SUB - Structural Design - I (TH1)

SEM - 4th

Session - (2021 - 2022)

Sub- Structural Design-I

Sl. No.	Lect. No.	Module	Lecture Details	Lect. Date	Status
01.	1/1	Working stress Method (WSM)	Objectives of design and detailing. State the different Methods of design of Concrete structures.	14/03/22	Partially Completed
02.	1/2	-do-	Introduction to reinforced Concrete, R.C. Sections their behavior, grades of Concrete and steel. Permissible stresses, assumption in W.S.M.	15/03/22	Partially Completed
03.	1/3	-do-	Flexural design and analysis of single reinforced sections from first Principles.	16/03/22	Partially Completed
04	1/4	-do-	Concept of under reinforced, Over reinforced and blanced sections.	17/03/22	Partially Completed
05	1/5	-do-	Advantages and disadvantages of WSM, reasons for its Obsolescence.	21/03/22	Completed
06	2/1	Philosophy of limit state Method (LSM)	Definition, Advantages of LSM over WSM, IS code suggestions regarding design Philosophy.	22/03/22	Partially Completed
07	2/2	-do-	Types of limit state, Partial safety factors for materials strength, characteristic strength, characteristic load, design load, loading on structure	23/03/22	Partially Completed

Sl. No.	Lect. No.	Module	Lecture Details	Lect. Date	status
			as per I.S. 875.		
08	2/3	-do-	Study of I.S specification regarding spacing of reinforcement in slab, Cover to reinforcement in slab, beam column and footing, minimum reinforcement in slab, beam and column, lapping, anchorage, effective span for beam & slab.	24/03/22	Completed
09.	3/1	Analysis & Design of Single and Double Reinforced Sections (LSM)	Limit state of collapse (flexure), Assumptions	25/03/22	Partially Completed
10.	3/2	-do-	stress-strain relationship for concrete.	28/03/22	Partially Completed
11.	3/3	-do-	Concrete and steel, neutral axis.	29/03/22	Partially Completed
12.	3/4	-do-	stress block diagram and	30/03/22	Partially Completed
13.	3/5	-do-	strain diagram for singly reinforced Section.	31/03/22	Partially Completed

Sl No	Lect. No.	Module	Lecture Details	Lect. Date	Status
14	3/6	-do-	Concept of under-reinforced, Over-reinforced and limiting Section,	02/04/22	Partially Completed
15.	3/7	-do-	Neutral axis Co-efficient.	05/04/22	Partially Completed
16.	3/8	-do-	Limiting value of moment of resistance.	06/04/22	Partially Completed
17.	3/9	-do-	Limiting Percentage of steel	07/04/22	Partially Completed
18.	3/10	-do-	Required for limiting Singly R.C. Section.	08/04/22	Partially Completed
19	3/11	do-	Analysis and design	09/04/22	Partially Completed
20.	3/12	-do-	Determination of design Constants.	11/04/22	Partially Completed
21.	3/13	-do-	Moment of resistance and area of steel for rectangular Sections.	12/04/22	Partially Completed
22.	3/14	-do-	Necessity of Doubly reinforced section, design of doubly reinforced rectangular Section.	13/04/22	Partially Completed
23.	3/15	-do-	-do-	18/04/22	Completed

Sl No.	Lect. No.	Module	Lecture Details	Lect. Date	Status
24.	4/1	Shear, Bond & Development Length (LSM)	Nominal shear in R.C. Section, design shear strength of Concrete maximum shear stress, design of sheear reinforcement, minimum shear reinforcement forms of shear reinforcement.	19/04/22	Partially Completed
25.	4/2	-do-	Bond and types of bond, bond stress check for bond stress, develop-Ment length in tension and Compression, anchorage value for hooks 90° bend and 45° bend standards lapping of bars, Check for development length.	20/04/22	Partially Completed
26.	4/3	-do-	Numerical problems on deciding Wether shear reinfor-cement is required or not, Check for adequacy of the section in shear.	21/04/22	Partially Completed
27.	4/4	-do-	Design of shear reinforcement ; Minimum shear reinforcement in beams (Explain through examples only)	22/04/22	Completed
28.	5/1	Analysis and Design of T-Beam (LSM)	General features	23/04/22	Partially Completed
29.	5/2	-do-	Advantages	25/04/22	Partially Completed

SL NO	Lect. No.	Module	Lecture Details	Lect. Date	Status
30.	5/3	-do-	-do-	26/04/22	Partially Completed
31	5/4	-do-	Effective width of flange as per IS: 456-2000 Code Provisions.	27/04/22	Partially Completed
32.	5/5	-do-	-do-	28/04/22	Partially Completed
33	5/6	-do-	Analysis of singly reinforced T-Beam	29/04/22	Partially Completed
34.	5/7	-do-	strain diagram	02/05/22	Partially Completed
35.	5/8	-do-	stress diagram	04/05/22	Partially Completed
36.	5/9	-do-	Depth of neutral axis	05/05/22	Partially Completed
37.	5/10	-do-	Moment of resistance of T-Beam	06/05/22	Partially Completed
38.	5/11	-do-	T-Beam section with netral axis lying with in the flange.	09/05/22	Partially Completed
39.	5/12	-do-	Simple numerical problems on deciding effective flange width	10/05/22	Partially Completed
40.	5/13	-do-	-do-	11/05/22	Partially Completed

Sl No	Lect. No.	Module	Lecture Details	Lect. Date.	Status
41.	5/14	-do-	Problems only on finding Moment of resistance of T-Beam Section	12/05/22	Partially Completed
42.	5/15	-do-	N.A. lies with in oo up to the bottom of flange shall be asked in written examination.	13/05/22	Completed
43.	6/1	Analysis And Design of Slab and Stair Case (LSM)	Design of simply Supported.	17/05/22	Partially Completed
44.	6/2	-do-	One-Way slabs for flexure.	18/05/22	Partially Completed
45.	6/3	-do-	Check for deflection control and shear.	19/05/22	Partially Completed
46.	6/4	-do-	Design of one-way	20/05/22	Partially Completed
47.	6/5	-do-	Cantilever slabs and cantilevers chajjas	23/05/22	Partially Completed
48.	6/6	-do-	flexure check for deflection control	24/05/22	Partially Completed
49.	6/7	-do-	check for development length and shear.	25/05/22	Partially Completed

Sl No	Lect. No.	Module	Lecture Details	Lect. Date	Status
50.	6/8	-do-	Design of two-way simply Supported	26/05/22	Partially Completed
51.	6/9	-do-	Slabs for flexure with Corner free to lift.	27/05/22	Partially Completed
52.	6/10	-do-	-do-	30/05/22	Partially Completed
53.	6/11	-do-	Design of dog-legged staircase	31/05/22	Partially Completed
54.	6/12	-do-	-do-	01/06/22	Partially Completed
55.	6/13	-do-	Detailing of reinforcement	02/06/22	Partially Completed
56.	6/14	-do-	-do-	03/06/22	Partially Completed
57.	6/15	-do-	Stairs spanning longitudinally.	06/06/22	Completed
58.	7/1	Design of Axially loaded Columns & Footings (LSM)	Assumptions in limit state	07/06/22	Partially Completed
59.	7/2	-do-	-do-	08/06/22	Partially Completed

SL NO.	Lect. No.	Module	Lecture Details	Lect. Date	Status
60.	7/3	-do-	limit state of collapse- Compression.	09/06/22	Partially Completed
61.	7/4	-do-	Detination and classifi--cation of Columns.	10/06/22	Partially Completed
62.	7/5	-do-	-do-	13/06/22	Partially Completed
63.	7/6	-do-	effective length of Columns.	17/06/22	Partially Completed
64.	7/7	-do-	Specification for Minimum reinforcement	20/06/22	Partially Completed
65.	7/8	-do-	Covers, Maximum reinforce--Ment.	21/06/22	Partially Completed
66.	7/9	-do-	Numbers of bars in rectangular.	22/06/22	Partially Completed
67.	7/10	-do-	Square and Circular Sections.	23/06/22	Partially Completed
68.	7/11	-do-	Diameter and spacing of lateral ties.	24/06/22	Partially Completed
69.	7/12	-do-	Analysis and design of axially loaded short square.	27/06/22	Partially Completed
70.	7/13	-do-	Rectangular and circular Column.	28/06/22	Partially Completed

Sl No	Lect No	Module	Lecture Details	Lect Date	Status
71.	7/14	-do-	Circular columns with lateral tiets only	29/06/22	Partially Completed
72.	7/15	-do-	—do—	29/06/22	Partially Completed
73.	7/16	-do-	Types of footing	29/06/22	Partially Completed
74.	7/17	-do-	Design of isolated square Column footing of Uniform	30/06/22	Partially Completed
75.	7/18	-do-	Thickness for flexure and shear	30/06/22	Completed

SUBJECT: HYDRAULICS & IRRIGATION ENGINEERING (TH2)

SEM - 4th

TH2. HYDRAULIC AND IRRIGATION ENGINEERING

SL No.	Lect. No.	Module	Lecture Details	Lect. date	Status
			PART: A (Hydraulics and Machines)		
01.	1/1	Hydrostatics	Properties of fluid: Density, Specific gravity	14/03/22	Partially Completed
02.	1/2	-do-	Properties of fluid: Surface tension	15/03/22	Partially Completed
03.	1/3	-do-	Properties of fluid: capillarity	16/03/22	Partially Completed
04.	1/4	-do-	Properties of fluid: Viscosity and their uses	21/03/22	Partially Completed
05.	1/5	-do-	Pressure and its Measurements: Intensity of Pressure	22/03/22	Partially Completed
06.	1/6	-do-	Atmospheric pressure, Absolute Pressure	25/03/22	Partially Completed
07.	1/7	-do-	Gauge Pressure, Absolute Pressure	28/03/22	Partially Completed
08.	1/8	-do-	Vacuum pressure; relationship between atmospheric Pressure.	29/03/22	Partially Completed
09.	1/9	-do-	Absolute Pressure and Gauge Pressure	30/03/22	Partially Completed
10.	1/10	-do-	Pressure head; Pressure Gauge	04/04/22	Partially Completed

Sl No.	Lect. No.	Module	Lecture Details	Lect. Date.	status
11.	1/11	-do-	Pressure exerted on an Immersed surface : Total Pressure, resultant Pressure.	05/04/22	Partially Completed
12.	1/12	-do-	Expression for total Pressure exerted on Horizontal and Vertical Surface.	06/04/22	Completed
13.	2/1	Kinematics Of fluid flow.	Basic equation of fluid and their application : Rate of discharge.	08/04/22	Partially Completed
14.	2/2	-do-	Equation of continuity of Liquid flow.	11/04/22	Partially Completed
15.	2/3	-do-	Total energy of a liquid in motion - potential.	12/04/22	Partially Completed
16.	2/4	-do-	Kinetic and Pressure	13/04/22	Partially Completed
17.	2/5	-do-	Bernoulli's theorem and its limitations.	18/04/22	Partially Completed
18.	2/6	-do-	Practical applications of Bernoulli's equation.	19/04/22	Partially Completed
19.	2/7	-do-	Flow over Notches and weirs: Notches.	20/04/22	Partially Completed

Sl No.	Lect. No.	Module	Lecture Details	Lect. Conducted Date	Status
20.	2/8	-do-	Weirs, types of notches and weirs.	22/04/22	Partially Completed
21.	2/9	-do-	Discharge through different types of notches.	25/04/22	Partially Completed
22.	2/10	-do-	Weirs - their application		Partially Completed
23	2/11	-do-	Types of flow through the pipes	26/04/22	Partially Completed
24.	2/12	-do-	Uniform and non uniform	27/04/22	Partially Completed
25.	2/13	-do-	Laminar and turbulent	29/04/22	Partially Completed
26.	2/14	-do-	steady and Unsteady	02/05/22	Partially Completed
27.	2/15	-do-	steady and Reynod's number and its application	04/05/22	Partially Completed
28.	2/16	-do-	Different types of Major and Minor losses.	06/05/22	Partially Completed
29.	2/17	-do-	Total energy lines and Hydraulic gradient line	09/05/22	Partially Completed
30.	2/18	-do-	Types of channel sections - rectangular.	10/05/22	Completed

Sl. No.	Lect. No.	Module	Lecture Details	Lect. Date	status
31.	3/1	Pumps	Best economical section	11/05/22	Partially Completed
32.	3/2	-do-	Types of Pumps	13/05/22	Partially Completed
33.	3/3	-do-	Centrifugal Pump : Besic Poinciples	17/05/22	Partially Completed
34.	3/4	-do-	Operation, discharge, horse powes & effciency.	18/05/22	Partially Completed
35.	3/5	-do-	Reciprocating Pumps : types, Operation, dischasge, horse power and effciency.	20/05/22	Completed
			PART : B (Irrigation Engineering)	~~20/05/22~~	
01.	1/1	Hydrology	Hydrology Cycle	24/05/22	Partially Completed
02.	1/2	-do-	Rainfall : types, intensity, hyetograph.	25/05/22	Partially Completed
03.	1/3	-do-	Estimation of Rainfall, rain gauges, its types (concept Only)	26/05/22	Partially Completed
04.	1/4	-do-	Concept of catchment area types, run-off.	27/05/22	

Sl. No.	Lect. No.	Module	Lecture Details	Lect. Date	status
			estimation of flood discharge by Dicken's and Ryve's formulae		Completed
05.	2/1	Water Requirement of Crops	Definition of irrigation, necessity, benefits of irrigation, types of irrigation	31/05/22	Partially Completed
06.	2/2	-do-	Crop Season	01/06/22	Partially Completed
07.	2/3	-do-	Duty, Delta and base period their relationship, Overlap allowance, Kharif and rabi Crops.	02/06/22	Partially Completed
08.	2/4	-do-	Gross Command area, culturable Command area, intensity of irrigation, irrigable area, time factor, Crop ratio.	03/06/22	Completed
09.	3/1	Flow Irrigation	Canal Irrigation, types of Canals.	06/06/22	Partially Completed
10.	3/2	-do-	Loss of water in canals	07/06/22	Partially Completed
11.	3/3	-do-	Perennial Irrigation	08/06/22	Partially Completed

		Module	Lecture Details	Lect. Date	Status
12.	3/4	-do-	Different Components of irrigation canals and their functions.	09/06/22	Partially Completed
13.	3/5	-do-	Sketches of different canal according to their alignment, various	10/06/22	Partially Completed
14.	3/6	-do-	Classification of Canals according to their alignment,	13/06/22	Partially Completed
15.	3/7	-do-	Various types of canal lining - Advantages and disddvantages	13/06/22	Completed
16.	4/1	Water Logging & Drainage:	Causes and effects of water logging	17/06/22	Partially Completed
17.	4/2	-do-	Detection, Prevention and Remedies.		Completed
18.	5/1	Diversion head Works and Regulatory structures	Necessity and Objectives of diversion head works	20/06/22	Partially Completed
19.	5/2	-do-	Weirs and barrages		Partially Completed
20.	5/3	-do-	General layout	21/06/22	Partially Completed

Sl No.	Lect. No.	Module	Lecture Details	Lect. Date	
21.	5/4	-do-	Functions of different parts of barrage.	22/06/22	Partially Completed
22.	5/5	-do-	-do-		Partially Completed
23.	5/6	-do-	silting and scouring	23/06/22	Partially Completed
24.	5/7	-do-	-do-		Partially Completed
25.	5/8	-do-	Functions of regulatory structures.	24/06/22	Completed
26.	6/1	Cross Drainage Works:	Functions and necessity		Partially Completed
27.	6/2	-do-	-do-		Partially Completed
28.	6/3	-do-	Cross drainage works	27/06/22	Partially Completed
29.	6/4	-do-	-do-		Partially Completed
30.	6/5	-do-	Aqueduct, siphon		Partially Completed
31.	6/6	-do-	Super pag passage		Partially Completed

Sl No.	Lect. No.	Module	Lecture Details	Lect. Date	Status
32.	6/7	-do-	Level Crossing	28/06/22	Partially Completed
33.	6/8	-do-	Concept of each with help of neat sketch		Completed
34.	7/1	DAMS	Necessity of storage reservoirs	28/06/22	Partially Completed
35.	7/2	-do-	-do-		Partially Completed
34.	7/3	-do-	types of dams	28/06/22	Partially Completed
35.	7/4	-do-	Earthen dams: types	29/06/22	Partially completed
36.	7/5	-do-	Description	29/06/22	Partially Completed
37.	7/6	-do-	Causes of failure and Protection Measures.		Partially Completed
38.	7/7	-do-	Gravity dam - tapes Description, Causes of failure and protection Measures.	30/06/22	Partially Completed
39.	7/8	-do-	Spillway - Types (With sketch) and necessity		Completed

SUBJECT: LAND SURVEY-I (TH3)

SEM: 4th

TH3. LAND SURVEY-I

Sl No	Lect. No.	Module	Lecture Details	Lect. date.	Status
01.	1/1	Introduction To Surveying, Linear Measurements	Surveying: Detination, Aims and Objectives.	14	Partially Completed
02.	1/2	-do-	Principles of Survey.	15	Partially Completed
03.	1/3	-do-	Plane surveying, Geodetic Surveying, Instrumental Surveying	16	Partially Completed
04.	1/4	-do-	Precision and accuracy of Measurements	17	Partially Completed
05.	1/5	-do-	Instruments used for measurement of distance, Type of tapes and chains	20	Partially Completed
06.	1/6	-do-	Errors and mistakes in liner Measurement - Classification, Sources of errors and remedies	22	Partially Completed
07	1/7	-do-	Corrections to measured lengths due to - incorrect length, temperature variation, Pull, Sag, Numerical problem applying.	23	Completed

Sl. No	Lect No.	Module	Lecture Details	Lect. Date	Status
08.	2/1	Chaining & chain Surveying	Equipment and accessories for chaining.	24	Partially Completed
09.	2/2	-do-	Ranging - Purpose, signaling, direct and indirect ranging, Line ranges features and use, error due to incorrect ranging.	25	Partially Completed
10.	2/3	-do-	Methods of chaining - chaining on flat ground, chaining on sloping ground stepping Method, Clinometer- features and use, slop Correction.	28	Partially Completed
11.	2/4	-do-	Setting perpendicular with chain and tape, chaining across obstacles.	29	Partially Completed
12.	2/5	-do-	Purpose of chain Surveying, its Principles, Concept of tiled block. Section of survey stations, base line tie lines, check line,	30	Partially Completed
13.	2/6	-do-	Offsets - Necessity, Perpendicular and oblique offsets, instuments for setting offset - Cross staff Optical Square.	31	Partially Completed

Sl No.	Lect. No.	Module	Lecture Details	Lect. Date.	Status
14.	2/7	-do-	Error in chain surveying - Compensation and accumulative errors Causes and remedies, precautions to be taken during chain surveying.	04/04/22	Completed
15.	3/1	Angular Measurement And Compas Surveying	Measurment of angles with chain, tape and Compass	05/04/22	Partially Completed
16.	3/2	-do-	Compass - Types, features parts, Merits & demerits, testing and Adjustment of Compass.	06/04/22	Partially Completed
17.	3/3	-do-	Designation of angles. - Concept of Meridians - Magnetic, True, arbitrary	07/04/22	Partially Completed
18.	3/4	-do-	Concept of Fore bearing, Back Bearing, Numerical Problems on computation of interior and exterior angles from bring.	08/04/22	Partially Completed
19.	3/5	-do-	Effects of earths Magnetism Dip of needle, Magnetic declination, variation in delination, numerical Problems on application of Correction for declination.	11/04/22	Partially Completed

20.	3/6
21.	3/7
22.	3/8
23.	3/9
24.	3/10
25.	3/11
26.	3/12
27.	4/1

			Lecture Details	Lect. Date.	Status
20.	3/6	-do-	Errors in angle Measurement with Compass - sources and remedies.	12/04/22	Partially Completed
21.	3/7	-do-	Principles of traversing - Open and Closed traverse, Methods of traversing.	13/04/22	Partially Completed
22.	3/8	-do-	-do-	18/04/22	Partially Completed
23.	3/9	-do-	Local attraction - causes, detection, errors, Correction, Numerical Problems of application of correction due to local attraction.	19/04/22	Partially Completed
24.	3/10	-do-	Errors in Compass Surveying - Sources & remedies.	20/04/22	Partially Completed
25.	3/11	-do-	Plotting of traverse - check of closing error in closed	21/04/22	Partially Completed
26.	3/12	-do-	Open traverse, Bowditch's Correction, Gales table.	22/04/22	Completed
27.	4/1	Map Reading Cadastral Maps and Compas Surveying, Nomencla-ture.	Study of direction, Scale	25/04/22	Partially Completed

Sl No	Lect No.	Module	Lecture Details	Lect Date	Status
28.	4/2	-do-	Grid Reference and Grid Square Study of Signs & Symbols.	26/04/22	Partially Completed
29.	4/3	-do-	Cadastral Map Preparation Methodology	27/04/22	Partially Completed
30.	4/4	-do-	Unique identification Number of Parcel.	28/04/22	Partially Completed
31.	4/5	-do-	Positions of existing Control Points and its types.	29/04/22	Partially Completed
32.	4/6	-do-	Adjacent Boundaries and features, Topology Creation and verification.	02/05/22	Partially Completed
33.	4/7	-do-	-do-	04/05/22	Completed
34.	5/1	Plane Table Surveying	Objectives, Principles and use of Plane table Surveying.	05/05/22	Partially Completed
35.	5/2	-do-	-do-	06/05/22	Partially Completed
36.	5/3	-do-	Instruments and accessories used in Plane table Surveying.	09/05/22	Partially Completed
37.	5/4	-do-	Methods of plane table Surveying	10/05/22	Partially Completed

Sl NO	Lect NO.	Module	Lecture Details	Lect. Date.	status
38.	5/5	-do-	(i) Radiation (ii) Intersection (iii) Traversing (iv) Resection	11/05/22	Partially Completed
39.	5/6	-do-	Statements of TWO POINT and THREE POINT PROBLEM.	12/05/22	Partially Completed
40	5/7	-do-	Errors in plane table surveying and their Corrections, Precautions in Plane table surveying.	13/05/22	Completed
41.	6/1	Theodolite Surveying And Traversing	Purpose and definition of theodolite surveying.	17/05/22	Partially Completed
42.	6/2	-do-	Transit theodolite - Description of features, Component parts, fundamental.	18/05/22	Partially Completed
43.	6/3	-do-	axes of a theodolite, Concept of vernier, reading a Vernier, Temporary adjustMent of theodolite.	19/05/22	Partially Completed
44.	6/4	-do-	Concept of transting - Measurement of Horizontal and vertical angles.	20/05/22	Partially Completed

Sl No	Lect. No.	Module	Lecture Details	Lect. Date.	Status
45	6/5	-do-	Measurement of Magnetic bearings, deflection angle, direct angle, setting out angle.	23/05/22	Partially Completed
46.	6/6	-do-	Prolonging a straight line with theodolite. Errors in Theodolite observations.	24/05/22	Partially Completed
47.	6/7	-do-	Methods of theodolite traversing.	25/05/22	Partially Completed
48	6/8	-do-	Inclined angle method, deflection angle Method, bearing Method, Plotting the travers by coordinate Method.	26/05/22	Partially Completed
49.	6/9	-do-	checks for open and closed traverse.	27/05/22	Partially Completed
50.	6/10	-do-	Traverse Computation - Consecutive Coordinates, latitude and departure;	31/05/22	Partially Completed
51.	6/11	-do-	Gale's traverse table.	01/06/22	Partially Completed
52.	6/12	-do-	Numerical problems on Omitted Measurement of lengths and bearings.	02/06/22	Partially Completed

SL NO.	Lect NO.	Module	Lecture Details	Lect. Date.	Status
53.	6/13	-do-	Closing error - adjustment of angular errors, adjustment of bearings, numerical problems	03/06/22	Partially Completed
54.	6/14	-do-	Balancing of traverse - Bowditch's Method.	06/06/22	Partially Completed
55.	6/15	-do-	Transit Method, graphical Method, axis Method, Calculation of area of closed traverse.	07/06/22	Completed
56.	7/1	Levelling And Contouring	Definition and purpose and types of leveling	08/06/22	Partially Completed
57.	7/2	-do-	Concepts of level surface, Horizontal surface, Vertical surface, Datum, R.L., BM.	09/06/22	Partially Completed
58.	7/3	-do-	Instruments used for Levelling, Concepts of line of collimation, axis of bubble tube, axis of telescope, Vertical axis.	10/06/22	Partially Completed
59.	7/4	-do-	Levelling staff - Temporary adjustments of level, taking reading with Level, Concept of bench Mark, BS, IS, FS, CP, HI.	13/06/22	Partially Completed

Sl No	Lect No.	Module	Lecture Details.	Lect. Date.	Status
60.	7/5	-do-	Field data entry - level Book - height of collimation, axis of bubble tube	13/06/22	Partially Completed
61.	7/6	-do-	Height of Collimation Method and Rise and Fall Method, Comparison, Numerical Problems on reduction of level, taking	20/06/22	Partially Completed
62.	7/7	-do-	Effects of Curvature and refraction, Numerical problems on application of Correction.		Partially Completed
63.	7/8	-do-	Reciprocal Leveling - Principles, Methods, Numerical Problems, Precise leveling.	21/06/22	Partially Completed
64.	7/9	-do-	Errors in leveling and Precautions, Permanent and temporary adjustments of different types of levels.		Partially Completed
65.	7/10	-do-	Definations, Concepts and chapter of Contours.	22/06/22	Partially Completed
66.	7/11	-do-	Methods of contouring, plotting Contour map, Interpretation of contour maps, toposheets.		Partially Completed

	Lect No.	Module	Lecture Details	Lect. Date.	Status
67.	7/12	-do-	Use of Contour maps on civil engineering Projects - drawing Cross sections from contour maps.	23/06/22	Partially Completed
68.	7/13	-do-	locating proposal routes of roads / railway / canal on a Countour map.		Partially Completed
69	7/14	-do-	Map Interpretation : Interpret Human and Economic Activities	24/06/22	Partially Completed
70.	7/15	-do-	Interpret Physical landform, Problem Solving and Decision Making.		Completed
71.	8/1	Computation of area and Volume	Determination of areas,	27/06/22	Partially Completed
72.	8/2	-do-	Computation of areas from plans.	28/06/22	Partially Completed
73	8/3	-do-	Calculation of area by using ordinate rule, trapezoidal rule, Simpson's rule.	29/06/22	Partially Completed
74.	8/4	-do-	Calculation of volumes by prismoidal formula and trapezoidal formula	30/06/22	Partially Completed
75.	8/5	-do-	Prismoidal Corrections.		Completed

SUBJECT: HIGHWAY ENGINEERING (TH 4)

SEM: 4th

TH4: HIGHWAY ENGINEERING

Sl No.	Lect. No.	Module	Lecture Details	Lect. Date.	Status
01.	1/1	Introduction	Importance of Highway transportation: Importance Organizations like Indian road Congress.	14/03/22	Partially Completed
02.	1/2	-do-	Ministry of surface transportation, central Road Research Institute.	15/03/22	Partially Completed
03	1/3	-do-	Functions of Indian Roads Congress	16/03/22	Partially Completed
04	1/4	-do-	IRC classification of Roads	17/03/22	Partially Completed
05.	1/5	-do-	Organisation of state highway department.	21/03/22	Completed
06.	2/1	Road Geometrics	Glossary of terms uses in geometric and their importance.	22/03/22	Partially Completed
07.	2/2	-do-	-do-	23/03/22	Partially Completed
08.	2/3	-do-	Right of way.	24/03/22	Partially Completed
09.	2/4	-do-	Formation Width.	25/03/22	Partially Completed
10.	2/5	-do-	Road Magin	28/03/22	Partially Completed

Sl No.	Lect. No.	Module	Lecture Details	Lect. Date.	Status
11.	2/6	-do-	Road Shoulder	29/03/22	Partially Completed
12.	2/7	-do-	Carriage Way	30/03/22	Partially Completed
13.	2/8	-do-	Side Slopes, Kerbs	31/03/22	Partially Completed.
14.	2/9	-do-	Formation Level	04/04/22	Partially Completed
15.	2/10	-do-	Camber and gradient	05/04/22	Partially Completed
16.	2/11	-do-	-do-	06/04/22	Partially Completed
17.	2/12	-do-	Design and average running Speed.	07/04/22	Partially Completed
18.	2/13	-do-	Stopping and passing sight distance.	08/04/22	Partially Completed
19.	2/14	-do-	Necessity of Curves.	11/04/22	Partially Completed
20.	2/15	-do-	-do-	12/04/22	Partially Completed
21.	2/16	-do-	Horizontal and vertical including transition Curves.	13/04/22	Partially Completed

Sl No	Lect. No.	Module	Lecture Details	Lect. Date.	Status
22.	2/17	-do-	Super elevation	18/04/22	Partially Completed
23.	2/18	-do-	Camber of direction	19/04/22	Partially Completed
24.	2/19	-do-	Methods of providing Super-elevation.	20/04/22	Partially Completed
25.	2/20	-do-	-do-	21/04/22	Completed
26.	3/1	Road Materials	Difference types of road Materials in use.	25/04/22	Partially Completed
27.	3/2	-do-	Soil, aggregates and binders.	26/04/22	Partially Completed
28.	3/3	-do-	Function of soil as highway subgrade.	27/04/22	Partially Completed
29.	3/4	-do-	California Bearing Ratio	28/04/22	Partially Completed
30.	3/5	-do-	Methods of finding CBR valued in the Laboratory	29/04/22	Partially Completed
31.	3/6	-do-	At site and their significance	02/05/22	Partially Completed
32.	3/7	-do-	Testing aggregates: Abrasion test, impact test Crushing strength test.	03/05/22	Partially Completed

Sl No	Lect. No.	Module	Lecture Details	Lect. Date	Status
33	3/8	-do-	Water absorption test	04/05/22	Partially Completed
34	3/9	-do-	Soundness test.	05/05/22	Completed
35	4/1	Road Pavements.	Road Pavement: Flexible and rigid pavement, their merits and demerits typical cross-section, function	06/05/22	Partially Completed
	4/2	-do-	Sub-grade Preparation: Flexible and rigid Pavements.	09/05/22	Partially Completed
	4/3	-do-	Construction of embankment, Compaction	10/05/22	Partially Completed
	4/4	-do-	stabilization, Preparation of Subgrade,	11/05/22	Partially Completed
	4/5	-do-	Construction of embankment	12/05/22	Partially Completed
	4/6	-do-	Gradient and alignment as per recommendations of IRC.	13/05/22	Partially Completed
	4/7	do	equipment used for Subgrade preparation.	17/05/22	Partially Completed
	4/8	-do-	Sub base Course: Necessity of Sub base, stabilized sub base.	18/05/22	Partially Completed

Sl No	Lect. No.	Module	Lecture Details	Lect. Date	Status
43	4/9	-do-	Types of stabilization • Mechanical stabilization • Lime stabilization • Cement stabilization • Fly ash stabilization	19/05/22	Partially Completed
44	4/10	-do-	Base soling, stone soling Preparation of base course Water Bound Macadam and wet-mix macdam.	20/05/22	Partially Completed
45.	4/11	-do-	Bituminous Constructions: Different types.	23/05/22	Partially Completed
46.	4/12	-do-	Surfacing: • Surface dressing (i) Premix carpet. (ii) Semi dense carpet.	24/05/22	Partially Completed
47.	4/13	-do-	• Bituminous Concrete • Grouting	25/05/22	Partially Completed
48.	4/14	-do-	Rigid Pavements: Concept of Concrete roads as per IRC specifications.	26/05/22	Completed
49.	5/1	Hill Roads:	Introduction	27/05/22	Partially Completed
50.	5/2	-do-	Typical cross-sections showing all details of a typical hill road in cut.	31/05/22	Partially Completed

	Lect. No.	Module	Lecture Details	Lect. Date.	Status
	513	-do-	Partly in cutting and Partly in filling.	01/06/22	Partially Completed.
2.	514	-do-	Breast walls	02/06/22	Partially Completed
3.	515	-do-	-do-	03/06/22	Partially Completed
4.	516	-do-	Retaining Walls	06/06/22	Partially Completed
5.	517	-do-	Different types of bends	07/06/22	Completed
6.	611	Road Drainage	Necessity of road drainage Work.	08/06/22	Partially Completed
7.	612	-do-	Cross drainage works.	09/06/22	Partially Completed
8.	613	-do-	Surface and Sub-Surface drains and storm water drains.	10/06/22	Partially Completed
9.	614	-do-	Location, Spacing and typical details of side drains.	13/06/22	Partially Completed
10.	615	-do-	Side ditches for Surface drainage		Partially Completed
11.	616	-do-	Intercepting drains, Pipe drains in hill roads, details of drains in Cutting		Partially Completed

Sl No	Lect. No.	Lect. Module	Lecture Details	Lect. Date	Status
			embankment.		
62.	617	-do-	Typical cross sections.		Completed
63.	711	Road Maintenance:	Common types of road failures		Partially Completed
64.	712	-do-	Their causes and remedies		Partially Completed
65.	713	-do-	Maintenance of Bituminous road such as Patch work and resurfacing.		Partially Completed
66.	714	-do-	Maintenance of Concrete Road such as patch work		Partially Completed
67.	715	-do-	filling cracks, repairing joints, Maintenance of Shoulders (berm), Maintenance of traffic Control devices.		Partially Completed
68.	716	-do-	Basic Concept of traffic study.		Partially Completed
69.	717	-do-	Traffic safety and traffic Control signal.		Completed
70.	811	Construction equipments:	Preliminary ideas of the following plant and equipment.		Partially Completed

	Module	Lecture Details	Lect. date	Status
2	-do-	Hot mixing plant.		Partially Completed
3	-do-	Tipper, tractors (wheel and crawler) & scraper, Bulldozer.		Partially Completed
4	-do-	Dumpers, shovels, graders, Rolle dragline.		Partially Completed
5	-do-	Asphalt mixer and tar boilers		Partially Completed
16	-do-	Road Pavers		Partially Completed
17	-do-	Modern Construction equipments for roads.		Completed

SUBJECT : LAND SURVEY PRACTICE (Pr.1)

SEM : 4th

Pr1. LAND SURVEY PRACTICE-I

Sl No.	Lect. No.	Module	Lecture Details	Lect. Date.	Status
01.	1/1	Linear Measurements, Chaining & Chain Surveying	Testing and adjusting of a metric chain. Measurement of distance between two points with chain including direct ranging.	15/03/22	Partially Completed
02.	1/2	-do-	Setting out different types of triangles, given the lengths of sides with chain and tape.	15/03/22	Partially Completed
03.	1/3	-do-	Measurement of distance between two points by chaining across a sloped ground using stepping Meathod and a clinometer.	15/03/22	Partially Completed
04.	1/4	-do-	Measurement of distance by chaining across a obstacles on the chain line (i) a pond (ii) a building (iii) a stream / river.	17/03/22	Partially Completed
05.	1/5	-do-	Setting Perpendicular offsets to various objects (at least 3) from a chain line - (1) tape, (2) Cross-staff, (3) Optical square and Comparing the accuracy of the 3 methods.	17/03/22	Completed.

Sl No.	Lect. No.	Module	Lecture Details	Lect. Date.	Status
06.	211	Angular Measurement and Compass Surveying.	Testing and adjustment of prismatic Compass	17/03/22	Partially Completed
07.	212	-do-	Surveyor's Compass	22/03/22	Partially Completed.
08.	213	-do-	Measurement of bearings of lines (at least 3 lines)	22/03/22	Partially Completed
09.	214	-do-	Determination of included angles using prismatic Compass	22/03/22	Partially Completed
10.	215	-do-	Surveyor's Compass	24/03/22	Partially Completed
11.	216	-do-	Setting out a closed traverse of 5 sides.	24/03/22	Partially Completed
12.	217	-do-	Setting out triangles (at least 2) with Compass	24/03/22	Partially Completed
13.	218	-do-	given the length and bearing of one side and included angles.	26/03/22	Partially Completed
14.	219	-do-	Using Prismatic Compass	26/03/22	Partially Completed
15.	2110	-do-	Given bearing of one line	26/03/22	Partially Completed

Sl No	Lect. No.	Module	Lecture Details	Lect. Date	Status
16.	2/11	-do-	Conducting chain and compass traverse surveying in a given plot of area (2 plots).	29/03/22	Partially Completed
17.	2/12	-do-	Recording data in the field book. (5 to 6 students / groups)	29/03/22	Completed
18.	3/1	Map Reading Cadastral Maps and Nomenclature:	study of direction, scale.	29/03/22	Partially Completed
19.	3/2	-do-	Grid Reference and Grid Square.	31/03/22	Partially Complete
20.	3/3	-do-	Study of Signs and Symbols.	31/03/22	Partially Completed
21.	3/4	-do-	Cadastral Map Preparation Methodology.	31/03/22	Partially Completed
22.	3/5	-do-	Unique identification number of parcel	02/04/22	Partially Completed
23.	3/6	-do-	Positions of existing control points and its types.	02/04/22	Partially Completed
24	3/7	-do-	Adjacent Boundaries and features.	02/04/22	Partially Completed

Lect. No.	Module	Lecture Details	Lect. Date	Status
3/8	-do-	Topology Creation and verification.	05/04/22	Completed
4/1	Plane Table Surveying	Setting up of plane table and plotting five points by radiation	05/04/22	Partially Completed
4/2	-do-	-do-	05/04/22	Partially Completed
4/3	-do-	Radiation Method and five inaccessible points by intersection method.	07/04/22	Partially Completed
4/4	-do-	-do-	07/04/22	Partially Completed
4/5	-do-	Conducting plane table surveying in a given plot of area by traversing	07/04/22	Partially Completed
4/6	-do-	Atleast a 5-sided traverse	09/04/22	Partially Completed
4/7	-do-	-do-	09/04/22	Partially Completed
4/8	-do-	-do-	09/04/22	Partially Completed
4/9	-do-	Plane table Surveying by Resection Method	12/04/22	Partially Completed

Sl No	Lect. No.	Module	Lecture Details	Lect. Date	Status
35.	4/10	-do-	-do-	12/04/22	Partially Completed
36.	4/11	-do-	Two point problem method.	12/04/22	Partially Completed
37.	4/12	-do-	Three point problem method.	16/04/22	Completed
38.	5/1	Theodolite Traversing	Measurement of horizontal angles (3nos) by repetition	16/04/22	Partially Completed
39.	5/2	-do-	Five inaccessible points by intersection points, Compare two methods.	16/04/22	Partially Completed
40.	5/3	-do-	Prolonging a given straight line with the help of a theodolite.	19/04/22	Partially Completed
41.	5/4	-do-	Determination of magnetic bearing of 3 given straight line.	19/04/22	Partially Completed
41.	5/5	-do-	Setting out a closed traverse with 6 sides and entering the field data.	19/04/22	Partially Completed.
42.	5/6	-do-	-do-	29/04/22	Partially Completed

Sl No.	Lect No.	Module	Lecture Details	Lect. Date	Status
43.	5/7	-do-	Plotting the traverse from exercise 4.1.	21/04/22	Partially Completed
44.	5/8	-do-	Checking the error of Closure.	21/04/22	Partially Completed
45.	5/9	-do-	Setting out an open traverse with 5 sides and entering the field data.	23/04/22	Partially Completed
46.	5/10	do	Plotting the traverse from exercise 4.3 and checking the error of closure.	23/04/22	Completed
47.	6/1	Levelling and Contouring	Making temporary adjustments of Levels.	23/04/22	Partially Completed
48.	6/2	-do-	Determining the difference of levels between two points by taking staff readings from single set up of level.	26/04/22	Partially Completed.
49.	6/3	-do-	Readings in level book and Application of Arithmetic check.	28/04/22	Partially Completed
50.	6/4	-do-	Determining Reduced Levels between five given points taking staff readings with Levels.		Partially Completed

Sl No	Lect. No	Module	Lecture Details	Lect. Date	Status
51.	615	-do-	Conduct Fly Leveling between two distant points with respect to R.L. of a given B.M. and reduction of levels by both height of collimation and rise & fall method and applying Arithmetic check.	-ob-	Partially Completed
52.	616	-do-	Conduct profile leveling along the given alignment for a road/ canal for 150m Length, taking L.S. at every 15m and C.S. at 1m & 3m aparts on both sides at every 30m interval and recording the data in level book and applying Arithmetic check.	30/04/22	Partially Completed
53.	617	-do-	Locating contour points in the given area by direct Method /indirect Method.	-ob-	Partially Completed
54.	618	-do-	Conducting block level Survey in the given area.	-ob-	Partially Completed
55.	619	-do-	Plotting and drawing Contour map of a given area by radial method.	05/05/22	Partially Completed
56.	6110	-do-	Map Interpretation: Interpret Human and		Partially Completed

Sl No	Lect. No.	Module	Lecture Details	Lect. Date	Status
57.	6/11	-do-	Economic Activities (i.e., settlement, Communication, Land use e.t.c)		Partially Completed
58.	6/12	-do-	Interpret physical landform (i.e.: Relief, Drainage, Pattern e.t.c), Problem Solving & Desision Making	07/05/22	Completed
59.	7/1	Basics of Aerial Photography	Film		Partially Completed
60.	7/2	-do-	-do-		Partially Completed
61.	7/3	-do-	-do-	10/05/22	Partially Completed
62.	7/4	-do-	Focal Length		Partially Completed
63.	7/5	-do-	-do-		Partially Completed
64.	7/6	-do-	-do-	12/05/22	Partially Completed
65.	7/7	-do-	Scale		Partially Completed
66.	7/8	-do-	-do-		Partially Completed

Sl No	Lect. No.	Module	Lecture Details	Lect. Date	Status
67.	7/9	-do-	Types of Aerial Photographs (Oblique, straight).	14/05/22	Completed
68.	8/1	Basics of Photogrammetry, DEM and Ortho image generation.	Photogrammetry		Partially Completed
69.	8/2	-do-	-do-		Partially Completed
70.	8/3	-do-	Classification of Photogrammetry.	17/05/22	Partially Completed
71.	8/4	-do-	-do-		Partially Completed
72.	8/5	-do-	-do-		Partially Completed
73.	8/6	-do-	Aerial Photogrammetry	19/05/22	Partially Completed
74.	8/7	-do-	-do-		Partially Completed
75.	8/8	-do-	Terestrial Photogrammetry		Partially Completed

Sl. No.	Lect No.	Module	Lecture Details	Lect. Date.	Status
76.	8/9	-do-	-do-	21/05/22	Partially Completed
77.	8/10	-do-	-do-		Partially Completed
78.	8/11	-do-	Photogrammetry Process:		Partially Completed
79.	8/12	-do-	-do-	24/05/22	Partially Completed
89.	8/13	-do-	Acquisition of imagery		Partially Completed
90.	8/14	-do-	-do-		Partially Completed
91.	8/15	-do-	Satellite Platform	26/05/22	Partially Completed
92.	8/16	-do-	-do-		Partially Completed
93.	8/17	-do-	-do-		Partially Completed
94.	8/18	-do-	Control Survey	31/05/22	Partially Completed
95.	8/19	-do-	-do-		Partially Completed

Sl No	Lect. No	Module	Lecture Details	Lect. Date	Status
96.	8/20	-do-	Geometric Distortion in imagery.	02/06/22	Partially Completed
97.	8/21	-do-	-do-		Partially Completed
98.	8/22	-do-	Application of imagery and its support data.		Partially Completed
99.	8/23	-do-	-do-	07/06/22	Partially Completed
100.	8/24	-do-	Orientation		Partially Completed
101.	8/25	-do-	Triangulation		Partially Completed
102.	8/26	-do-	Stereoscopic Measurement : X-Parallax & Y-Parallax	09/06/22	Partially Completed
103.	8/27	-do-	-do-	21/06/22	Partially Completed
104.	8/28	-do-	DTM/DEM Generation	23/06/22	Partially Completed
105.	8/29	-do-	-do-	28/06/22	Partially Completed
106.	8/30	-do-	Other Image Generation	30/06/22	Completed

SUBJECT : CIVIL ENGINEERING DRAWING-II
(Pr-2)

SEM : 4th

Pr2. CIVIL ENGINEERING DRAWING-II

St. No.	Sl. No.	Lect. No.	Module	Lecture Details	Lect. Date.	Status
6:9	01.	1/1	Detailed Drawing of Culvert	Half Foundation Plan	14/03/22	Partially Completed
9 6:	02.	1/2	-do-	-do-		Partially Completed
9	03.	1/3	-do-	-do-		Partially Completed
9 6'	04.	1/4	-do-	-do-	16/03/22	Partially Completed
10 7(	05.	1/5	-do-	Half top Plan		Partially Completed
1(7:	06.	1/6	-do-	-do-		Partially Completed
1(7:	07.	1/7	-do-	-do-	20/03/22	Partially Completed
10 7:	08.	1/8	-do-	Cross Sectional elevation		Partially Completed
1(7	09.	1/9	-do-	-do-		Partially Completed
1 7!	10.	1/10	-do-	-do-	23/03/22	Partially Completed
1	11.	1/11	-do-	longitudinal Section		Partially Completed

Sl No.	Lect. No.	Module	Lecture Details	Lect. Date	status
12.	1/12	-do-	-do-		Partially Completed
13.	1/13	-do-	-do-	28/03/22	Partially Completed
14.	1/14	-do-	RCC slab culvet with right angled wing wall		Partially Completed
15.	1/15	-do-	-do-		Partially Completed
16.	1/16	-do-	-do-	30/03/22	Partially Completed
17.	1/17	-do-	-do-		Partially Completed
18.	1/18	-do-	-do-		Partially Completed
19.	1/19	-do-	-do-	04/04/22	Partially Completed
20.	1/20	-do-	Hume Pipe culvert with splayed wing wall		Partially Completed
21	1/21	-do-	-do-		Partially Completed
22.	1/22	-do-	-do-	06/04/22	Partially Completed

Sl No.	Lect. No	Module	Lecture Details	Lect. Date.	Status
23.	1/23	-do-	-do-	11/04/22	Partially Completed
24.	1/24	-do-	-do-		Partially Completed
25.	1/25	-do-	-do-		Completed
26.	2/1	Irrigation Structures.	Detail drawing of a Vertical	13/04/22	Partially Completed
27.	2/2	-do-	-do-		Partially Completed
28.	2/3	-do-	-do-		Partially Completed
29.	2/4	-do-	-do-	18/04/22	Partially Completed
30.	2/5	-do-	-do-		Partially Completed
31.	2/6	-do-	-do-		Partially Completed
32.	2/7	-do-	-do-	20/04/22	Partially Completed
33.	2/8	-do-	-do-		Partially Completed

Sl No.	Lect. No	Module	Lecture Details	Lect. Date.	Status
34.	2/9	-do-	Vertical drop type fall (Sarada Type) from given Specifications.		Partially Completed
35.	2/10	-do-	-do-	25/04/22	Partially Completed
36.	2/11	-do-	-do-		Partially Completed
37.	2/12	-do-	-do-		Partially Completed
38.	2/13	-do-	-do-	27/04/22	Partially Completed
39.	2/14	-do-	-do-		Partially Completed
40.	2/15	-do-	-do-		Partially Completed
41.	2/16	-do-	-do-	02/05/22	Partially Completed
42.	2/17	-do-	-do-		Partially Completed
43.	2/18	-do-	-do-		Partially Completed
44.	2/19	-do-	-do-	04/05/22	Partially Completed

Sl No	Lect. No.	Module	Lecture Details	Lect. Date.	Status
45.	2/20	-do-	-do-		Partially Completed
46.	2/21	-do-	-do-		Partially Completed
47.	2/22	-do-	-do-	09/05/22	Partially Completed
48.	2/23	-do-	-do-		Partially Completed
49.	2/24	-do-	-do-		Partially Completed
50.	2/25	-do-	-do-	11/05/22	Partially Completed
51.	2/26	-do-	Drawing of a Drainage siphon from given Specifications		Partially Completed
52.	2/27	-do-	-do-		Partially Completed
53.	2/28	-do-	-do-	18/05/22	Partially Completed
54.	2/29	-do-	-do-		Partially Completed
55.	2/30	-do-	-do-		Partially Completed

Sl No	Lect. No.	Module	Lecture Details	Lect. Date	Status
56.	2/31	-do-	-do-	23/05/22	Partially Completed
57.	2/32	-do-	-do-		Partially Completed
58.	2/33	-do-	-do-		Partially Completed
59.	2/34	-do-	-do-	25/05/22	Partially Completed
60.	2/35	-do-	-do-		Completed
61.	3/1	Plumbing and Sanitary Connections	Plumbing and Sanitary Connections		Partially Completed
62.	3/2	-do-	-do-	01/06/22	Partially Completed
63.	3/3	-do-	-do-		Partially Completed
64.	3/4	-do-	-do-		Partially Completed
65.	3/5	-do-	-do-	06/06/22	Partially Completed
66.	3/6	-do-	Fittings of a two roomed building.		Partially Completed

	Lect. No.	Module	Lecture Details	Lect. Date.	Status
67.	3/7	-do-	-do-		Partially Completed
68.	3/8	-do-	-do-	08/06/22	Partially Completed
69.	3/9	-do-	-do-		Partially Completed
70.	3/10	-do-	-do-		Completed
71.	4/1	Septic tank up to 50 Users with Soak pit	Detailed drawing of Septic tank.	13/06/22	Partially Completed
72.	4/2	-do-	-do-		Partially Completed
73.	4/3	-do-	-do-	20/06/22	Partially Completed
74.	4/4	-do-	-do-		Partially Completed
75.	4/5	-do-	-do-	22/06/22	Partially Completed
76.	4/6	-do-	-do-		Partially Completed
77.	4/7	-do-	-do-		Partially Completed

SL NO	Lect NO.	Module	Lecture Details	Lect. Date	Status
78.	4/8	-do-	Septic tank up to 50 users with soak pit and necessary	27/06/22	Partially Completed
79.	4/9	-do-	-do-		Partially Completed
80.	4/10	-do-	-do-	29/06/22	Partially Completed
81.	4/11	-do-	-do-		Partially Completed
82.	4/12	-do-	-do-		Partially Completed
83.	4/13	-do-	-do-		Partially Completed
84.	4/14	-do-	-do-		Partially Completed
85.	4/15	-do-	Necessary Connection from the water closet.		Partially Completed
86.	4/16	-do-	-do-		Partially Completed
87.	4/17	-do-	-do-		Partially Completed
88.	4/18	-do-	-do-		Partially Completed

Sl. No.	Lect. No.	Module	Lecture Details	Lecture Date	Status
89.	4119	-do-	-do-		Partially Completed
90.	4120	-do-	-do-		Completed