

STRENGTH OF
MATERIAL

TKA-2

Sl No	Lect No	Module	Lecture Details	Lecture Date	Status
1	1/1	Simple stress and strain	Types of Load, stresses & strains (Axial & tangential)	12/09/2022	Complete
2	1/2	-do-	Hook's Law, Young's Modulus.	13/09/2022	Complete
3	1/3	-do-	Bulk modulus, Modulus of Rigidity	14/09/2022	Complete
4	1/4	-do-	Poisson's Ratio, Derive relation between 2 elastic constants.	15/09/2022	Complete
5	1/5	-do-	Principle of superposition stresses in composite section.	19/09/2022	Completed
6	1/6	-do-	Temperature stresses.	20/09/2022	Completed
7	1/7	-do-	Determine the temperature stresses in composite Bar.	21/09/2022	Completed
8	1/8	-do-	Strain energy in Resilience	22/09/2022	Completed
9	1/9	-do-	Stress due to gradually applied load	26/09/2022	Completed
10	1/10	-do-	Stress due to suddenly applied and Impact load.	27/09/2022	Completed

SL No.	Lect No.	Module	Lecture Detail	Lecture Date	Status
11	2/1	Thin cylinder and spherical shell under internal pressure	Derivation of Hoop and Longitudinal stress.	28/09/2022	Completed
12	2/2	- do -	Strain	29/09/2022	Completed
13	2/3	- do -	Derivation of Hoop stress.	10/10/2022	Completed
14	2/4	- do -	Derivation of Longitudinal stress.	11/10/2022	Completed
15	2/5	- do -	Hoop strain	12/10/2022	Completed
16	2/6	- do -	Longitudinal strain	13/10/2022	Completed
17	2/7	- do -	Volumetric strain	17/10/2022	Completed
18	2/8	- do -	Computation of the change in length, Diameter and volume	18/10/2022	Completed
19	3/1	Two Dimensional Stress SYSTEM	Determination of Normal stress	19/10/2022	Completed
20	3/2	- do -	Shear stress.	20/10/2022	Completed

SL No	Lect No	Module	Lecture Details	Lecture Date	Status
21	3/3	- do -	Shear stress	26/10/2022	Completed
22	3/4	- do -	Resultant stress on oblique plane	27/10/2022	Completed
23	3/5	- do -	Resultant stress on oblique plane	31/10/2022	Completed
24	3/6	- do -	Location of principal plane and computation of principal stress	01/11/2022	Completed
25	3/7	- do -	Location of principal plane and computation of principal stress	02/11/2022	Completed
26	3/8	- do -	Mohr's circle	03/11/2022	Completed
27	3/9	- do -	Maximum shear stress using Mohr's circle	07/11/2022	Completed
28	3/10	- do -	Maximum shear stress using Mohr's circle	09/11/2022	Completed
29	4/1	Bending Moments and shear force	Types Beam and Load	10/11/2022	Completed
30	4/2	- do -	Concept of shear force and Bending moment	15/11/2022	Completed

SL No	Leet No	Module	Lecture Details	Learn Date	Status
31	4/12	- do -	Concept of Shear force and Bending moment	26/11/2022	Completed
32	4/13	- do -	Concept of Shear force and Bending moment	19/11/2022	Completed
33	4/15	- do -	Shear force and Bending moment diagram	21/11/2022	Completed
34	4/16	- do -	Shear force and Bending moment diagram	22/11/2022	Completed
35	4/17	- do -	Shear force and Bending moment diagram	23/11/2022	Completed
36	4/18	- do -	Salient illustration in Cantilever Beam	24/11/2022	Completed
37	4/19	- do -	Simply supported Beam	28/11/2022	Completed
38	4/20	- do -	Over hanging Beam	29/11/2022	Completed
39	5/1	Continued of Bending moment	Assumption in theory of Bending	30/11/2022	Completed

S. No	Lect No	Module	Lecture Details	Lect Date	Status
40	5/2	Theory of Simple Bending	Bending eqn	01/12/2022	Completed
41	5/3	- do -	Bending eqn	05/12/2022	Completed
42	5/4	- do -	Moment of Resistance	06/12/2022	Completed
43	5/5	- do -	Moment of Resistance	07/12/2022	Completed
44	5/6	- do -	Section Modulus	08/12/2022	Completed
45	5/7	- do -	Section Modulus	12/12/2022	Completed
46	5/8	- do -	Neutral axis	13/12/2022	Completed
47	5/9	- do -	Simple problem on above	14/12/2022	Completed
48	5/10	- do -	Numerical discussion	15/12/2022	Completed
49	6/1	Combined direct and Bending stress	Column Axial Load	19/12/2022	Completed
50	6/2	- do -	Eccentric load on Column	20/12/2022	Completed
51	6/3	- do -	Direct stress Bending stress	21/12/2022	Completed

Lect Date	Status	Sl No	Lect No	Module	Lecture Details	Lecture Date	Status
1/12/2022	Completed	52	5/4	- do -	Maximum and Minimum stresses.	22/12/2022	Completed
5/12/2022	Completed						
6/12/2022	Completed	53	6/5	- do -	Buckling. Load computation using Euler's formula in one column and end condition.	26/12/2022	Completed
7/12/2022	Completed						
8/12/2022	Completed	54	6/6	- do -	Buckling Load Computation using Euler's formula in column with various end conditions.	27/12/2022	Completed
9/12/2022	Completed						
10/12/2022	Completed						
11/12/2022	Completed	55	7/1	Torsion	A assumption of pure torsion	28/12/2022	Completed
12/12/2022	Completed	56	7/2	- do -	Torsion equation for solid and hollow circular shafts	29/12/2022	Completed
13/12/2022	Completed						
14/12/2022	Completed	57	7/3	- do -	Torsion eqn for solid and hollow circular shaft	02/01/2023	Completed
15/12/2022	Completed						
16/12/2022	Completed	58	7/4	- do -	- do -	03/01/2023	Completed
17/12/2022	Completed	59	7/5	- do -	Comparison between solid and hollow shafts subjected to pure torsion	04/01/2023	Completed
18/12/2022	Completed	60	7/5	- do -	Comparison between solid and hollow shafts subjected to pure torsion	05/01/2023	Completed

TH-1

PRODUCTION

TECHNOLOGY

<u>SL NO</u>	<u>Lect. No</u>	<u>Module</u>	<u>Lecture Details</u>	<u>Lect. date</u>	<u>status</u>
01	1/1	Metal Forming process	Extrusion, Definition and classification.	12/09/2022	Completed
02	1/2	- do -	Direct, Indirect Extrusion.	13/09/2022	Completed
03	1/3	- do -	Explain Impact Extrusion process	15/09/2022	Completed
04	1/4	- do -	Define Rolling	16/09/2022	Completed
05	1/5	- do -	Classifications of Rolling process.	19/09/2022	Completed
06	1/6	- do -	Differentiate between cold rolling and hot rolling process.	20/09/2022	Completed
07	1/7	- do -	List the different types of rolling mills used in rolling process.	22/09/2022	Completed
08	2/1	Welding	Define welding and classification of various welding process.	23/09/2022	Completed
09	2/2	- do -	classification of various welding process.	26/09/2022	Completed
10	2/3	- do -	Explain fluxes used in welding.	27/09/2022	Completed
11	2/4	- do -	fluxes used in welding.	29/09/2022	Completed

<u>Sl No.</u>	<u>Lect. No.</u>	<u>Module</u>	<u>Lecture Details</u>	<u>Lect. date</u>	<u>Status</u>
12	2/5	Welding	Explain oxy-acetylene welding process.	30/09/2022	Completed
13	2/6	- do -	Explain various types of flames used in oxy-acetylene welding process.	10/10/2022	Completed
14	2/7	- do -	Explain arc welding process.	11/10/2022	Completed
15	2/8	- do -	Specify arc-welding electrodes.	13/10/2022	Completed
16	2/9	- do -	Define resistance welding process.	14/10/2022	Completed
17	2/10	- do -	classifications of Resistance welding process.	17/10/2022	Completed
18	2/11	- do -	Describe various resistance welding process.	18/10/2022	Completed
19	2/12	- do -	butt welding, spot welding, projection welding, flash welding & seam welding.	20/10/2022	Completed
20	2/13	- do -	TIG & MIG welding process.	21/10/2022	Completed
21	2/14	- do -	Explain TIG & MIG welding	27/10/2022	Completed
22	2/15	- do -	State different welding defects	28/10/2022	Completed

<u>Sl. No.</u>	<u>Lect. No.</u>	<u>Module</u>	<u>Lecture Details</u>	<u>Lect. date</u>	<u>status</u>
23	2/16	- do -	Causes and Remedies	01/11/2022	Completed
24	3/1	Casting	Define casting & classify the various casting process.	03/11/2022	Completed
25	3/2	- do -	classification of various casting process.	04/11/2022	Completed
26	3/3	- do -	Explain the procedure of sand mould casting.	07/11/2022	Completed
27	3/4	- do -	procedure of sand moulding casting and diff. types of moulding sand.	10/11/2022	Completed
28	3/5	- do -	Diff. types of moulding sand with their composition and properties.	11/11/2022	Completed
29	3/6	- do -	classify diff. patterns and state various pattern allowances.	17/11/2022	Completed
30	3/7	- do -	classify diff. patterns & state various pattern allowances.	18/11/2022	Completed
31	3/8	- do -	classify core	21/11/2022	Completed
32	3/9	- do -	Describe construction and working of cupola and crucible furnace.	22/11/2022	Completed
33	3/10	- do -	construction and working of cupola & crucible furnace.	24/11/2022	Completed

SLNO	Lect. NO	Module	Lecture Details	Lect. date	status
34	3/11	Casting	Explain die-casting method.	25/11/2022	Completed
35	3/12	- do -	Explain centrifugal casting such as true centrifugal casting	28/11/2022	Completed
36	3/13	- do -	Centrifuging with advantages.	29/11/2022	Completed
37	3/14	- do -	Limitations and area of application.	01/12/2022	Completed
38	3/15	- do -	Explain various casting defects.	02/12/2022	Completed
39	3/16	- do -	Casting defects with their causes and remedies.	05/12/2022	Completed
40	3/17	- do -	Causes & remedies.	06/12/2022	Completed
41	4/1	Powder Metallurgy	Define powder metallurgy process.	08/12/2022	Completed
42	4/2	- do -	State advantages of powder metallurgy	09/12/2022	Completed
43	4/3	- do -	Describe the method of producing components by powder metallurgy technique.	12/12/2022	Completed
44	4/4	- do -	- do -	13/12/2022	Completed

<u>Sl. No.</u>	<u>Lect No.</u>	<u>Module</u>	<u>Lectures Details</u>	<u>Lect. date & status</u>
45	4/5	Powder Metallurgy	Explain sintering	15/12/2022 Completed
46	4/6	- do -	Explain sintering	16/12/2022 Completed
47	4/7	- do -	Economics of powder metallurgy.	19/12/2022 Completed
48	5/1	Press Work	Describe press works	20/12/2022 Completed
49	5/2	- do -	Blanking	22/12/2022 Completed
50	5/3	- do -	piercing	23/12/2022 Completed
51	5/4	- do -	Trimming	26/12/2022 Completed
52	5/5	- do -	Various types of die and punch.	27/12/2022 Completed
53	5/6	- do -	Explain simple die.	29/12/2022 Completed
54	5/7	- do -	Compound and progressive dies & Describe the various advantages & dis-advantages.	30/12/2022 Completed
55	6/1	Jig & fixture	Define jig & fixture State advantages of jig & fixture.	02/01/2023 Completed
56	6/2	- do -	state the principle of locations.	03/01/2023 Completed
57	6/3	- do -	Describe the methods of location w.r.t 3-2-1 point of location of rectangular jig.	05/01/2023 Completed

<u>SLNO.</u>	<u>Lect. NO.</u>	<u>Module</u>	<u>Lecture Details.</u>	<u>Date</u>	<u>status</u>
58	6/4	Jigs & fixture	Describe the methods of location w.r.t 3-2-1 point of location of rectangular jig.	06/01/2023	Complete
59	6/5	- do -	- do -	09/01/2023	Complete
60	6/6	- do -	List various types of jigs & fixture.	10/01/2023	complete

ENGG. MATERIAL

<u>Sl No.</u>	<u>Lect No.</u>	<u>Module</u>	<u>Lecture Details</u>	<u>Lect date</u>	<u>Status</u>
01	1/1	Engg.	Material classification Materials into ferrous and non-ferrous categories and their properties alloys.	12/09/22	Completed
02	1/2	- do -	Properties of materials; Physical, chemical and mechanical.	13/09/22	Completed
03	1/3	- do -	properties of materials physical, chemical and mechanical.	14/09/2022	Completed
04	1/4	- do -	Performance requirements.	16/09/2022	Completed
05	1/5	- do -	Material reliability and safety.	19/09/2022	Completed
06	2/1	Ferrous material & alloy.	Characteristics and application of ferrous materials.	20/09/2022	Completed
07	2/2	- do -	classification, composition and application of low carbon steel, medium carbon steel & high carbon steel.	21/09/2022	Completed
08	2/3	- do -	Alloy steel, low alloy steel, high alloy steel, tool steel & stainless steel.	23/09/2022	Completed

<u>SLNO.</u>	<u>Lect.No.</u>	<u>Module</u>	<u>Lecture Details</u>	<u>Lect date</u>	<u>Status</u>
09	2/4	Ferrous materials & alloys.	Alloy steel, Low alloy steel, high alloy steel, tool steel & stainless steel.	26/09/2022	Completed
10	2/5	- do -	Alloy steel, Low alloy steel, high alloy steel tool steel & stainless steel. Effects of various alloying elements such as Cr, Mn, Ni, V, Mo.	27/09/2022	Completed
11	3/1	Iron-carbon system	Concept of phase diagram & cooling curves.	28/09/2022	Completed
12	3/2	- do -	Features of Iron-carbon diagram with salient micro-constituents of Iron and steel.	20/09/2022	complete
13	3/3	- do -	Features of Iron-carbon diagram with salient micro-constituents of Iron & steel.	10/10/2022	Completed
14	3/4	- do -	- do -	11/10/2022	Completed
15	3/5	- do -	- do -	12/10/2022	Completed

SL No.	Lect. No	Module	Lecture Details	Lect. date	status
16	3/6	Iron-carbon system	Iron-carbon diagram	14/10/2022	Completed
17	3/7	- do -	Iron-carbon diagram	17/10/2022	Completed
18	3/8	- do -	Iron-carbon diagram	18/10/2022	Completed
19	4/1	Crystal Imperfections.	Crystal defines, classifications of crystals, ideal crystals and crystal imperfections.	19/10/2022	Completed
20	4/2	- do -	Crystal defines, classifications of crystals, ideal crystal & crystal imperfections.	20/10/2022	Completed
21	4/3	- do -	Crystal defines, classifications of crystals, ideal crystal & crystal imperfections.	21/10/2022	Completed
22	4/4	- do -	Types and causes of point defects, vacancies, Interstitials & impurities.	26/10/2022	Completed
23	4/5	- do -	Types & causes of line defects, Edge dislocation & screw dislocation.	28/10/2022	Completed

<u>SLNO</u>	<u>Lect. No.</u>	<u>Module</u>	<u>Lecture Details</u>	<u>Lect. date</u>	<u>status</u>
24	4/6	Crystal Imperfections.	Types & causes of line defects, Edge dislocation & screw dislocations.	21/10/2022	Completed
25	4/7	- do -	Effects of imperfections on material properties.	01/11/2022	Completed
26	4/8	- do -	Effects of imperfections on material properties.	02/11/2022	Complete
27	4/9	- do -	Deformation by slip and twinning.	04/11/2022	Complete
28	4/10	- do -	Effect of deformation on material properties.	07/11/2022	Complete
29	5/1	Heat Treatment	purpose of heat treatment.	09/11/2022	Completed
30	5/2	- do -	purpose of heat treatment.	11/11/2022	Complete
31	5/3	- do -	purpose of heat treatment; Annealing, normalizing, hardening, tempering, stress relieving measures.	15/11/2022	Completed
32	5/4	- do -	purpose of heat treatment; Annealing, normalizing, hardening, tempering, stress relieving measures.	16/11/2022	Complete

<u>SLNO.</u>	<u>Lect.No</u>	<u>Module</u>	<u>Lecture Details.</u>	<u>Lect.date</u>	<u>status</u>
33	5/5	Heat treatment.	Surface hardening; carburizing and Nitriding.	18/11/2022	Completed
34	5/6	- do -	Surface hardening; carburizing and Nitriding.	21/11/2022	Completed
35	5/7	- do -	Effect of heat treatment on properties of steel	22/11/2022	Completed
36	5/8	- do -	Effect of heat treatment on properties of steel.	23/11/2022	Completed
37	5/9	- do -	Hardenability of steel.	25/11/2022	Completed
38	5/10	- do -	Hardenability of steel.	28/11/2022	Completed
39	6/1	Non-Ferrous Alloys	Aluminum alloys; composition, property usage of duralmin, z-y alloy.	29/11/2022	Completed
40	6/2	- do -	Aluminum alloys; composition, property usage of duralmin, z-y alloy.	30/11/2022	Completed

<u>SLNO.</u>	<u>Loc. NO.</u>	<u>Module</u>	<u>Lecture Details</u>	<u>Lect. date</u>	<u>Status</u>
41	6/3	Non-Ferrous Alloys	Copper alloys; composition, property and usage of copper - Aluminium, Copper-tin babbitt, phosphorous bronze, brass-copper Nickel.	02/12/2022	Completed
42	6/4	- do -	predominating element of lead alloys, zinc alloys and nickel alloys.	05/12/2022	Completed
43	6/5	- do -	predominating element of lead alloys, zinc alloys and nickel alloys.	06/12/2022	Completed
44	6/6	- do -	predominating element of lead alloys, zinc alloys and nickel alloys.	07/12/2022	Completed
45	6/7	- do -	low alloy materials like P-91, P-22 for power plants and other high temp. services.	09/12/2022	Completed
46	6/8	- do -	low alloy materials like P-91, P-22 for power plants and other high temp. services.	12/12/2022	Completed

<u>SLNO.</u>	<u>Lect. No.</u>	<u>Module</u>	<u>Lecture details</u>	<u>Lect. date</u>	<u>status</u>
47	6/9	Non-ferrous Alloys.	High alloy materials like stainless steel grade of duplex, super duplex materials etc.	13/12/2021	Completed
48	6/10	- do -	High alloy materials like stainless steel grade of duplex, super duplex materials etc.	14/12/2021	Completed
49	7/1	Bearing Material	Classifications, composition and uses of copper base, Tin base, lead base, cadmium base lead materials.	16/12/2021	Completed
50	7/2	- do -	Classifications, composition and uses.	19/12/2021	Completed
51	7/2	- do -	Uses of copper base, Tin base, lead base, cadmium base bearing materials.	20/12/2021	Completed
52	8/1	Spring Material	Classification, composition and uses of Iron base and copper base Spring materials.	21/12/2021	Completed

<u>Sl. No.</u>	<u>Lect. No.</u>	<u>Module</u>	<u>Lecture Detail</u>	<u>Lect. date</u>	<u>status</u>
53	8/2	Spring Materials	Classification, composition, properties of spring materials.	23/12/2022	Complete
54	8/3	- do -	Uses of Iron-base and copper base spring materials.	26/12/2022	Complete
55	9/1	Polymers	properties and application of thermosetting and thermoplastic polymers.	27/12/2022	Complete
56	9/2	- do -	properties and application of thermosetting and thermo-plastic polymers.	28/12/2022	Complete
57	9/3	- do -	properties of elastomers	30/12/2022	Complete
58	10/1	composites & ceramics	classification, composition, properties and uses of particulate.	02/01/2023	Complete
59	10/2	- do -	classification, composition, properties and uses of particulate.	03/01/2023	Complete
60	10/3	- do -	classification & uses of ceramics.	04/01/2023	Complete

THERMAL
ENGG.

<u>SLNO.</u>	<u>Lect.NO</u>	<u>Module</u>	<u>Lecture Details.</u>	<u>Lect.date</u>	<u>Status</u>
01	1/1	Thermodynamic concept & Tech.	Thermodynamic System (closed, open, isolated)	12/09/2022	Completed
02	1/2	- do -	Thermodynamic properties of a system.	14/09/2022	Completed
03	1/3	- do -	Thermodynamic properties of a system.	15/09/2022	Completed
04	1/4	- do -	Intensive & Extensive properties.	16/09/2022	Completed
05	1/5	- do -	Define Thermodynamic process, path, cycle.	19/09/2022	Completed
06	1/6	- do -	state path function, point function.	20/09/2022	Completed
07	1/7	- do -	Thermodynamic Equilibrium.	22/09/2022	Completed
08	1/8	- do -	Quasi-static process	23/09/2022	Completed
09	1/9	- do -	Conceptual explanation of energy and its sources.	26/09/2022	Completed
10	1/10	- do -	Work, heat and comparison between the two.	28/09/2022	Completed

Sl	SL No.	Lect. No.	Module	Lecture Details	Lect. date
11	1/11		Thermo- dynamic Concept & Tech.	Mechanical equivalent of heat.	29/09/2022
12	1/12	- do -		Work transfer, Displace- ment of work.	30/09/2022
13	2/1		Law of Thermo- dynamic	state and Explain Zeroth law of thermodynamics.	10/10/2022
14	2/2	- do -		state and explain Zeroth law of thermodynamics.	12/10/2022
15	2/3	- do -		state and explain first law of Thermodynamic	13/10/2022
16	2/4	- do -		state and explain first Law of Thermodynamic	14/10/2022
17	2/5	- do -		Application of first law of Thermodynamics (S.F.F equation and its application)	17/10/2022
18	2/6	- do -		Application of first law of Thermodynamics (S.F.F eqn & its application)	19/10/2022

<u>Sl No.</u>	<u>Lect. No.</u>	<u>Module</u>	<u>Lecture Details.</u>	<u>Lect. date & date</u>
19	2/7	Law of Thermodynamic	Limitations of First Law of Thermodynamics	20/10/2022
20	2/8	- do -	Second Law of Thermodynamics (Clausius & Kelvin plank statement)	21/10/2022
21	2/9	- do -	Second law of Thermodynamics (Clausius & Kelvin plank statement)	24/10/2022
22	2/10	- do -	Application of second Law in heat engine, heat pump.	26/10/2022
23	2/11	- do -	Refrigerator & determination of efficiencies & C.O.P	27/10/2022
24	2/12	- do -	Solve Numerical on Laws of Thermodynamics.	28/10/2022
25	3/1	properties of perfect gas.	Laws of perfect gas.	31/10/2022
26	3/2	- do -	Laws of perfect gas.	02/11/2022
27	3/3	- do -	Explain specific Heat of gas (cp & cv)	05/11/2022

<u>SSLNO</u>	<u>Lect. NO.</u>	<u>Module</u>	<u>Lecture Detail</u>	<u>Lect. date</u>	<u>Status</u>
28	3/4	Proper- ties & processes of perfect gas.	Relation between C_p & C_v .	01/11/2022	Completed
29	3/5	- do -	Enthalpy of a gas.	07/11/2022	Completed
30	3/6	- do -	Work done during a non-flow process.	09/11/2022	Completed
31	3/7	- do -	Application of First Law of thermodynamics to various non-flow processes (Isothermal, Isobaric, Isentropic & Polytropic process.)	10/11/2022	Completed
32	3/8	- do -	Application of First Law of Thermodynamics to various non-flow process (Isothermal, Isobaric, Isentropic and Polytropic process)	11/11/2022	Completed
33	3/9	- do -	Solve simple problems on this chapter.	16/11/2022	Completed
34	3/10	- do -	Free expansion & throttling process.	17/11/2022	Completed

<u>SL No.</u>	<u>Lect. No.</u>	<u>Module</u>	<u>Lecture Details.</u>	<u>Lect. date</u>	<u>status</u>
35	4/1	Internal Combustion Engine	Explain & classify I.C Engine.	18/11/2022	Completed
36	4/2	- do -	Terminology of I.C Engine such as bore, dead centre stroke volume, piston speed & R.P.M	21/11/2022	Completed
37	4/3	- do -	Explain the working principle of 2-stroke and 4-stroke engine C.I & S.I Engine.	23/11/2022	Completed
38	4/4	- do -	Explain the working principle of 2-stroke and 4-stroke engine C.I & S.I Engine.	24/11/2022	Completed
39	4/5	- do -	Explain the working principle of 2-stroke & 4-stroke engine (C.I & S.I Engine)	25/11/2022	Completed
40	4/6	- do -	Explain the working principle of 2-stroke & 4-stroke engine (C.I & S.I Engine)	28/11/2022	Completed
41	4/7	- do -	Differentiate bet ⁿ 2-stroke & 4-stroke Engine (C.I & S.I Engine)	30/11/2022	Completed
42	4/8	- do -	Differentiate bet ⁿ 2-stroke & 4-stroke Engine (C.I & S.I Engine)	01/12/2022	Completed

<u>SLNO.</u>	<u>Lect. No.</u>	<u>Module</u>	<u>Lecture Details</u>	<u>Lect. date</u>	<u>status</u>
43	5/1	Air standard cycle	Carnot cycle.	02/12/2022	Complete
44	5/2	Gas power cycle	Carnot cycle.	05/12/2022	Complete
45	5/3	- do -	otto cycle.	07/12/2022	Complete
46	5/4	- do -	otto cycle.	08/12/2022	Complete
47	5/5	- do -	Diesel cycle.	09/12/2022	Complete
48	5/6	- do -	Dual cycle.	12/12/2022	Complete
49	5/7	- do -	Dual cycle.	14/12/2022	Complete
50	5/8	- do -	Solve simple Numerical	15/12/2022	Complete
51	5/9	- do -	Solve simple Numericals	16/12/2022	do
52	5/10	- do -	Solve simple Numericals	19/12/2022	do
53	6/1	Fuels & Combustion	Define Fuels.	21/12/2022	do
54	6/2	- do -	Types of Fuels	22/12/2022	do
55	6/3	- do -	Application of different types of Fuels.	23/12/2022	Complete
56	6/4	- do -	Application of diff. types of Fuels.	25/12/2022	Complete

<u>S.L No.</u>	<u>Leaf. No.</u>	<u>Module</u>	<u>Lecture Details</u>	<u>Lect date</u>	<u>Status</u>
57	6/5	Fuel and combustion	Heating valves & fuels.	28/12/2022	complete
58	6/6	- do -	Heating valves & Fuels.	29/12/2022	- do -
59	6/7	- do -	Quality of I.C engine fuels octane number, cetane number.	30/12/2022	- do -
60	6/8	- do -	Quality of I.C Engine fuels octane number, cetane number.	01/01/2023	complete

ENVIRONMENTAL STUDIES

<u>SL No</u>	<u>Lect No</u>	<u>Module</u>	<u>Lecture Details</u>	<u>Lect. date</u>	<u>status</u>
01	1/1	The multi-disciplinary nature of Environmental Studies.	Definition	13/09/2022	Completed
02	1/2	- do -	Scope & Importance	14/09/2022	Completed
03	1/3	- do -	Need for public Awareness	15/09/2022	Completed
04	1/4	- do -	Need for public awareness	16/09/2022	Completed
05	2/1	Natural Resources	Forest resources - Use and over exploitation, deforestation, case studies; Timber extraction, mining, dams & their effects on forests & tribal people	20/09/2022	Completed
06	2/2	- do -	Water resources; use and over utilization of surface & ground water, floods, drought, conflicts over water, dam's benefits and problems.	21/09/2022	Completed
07	2/3	- do -	Mineral resources. Use & exploitation, environmental effects of extracting	22/09/2022	Completed

<u>SLNO.</u>	<u>Lect No.</u>	<u>Module</u>	<u>Lecture Details</u>	<u>Lect. date</u>	<u>status</u>
			and using mineral resources.		
08	2/4	Natural Resources	Food Resources: World food problems, changes cause by agriculture & overgrazing, effects of modern agriculture, fertilizers, pesticide problems, water logging, salinity.	23/09/2022	Complete
09	2/5	- do -	Energy Resources - Growing energy need, Renewable and non-renewable energy sources, use of alternate energy sources, case studies.	27/09/2022	Complete
10	2/6	- do -	Land resources - Land as a resource, land degradation, man induces landslides, soil erosion, and desertification.	28/09/2022	Complete
11	2/7	- do -	Land resources - Land as a resource, land degradation, man induces landslides - soil erosion and desertification.	29/09/2022	Complete
12	2/8	- do -	Role of individual in conservation of natural resources.	30/09/2022	Complete

<u>Lr. No.</u>	<u>Lect. No.</u>	<u>Module</u>	<u>Lecture Details</u>	<u>Lect date status</u>
3	2/9	Natural Resources	Role of individual in conservation of natural resources	11/10/2022 Completed
14	2/10	- do -	Equitable use of resources for sustainable lifestyle.	12/10/2022 Completed
15	3/1	systems	concept of ecosystem	13/10/2022 Completed
16	3/2	- do -	structure and function of an ecosystem.	14/10/2022 Completed
17	3/3	- do -	producers, consumers, decomposers	18/10/2022 Completed
18	3/4	- do -	Energy Flow in the ecosystems	19/10/2022 Completed
19	3/5	- do -	Ecological Succession	20/10/2022 Completed
20	3/6	- do -	Food chains, Food web and ecological pyramids.	21/10/2022 Completed
21	3/7	- do -	Introduction, types, characteristic features, structure & function of the following ecosystem.	26/10/2022 Completed
22	3/8	- do -	Forest ecosystem & Aquatic ecosystem (Ponds, streams, lakes, river, ocean & estuaries)	27/10/2022 Completed

<u>S.L.No.</u>	<u>Lecture</u>	<u>Module</u>	<u>Lecture Details</u>	<u>Lect. date</u>	<u>Status</u>
23	4/1	Bio-diversity & its conservation	Introduction, def ⁿ , genetics, species & ecosystem diversity.	28/10/2022	comple ^d
24	4/2	- do -	Bio geographically classification of India	01/11/2022	comple ^d
25	4/3	- do -	value of biodiversity. consumptive use, productive use, social, aesthetic and opt in values.	02/11/2022	comple ^d
26	4/4	- do -	Biodiversity of global, national & local level.	02/11/2022	comple ^d
27	4/5	- do -	Biodiversity of global, national & local level.	04/11/2022	comple ^d
28	4/6	- do -	Threats of biodiversity.	09/11/2022	- do -
29	4/7	- do -	Habitats loss, poaching of wild life, man wild life conflicts.	10/11/2022	- do -
30	4/8	- do -	Habitats loss, poaching of wild life, man wild life conflicts.	11/11/2022	- do -

<u>Sl. No.</u>	<u>Lect. No.</u>	<u>Module</u>	<u>Lecture Details</u>	<u>Lect. date</u>	<u>Status</u>
31	5/1	Environ-	Definition, causes mental effects and control pollution measures of Air pollution.	15/11/2022	comple ted
32	5/2	- do -	Air pollution	16/11/2022	do-
33	5/3	- do -	Water pollution	17/11/2022	do-
34	5/4	- do -	Soil pollution.	18/11/2022	do-
35	5/5	- do -	Marine pollution.	22/11/2022	do-
36	5/6	- do -	Noise pollution.	23/11/2022	do-
37	5/7	- do -	Thermal pollution.	24/11/2022	do-
38	5/8	- do -	Nuclear Hazards	25/11/2022	Comple ted
39	5/9	- do -	Solid waste management causes.	29/11/2022	
40	5/10	- do -	Effects & control measures of urban & Industrial waste	30/11/2022	Comple ted
41	5/11	- do -	Role of an individual in prevention of pollution.	01/12/2022	Comple ted
42	5/12	- do -	Disaster Management : Floods, earthquake, cyclone & land slides.	02/12/2022	Completed

<u>SL No</u>	<u>Lect No</u>	<u>Module</u>	<u>Lecture Details</u>	<u>Lect. date</u>	<u>status</u>
43	6/1	Social issues & their environment.	From unsustainable to sustainable development, Urban problems related to energy.	06/12/2022	complete
44	6/2	- do -	water conservation, rain water harvesting, water shed management.	07/12/2022	Complete
45	6/3	- do -	water conservation, rain water harvesting, water shed management.	08/12/2022	Complete
46	6/4	- do -	Resettlement and rehabilitation of people, its problem & concern.	09/12/2022	Complete
47	6/5	- do -	Environmental ethics, issues & possible solution.	13/12/2022	complete
48	6/6	- do -	Climate change, global warming, acid rain, ozone layer depletion, nuclear accidents & holocaust, case studies	14/12/2022	Complete
49	6/7	- do -	Air (prevention & control of pollution) Act.	15/12/2022	complete
50	6/8	- do -	Water (prevention & control of pollution) Act.	16/12/2022	Complete

<u>Sl. No.</u>	<u>Lect. No.</u>	<u>Module</u>	<u>Lecture Details.</u>	<u>Lect. date</u>	<u>Status</u>
51	6/9	Social Issues & their Environment.	Water (prevention & control of pollution) Act.	20/12/2022	Completed
52	6/10	- do -	Public Awareness.	21/12/2022	Completed
53	7/1	Human population & the environment.	population growth & variation among nations.	22/12/2022	Completed
54	7/2	- do -	population growth & variation among nations.	23/12/2022	Completed
55	7/3	- do -	population explosion - family welfare program.	27/12/2022	Completed
56	7/4	- do -	Environment & human health.	28/12/2022	Completed
57	7/5	- do -	human rights.	29/12/2022	Completed
58	7/6	- do -	human rights.	30/12/2022	Completed
59	7/7	- do -	Value education.	03/01/2023	Completed
60	7/8	- do -	Role of Information tech. in environment & human health.	04/01/2023	Completed