/23	Completed
24	do Representation on P-V, T-S, H-S, T-H diagram.	04/04/23	Partial Completed
25	do	05/04/23	Completed

Lect No.	Module	Lecture Details	Lecture Date	Status
36	do	Definition & Properties of steam.	6/04/23	Partial Completed
37	do	do	8/04/23	Completed
38	do	Use of steam table & mollier chart for finding unknown properties.	10/04/23	Partial Completed
39	do	do	11/04/23	Completed
40	do	Non Flow & Flow process of Vapour.	12/04/23	Completed
41	do	P-V, T-S & H-S diagram.	15/04/23	Completed
42	do	Determine the changes in properties & solve simple numerical.	18/04/23	Completed
43	Steam Generator	Classification & types of Boiler	19/04/23	Partial Completed
44	do	do	20/04/23	Completed
45	do	Important terms for Boiler	25/04/23	Completed
46	do	Comparison between fire tube & water tube Boiler.	26/04/23	Completed
47	do	Description & Working of Common boiler (Cochran, Lancashire, Babcock & Wilcox Boiler)	27/04/23	Partial Completed
48	do	do	29/04/23	Partial Completed
49	do	do	1/05/23	Partial Completed
50	do	do	3/05/23	Completed

Sl. No.	Topic	Module	Lecture Details	Sheet Date	Status
41	7/9	do	Boiler Draught (forced, induced & balanced)	04/15/23	Partial
42	7/10	do	do	04/05/23	Complete
43	7/11	do	Boiler mountings & accessories.	04/15/23	Partial
44	7/12	do	do	04/15/23	Complete
45	5/1	Steam Power cycles	Carnot cycle with Vapour.	09/15/23	Completed
46	5/2	do	Derive work & efficiency of the cycle	09/15/23	Complete
47	5/3	do	Rankine cycle. Representation in P-V, T-s & h-s diagram. Derive work & efficiency.	09/15/23	Completed
48	5/4	do	Derive work & efficiency	10/15/23	Completed
49	5/5	do	Effect of various conditions in Rankine cycle.	10/15/23	Complete
50	5/6	do	Reheat cycle & regenerative cycle	11/15/23	do
51	5/7	do	Solve simple numerical on Carnot vapour cycle & Rankine cycle.	11/15/23	do
52	5/8	do	do		
53	6/1	Heat Transfer	Modes of Heat Transfer (Conduction, Convection, Radiation)	11/15/23	do
54	6/2	do	do	12/15/23	do
55	6/3	do	Fourier law of heat conduction and thermal conductivity (k)	12/15/23	do
56	6/4	do	Newton's laws of cooling.		

Lect No.	Module	Lecture Details	Lect Date	Status
57	Heat Transfer	Radiation heat transfer (Stefan, Boltzmann & Kirchoff's law)	15/5/23	C
58	do	do		
59	do	Black body Radiation,	11/7/23	
60	do	Definition of emissivity, absorptivity, & transmissibility.	21/5/23	

FIELD
SEMESTER
MECHANICS

Lecture Details

Sr No	Lecl No	Module	Lecture Details	Date	Status
1	1/1	Properties of fluid	Define fluid	14/02/23	Completed
2	1/2	-do-	Description of fluid properties like Density,	15/02/23	Completed
3	1/3	-do-	Specific Weight,	16/02/23	Completed
4	1/4	-do-	Specific gravity,	17/02/23	Completed
5	1/5	-do-	Specific volume and Solve.	21/02/23	Completed
6	1/6	-do-	Definition and Units of Dynamic viscosity, kinematic viscosity,	22/02/23	Partial Completed
7	1/7	-do-	-do-	23/02/23	Completed
8	1/8	-do-	Definition and Units of Surface tension Capillary phenomenon.	24/02/23	Completed
9	2/1	Fluid Pressure and its Measurements	Definitions and units of fluid pressure pressure intensity and pressure head.	25/02/23	Partial Completed
10	2/2	-do-	-do-	1/03/23	Completed
11	2/3	-do-	Statement of pascal's Law.	2/03/23	Partial Completed
12	2/4	-do-	-do-	3/03/23	Completed
13	2/5	-do-	Concept of atmospheric pressure, gauge pressure, vacuum pressure and absolute pressure	9/03/23	Partial Completed
14	2/6	-do-	-do-	10/03/23	Completed

Sr No	date	Module	Lecture Details	Lecture Date	Status
15	2/7	—do—	Pressure Measuring instruments Manometers	11/03/23	Complete
16	2/8	—do—	Bourdon tube pressure gauge and Solve simple problems on Manometer.	15/03/23	Complete
17	3/2	Hydrostatic	Definition of Hydrostatic Pressure	16/03/23	Complete
18	3/2	—do—	Total pressure and Centre of Pressure on immersed bodies (Horizontal and Vertical Bodies)	17/03/23	Partial Complete
19	3/3	—do—	—do—	21/03/23	Complete
20	3/4	—do—	Solve Simple Problems.	22/03/23	Complete
21	3/5	—do—	Archimedes principle, Concept of buoyancy	23/03/23	Complete
22	3/6	—do—	Meta center and Metacentric height	14/03/23	Complete
23	3/7	—do—	Concept of floatation	28/03/23	Partial Completed
24	3/8	—do—	—do—	29/03/23	Complete
25	4/1	Kinematics of flow	Types of fluid flow.	04/04/23	Complete
26	4/2	—do—	Continuity equation	5/04/23	Partial Complete
27	4/3	—do—	—do—	6/04/23	Complete
28	4/4	—do—	Bernoulli's theorem	11/04/23	Partial Complete
29	4/5	—do—	—do—	12/04/23	Complete

Status	Sl. No	Topic	Module	Def No	Lecture Details	Subject	Date	Status
Completed	30	kinematics of flow		7/6	Applications and limitations of Bernoulli's theorem		13/04/23	Completed
Completed	31	-do-		4/7	Solve simple problems		18/04/23	Partial completed
Completed	32	-do-		4/8	-do-		19/04/23	Completed
Completed	33	orifices, notches & Weirs		5/1	Define orifice		20/04/23	Completed
Partial completed	34	-do-		5/2	Flow through orifice		21/04/23	Completed
Completed	35	-do-		5/3	Orifices Coefficient & the relation between the orifice coefficients		25/04/23	Partial completed
Completed	36	-do-		5/4	-do-		26/04/23	Completed
Completed	37	-do-		5/5	Classifications of notches & Weirs		27/04/23	Completed
Partial completed	38	-do-		5/6	Discharge over a rectangular notch or Weir		28/04/23	Partial completed
Completed	39	-do-		5/7	Discharge over a triangular notch or Weir		21/05/23	Completed
Completed	40	-do-		5/8	Simple problems on above		31/05/23	Completed
Partial completed	41	Flow through pipe		6/1	Definition of pipe		4/05/23	Completed
Completed	42	-do-		6/2	Loss of energy in pipe		9/05/23	Partial completed
Partial completed	43	-do-		6/3	-do-		15/05/23	Completed
Completed	44	-do-		6/4	Head loss due to friction: Darcy's and Chezy's formula		9/5/23	Partial completed
Completed	45	-do-		6/5	-do-		10/5/23	Partial completed
Completed	46	-do-		6/6	-do-		10/5/23	Completed

Sl. No	Leq. No	Module	Lecture Details	Lecture Date	Status
47	6/7	Flow through pipe	Solve problems using Darcy's and Chezy's formula.	10/5/23	Partially Complete
48	6/8	do	do		
49	6/9	do	Hydraulic gradient and total gradient line	10/5/23	Complete
50	6/10	do	do		
51	7/1	Impact of jets	Impact of jet on fixed and moving vertical flat plates	11/5/23	NOC
52	7/2	do	do	11/5/23	NOC
53	7/3	do	do		
54	7/4	do	Derivation of Work done on series of vanes and Condition for Maximum efficiency	12/5/23	Complete
55	7/5	do	do		
56	7/6	do	do	12/5/23	NOC
57	7/7	do	Impact of jet on moving curved vanes, illustration using velocity triangles, derivation of Work done, efficiency.	12/5/23	NOC
58	7/8	do	do		
59	7/9	do	do	12/5/23	Complete
60	7/10	do	do	12/5/23	Complete

TECHNOLOGY
SUPPORTING
SUSTAINABLE
DEVELOPMENT

Sl. No.	Module	Lecture Details	Lecture Date	Status
1	1/1	Composition of various tool materials,	14/02/23	Partial
2	1/2	Materials		Completed
3	1/3	Physical properties	15/02/23	Completed
4	1/4	Uses of such tool materials,	16/02/23	Completed
5	2/1	Cutting action of various tools and reamer Such as chisel, hacksaw blade, dies	21/02/23	Partial
6	2/2	Tool geometry	22/02/23	Completed
7	2/3	Purpose of tool angle, double	23/02/23	Completed
8	2/4	Machining process parameters	24/02/23	Completed
9	2/5	Coolants and lubricants in Machining	27/02/23	Completed
10	2/6	and purpose.	28/02/23	Completed
11	3/1	Construction and Working of lathe and CNC lathe	17/03/23	Completed
12	3/2	Major components of a lathe and their functions	21/03/23	Completed
13	3/3	Operations carried out in a lathe (Turning, thread, cutting, taper turning)	6/03/23	Completed
14	3/4	Internal Machining, Parting off, Facing, knurling)	9/03/23	Completed
15	3/5	Safety measures during Machining	13/03/23	Completed

Sl. No.	Module	Lecture Details	Date	Status	Lecture No.	Module	Lecture
16	3/6 - do -	Capstan lathe with respect to Difference engine lathe	14/03/23	Completed	28	5/1	Application area
17	3/7 - do -	Major components and their function	15/03/23	Completed	29	5/2	Difference
18	3/8 - do -	Define multiple tool holders	16/03/23	Completed	30	5/3	Major Comp
19	3/9 - do -	Turret lathe Difference with respect to Capstan lathe	20/03/23	Completed	31	5/4	The table
20	3/10 - do -	Major components and their function	21/03/23	Completed	32	5/5	Working of
21	3/11 - do -	Draw the tooling layout for preparation of a hexagonal bolt & bush	22/03/23	Completed	33	5/6	Clamping
22	4/1 Shaper	Potential application areas of a Shaper Machine	23/03/23	Completed	34	6/1	Types of performed
23	4/2 - do -	Major components and their function			35	6/2	CNC milling
24	4/3 - do -	Explain the automatic table feed Mechanism	27/03/23	Completed	36	6/3	Work hold
25	4/4 - do -	Construction & Working of tool head	28/03/23	Completed	37	6/4	Construction dividing
26	4/5 - do -	Quick return Mechanism through sketch	29/03/23	Completed	38	6/5	Simple and
27	4/6 - do -	Specification of a shaping Machine.	31/03/23	Completed	39	6/6	Simple and
					40	6/7	
					41	6/8	Different
					42	7/1	Major Comp
					43	7/2	

Sl. No.	Topic	Subject	Date	Status
28	5/1	Planning Machine	27/04/23	Completed
29	5/2	-do-	6/04/23	Completed
30	5/3	-do-	10/04/23	Completed
31	5/4	-do-	11/04/23	Completed
32	5/5	-do-	12/04/23	Completed
33	5/6	-do-	13/04/23	Completed
34	6/1	Milling Machine	17/04/23	Completed
35	6/2	-do-	18/04/23	Completed
36	6/3	-do-	19/04/23	Completed
37	6/4	-do-	20/04/23	Completed
38	6/5	-do-	24/04/23	Partial
39	6/6	-do-	25/04/23	Partial
40	6/7	-do-	26/04/23	Completed
41	6/8	-do-	27/04/23	Completed
42	7/1	8 to 10	1/05/23	Partial
43	7/2	-do-	2/05/23	Completed

Lecture Details

Application area of planer
 Difference with respect to shaper
 Major components and their functions
 The table drive mechanism
 Working of tool support
 Clamping of work through sketch
 Types of Milling Machine and operation performed by them
 CNC milling Machine
 Work holding attachment
 Construction & working of simple dividing head
 Simple and compound indexing head
 Simple and compound indexing head
 Different indexing Methods
 Major components and their function

Sl. No.	Module	Lecture Details	Lecture Date	Status
44	7/3	Tools used in Slotting	31/05/23	Complete
45	8/1	Significance of grinding operations	9/05/23	Complete
46	8/2	Manufacturing of grinding wheel	8/05/23	Complete
47	8/3	Criteria for selecting of grinding wheels	9/05/23	Complete
48	8/4	Working of cylindrical grinder	10/5/23	Complete
49	8/5	Surface Grinder	11/5/23	Complete
50	8/6	Centreless Grinder	15/5/23	Complete
51	9/1	Working of Bench drilling Machine	15/5/23	Complete
52	9/2	Pillar drilling Machine	15/5/23	Complete
53	9/3	Radial drilling Machine	17/5/23	Complete
54	9/4	Basic Principle of Boring	19/5/23	Complete
55	9/5	Different between Boring and drilling	20/5/23	Complete