

TH 1. LAND SURVEY - II

Sl. No.	Lect. No.	Module	Lecture Details	Lect. Date	Status
01	1/1	Tacheometry	Principles, stadia constants determination	14/03/22	Partially complete
02	1/2	-do-	-do-	15/03/22	complete
03	1/3	-do-	-do-	16/03/22	complete
04	1/4	-do-	Stadia tacheometry with staff held vertical and with line of collimation horizontal or inclined numerical Problems	17/03/22	Partially complete
05	1/5	-do-	-do-	18/03/22	Complete
06	1/6	-do-	-do-	22/03/22	Complete
07	1/7	-do-	Elevations and distances of staff stations - numerical Problems	23/03/22	Partially complete
08	1/8	-do-	-do-	24/03/22	complete
09	1/9	-do-	-do-	25/03/22	complete
10	2/10	Curves	Compound, reverse and transition curve, Purpose & use of different types of curves in field	28/03/22	complete
11	2/2	-do-	-do-	29/03/22	Partially complete

12	2/3	-do-	Elements of circular curves, numerical Problems	30/03/22	complete
13	2/4	-do-	-do-	31/03/22	Partially complete
14	2/5	-do-	Preparation of curve table for setting out	04/04/22	complete
15	2/6	-do-	Setting out of circular curve by chain and tape and by instrument angular methods (i) offsets from long chord (ii) successive bisection of arc, (iii) offsets from tangents (iv) offsets from chord produced (v) Rankine's method of tangent angles (No derivation)	05/04/22	complete
16	2/7	-do-	-do-	06/04/22	Partially complete
17	2/8	-do-	Obstacles in curve ranging - Point of intersection inaccessible	07/04/22	complete
18	3/1	Basics on scale and Basics of map.	Fractional or Ratio scale, Linear scale, Graphical scale, Graphical Scale, Physical Map,	08/04/22	Partially complete
19	3/2	-do-	-do-	11/04/22	Partially complete

20	3/3	- do -	What is Map, Map Scale and Map Projections. Topographic Map, Economic & Resources Map	12/04/22	Partially complete
21	3/4	- do -	- do -	13/04/22	Partially complete
22	3/5	- do -	How Maps convey Location and Extent. Road Map,	18/04/22	Partially complete
23	3/6	- do -	How Maps convey characteristics of features. Political Map,	19/04/22	Partially complete
24	3/7	- do -	- do -	20/04/22	Partially complete
25	3/8	- do -	How Maps convey Spatial Relationship. Thematic Map, Climate Map,	21/04/22	complete
26	4/1	Survey of India map Series	Open series map. Quadrangle Name, Latitude, Longitude, UTM's	22/04/22	Partially complete
27	4/2	- do -	- do -	25/04/22	Partially complete
28	4/3	- do -	- do -	26/04/22	Partially complete
29	4/4	- do -	- do -	27/04/22	Partially complete

30	4/5	-do-	Defense Series Map, Contour Lines, Magnetic Declination,	28/04/22	Partially complete
31	4/6	-do-	-do-	29/04/22	Partially complete
32	4/7	-do-	-do-	02/05/22	Partially complete
33	4/8	-do-	Map Nomenclature, Public Land Survey System Field Notes,	04/05/22	complete
34	4/9	-do-	-do-	05/05/22	Partially complete
35	4/10	-do-	-do-	06/05/22	complete
36	5/1	Basics of aerial Photography Photogram- metry, Dem and ortho image generation.	Aerial Photography: Film, focal Length, Scale 2: Types of Aerial Photographs (Oblique, straight)	09/05/22	Partially complete
37	5/2	-do-	-do-	10/05/22	Partially complete
38	5/3	-do-	-do-	11/05/22	Partially complete

39	5/4	-do-	Photogrammetry 1. classification of Photogrammetry 2. Aerial Photogrammetry 3. Terrestrial Photogrammetry	12/05/22	Partially complete
40	5/5	-do-	-do-	13/05/22	Partially complete
41	5/6	-do-	-do-	17/05/22	Partially complete
42	5/7	-do-	-do-	18/05/22	Partially complete
43	5/8	-do-	Photogrammetry Process: 1. Acquisition of Imagery using aerial and satellite platform 2. Control Survey 3. Geometric Distortion in Imagery. (4) DTM/DEM Generation (5) ortho Image	20/05/22	Partially complete
44	5/9	-do-	-do-	23/05/22	Partially complete
45	5/10	-do-	-do-	25/05/22	complete

46	6/1	Modern Surveying Methods:	Principles, features and use of (1) Micro-optic theodolite, digital theodolite.	26/05/22	Partially complete
47	6/2	-do-	-do-	31/05/22	Partially complete
48	6/3	-do-	-do-	01/06/22	Partially complete
49	6/4	-do-	-do-	02/06/22	Partially complete
50	6/5	-do-	-do-	03/06/22	Partially complete
51	6/6	-do-	Working principles of a total station (set up and use of total station to measure angles, distances of points under survey from total station and the co-ordinates (x, y & z or northing, easting, and elevation) of surveyed points relative to total station position using trigonometry and triangulation.	06/06/22	Partially complete
52	6/7	-do-	-do-	07/06/22	Partially complete

53	6/8	-do-	-do-	08/06/22	Partial complete
54	6/9	-do-	-do-	09/06/22	Partial complete
55	6/10	-do-	-do-	10/06/22	complete
56	7/7	Basics on Gps & DGPS and ETS.	GPS: Global Positioning 1. Working Principle of Gps, GPS signals	-ob-	Partial complete
57	7/2	-do-	-do-	13/06/22	Partial complete
58	7/3	-do-	GPS: Global Positioning 1. Expansion of GPS Positioning methods.	17/06/22	Partial complete
59	7/4	-do-	DGPS:- Differential Global Positioning System 1. Base station Setup 2. Rover GPS set up	17/06/22	Partial complete
60	7/5	-do-	DGPS:- Differential Global Positioning 1. Download, Post-Process and Export GPS data 2. Sequence to download GPS data from flashcards	17/06/22	Partial complete

61	7/6	- do -	DGPS:- Differential Global Positioning system 1. Sequence to Post-process GPS data. 2. Sequence to export post process GPS data 3. Sequence to export GPS Time tags to file	20/06/22	Partially complete
62	7/7	- do -	- do -	20/06/22	Partially complete
63	7/8	- do -	ETS:- Electronic Total station 1. Distance Measurement 2. Angle Measurement	21/06/22	Partially complete
64	7/9	- do -	ETS:- Electronic Total station 1. Leveling 2. Determining Position	21/06/22	Partially complete
65	7/10	- do -	ETS: Electronic Total station 1. Reference networks 2. Errors and Accuracy	22/06/22	complete
66	8/1	Basics of GIS and map preparation using GIS	Components of GIS, Integration of Spatial and Attribute Information	22/06/22	Partially complete

67	8/2	-do-	Three views of information system 1. Database or Table view Map view and Model view	23/06/22	Partial complete
68	8/3	-do-	Spatial Data Model	24/06/22	Partial complete
69	8/4	-do-	Attribute Data Management and Metadata concept	24/06/22	Partial complete
70	8/5	-do-	Prepare data and adding to Arc Map.	27/06/22	Partial complete
71	8/6	-do-	Organizing data as layers	28/06/22	partial complete
72	8/7	-do-	Editing the layers.	28/06/22	Partial complete
73	8/8	-do-	Switching to layout view.	29/06/22	Partial complete
74	8/9	-do-	Change page orientation Removing Borders.	29/06/22	Partial complete
75	8/10	-do-	Adding and editing map information. Finalize the map.	30/06/22	complete

TH2. CONSTRUCTION MANAGEMENT

Sl. No.	Lect. No.	Module	Lecture Details	Lect. Date	Status
01	1/1	Introduction to construction Management	Aims and objectives of construction management	14/03/22	Partially complete
02	1/2	- do -	Functions of construction management	15/03/22	Partially complete
03	1/3	- do -	The construction team components owner, engineer architect, contractor their functions and interrelationship and jurisdiction	16/03/22	Partially complete
04	1/4	- do -	Resources for construction management - men, machines materials, money.	17/03/22	Partially complete
05	2/1	Construction Planning	Importance of construction planning	20/03/22	Partially complete
06	2/2	- do -	Developing work breakdown structure for construction work	21/03/22	Partially complete
07	2/3	- do -	Construction planning stages - pre tender stage post-tender stage.	22/03/22	Partially complete
08	2/4	- do -	Construction schedules for labour materials machinery, finance for small	23/03/22	Partially complete

09	2/5	- do -	Construction scheduling by bar charts - preparation of Bar charts for simple construction works.	24/03/22	Partially complete
10	2/6	- do -	Limitation of Bar charts	28/03/22	Partially complete
11	2/7	- do -	construction scheduling by network techniques definition of terms PERT and CPM techniques advantages and disadvantages of two techniques, network analysis, estimation of time and critical path application of PERT and CPM techniques in sample construction works.	29/03/22	Complete
12	3/1	Materials and stores management	Classification of stones - storage of stock.	30/03/22	Partially complete
13	3/2	- do -	- do -	31/03/22	Partially complete
14	3/3	- do -	Issue of materials - inventory, invoice, bin card	04/04/22	Partially complete
15	3/4	- do -	- do -	05/04/22	complete

16	4/2	Construction site Management	Job lay out - objectives, Review plans, specifications Lay out of equipments.	06/04/22	Partially complete
17	4/2	-do-	-do-	07/04/22	Partially complete
18	4/3	-do-	Location of equipment, organizing labour at site	11/04/22	Partially complete
19	4/4	-do-	Job lay out for different construction sites.	12/04/22	Partially complete
20	4/5	-do-	Principle of storing material at site.	13/04/22	Complete
21	5/1	Construction organization	Introduction - characteristics structure, importance	18/04/22	Partially complete
22	5/2	-do-	Organization types - line and staff, functions and their characteristics.	19/04/22	Partially complete
23	5/3	-do-	Principles of organization meaning and significance of terms - control, authority responsibility, Job & task	20/04/22	Partially complete
24	5/4	-do-	Leadership - necessity, styles of leadership role of leader	27/04/22	Partially complete

25	5/5	-do-	Human relations-relations with subordinates, role of leader characteristics of group behavior mob psychology handling of grievances, absenteeism labour welfare.	25/04/22	Partially complete
26	5/6	-do-	Conflicts in organization genesis of conflicts types intrapersonal interpersonal, intergroup resolving conflicts	26/04/22	complete
27	6/1	Construction Labour and Labour Management	Preparing Labour schedule	27/04/22	Partially complete
28	6/2	-do-	Essential steps for optimum labour output	28/04/22	Partially complete
29	6/3	-do-	Labour characteristics		Partially complete
30	6/4	-do-	Wages & their payment	02/05/22	Partially complete
31	6/5	-do-	Labour incentives	04/05/22	Partially complete
32	6/6	-do-	Motivation classification of motives, different.	05/05/22	complete

33	7/2	Equipment Management	Preparing the equipment schedule	09/05/22	Partially complete
34	7/2	-do-	Identification of different alternative equipment	10/05/22	Partially complete
35	7/3	-do-	Importance of owning & operating costs in making decisions for hiring & purchase of equipment	11/05/22	Partially complete
36	7/4	-do-	-do-	12/05/22	Partially complete
37	7/5	-do-	Inspection and testing of equipment	17/05/22	Partially complete
38	7/6	-do-	Equipment maintenance	18/05/22	complete
39	8/2	Quality Control	Concept of quality in construction	19/05/22	Partially complete
40	8/2	-do-	-do-	23/05/22	Partially complete
41	8/3	-do-	Quality standards - during construction, after construction, destructive & non destructive methods.	27/05/22	Partially complete

42	8/4	-do-	Quality Standards - during construction, other construction, destructive & non destructive methods	25/05/22	Partially complete
43	8/5	-do-	-do-	26/05/22	complete
44	9/1	Monitoring Progress	Programme and progress of work	01/06/22	Partially complete
45	9/2	-do-	-do-	02/06/22	partially complete
46	9/3	-do-	Work Study	06/06/22	partially complete
47	9/4	-do-	-do-	07/06/22	partially complete
48	9/5	-do-	Analysis and control of physical and financial progress corrective measures.	08/06/22	partially complete
49	9/6	-do-	-do-	09/06/22	complete
50	10/1	Safety Management in construction	Importance of safety	13/06/22	partially complete

56	22/2	-do-	Earthquake hazard and vulnerability, Magnitude and intensity scales of earthquake, seismic zone, earthquake hazard maps types of structures and damages classification effects in housing and resistant measures	27/06/22	partially complete
57	22/3	-do-	Wind / cyclone hazard and vulnerability, wind speed and pressures, wind hazard and cyclone occurrence maps, storm surveys and cyclone resistant measures.	27/06/22	Partially complete
58	22/4	-do-	Flood hazard and vulnerability, flood hazard and flood prone areas of the country, General protection of habitants and flood resistant construction.	28/06/22	Partially complete
59	22/5	-do-	Landslides, Tsunamis and Thunderstorm hazards and vulnerability Landslide & Thunderstorm incidence maps,	29/06/22	Partially complete

60	72/6	-do-	Housing vulnerability risk tables and usage of vulnerability atlas of india Inclusion of vulnerability atlas in Tender documents	30/06/22	Complete
----	------	------	--	----------	----------

Th 3. ADVANCED CONSTRUCTION TECHNIQUES & EQUIPMENT

Sl. No.	Lect. No.	Module	Lecture details	Lect. date	Status
01	1/1	Advanced construction materials	Fibers and Plastics - Types of fibers - steel, carbon, glass fibers, use of fibers as construction material. Properties of fibers.	14/03/22	partially complete
02	1/2	- do -	- do -	15/03/22	partially complete
03	1/3	- do -	Fibers and plastics - Types of plastics - PVC, RPVC, HDPE, FRP, GFRP etc colored plastic sheets. use of plastic as construction material.	16/03/22	Partially complete
04	1/4	- do -	- do -	17/03/22	Partially complete
05	1/5	- do -	- do -	21/03/22	partially complete
06	1/6	- do -	Artificial Timbers Properties and uses of artificial timber. Types of artificial timber available in market, strength of artificial timber.	22/03/22	partially complete
07	1/7	- do -	- do -	23/03/22	partially complete

08	2/8	- do -	Miscellaneous materials Properties and uses of acoustics materials wall claddings, plaster boards micro-Silica artificial sand, bonding agents, adhesives etc.	24/03/22	Partially complete
09	7/9	- do -	- do -	28/03/22	Partially complete
10	7/10	- do -	- do -	29/03/22	Complete
11	2/11	Prefabrication	Introduction, necessity and scope of prefabrication of buildings, history of prefabrication current uses of prefabrication systems classification of prefabrication advantages and disadvantages of prefabrication,	30/03/22	Partially complete
12	2/12	- do -	- do -	31/03/22	Partially complete
13	2/13	- do -	- do -	04/04/22	Partially complete

14	2/4	-do-	The theory and process of prefabrication, design principle of prefabricated systems types of prefabricated elements modular coordination	05/04/22	partially complete
15	2/5	-do-	-do-	06/04/22	partially complete
16	2/6	-do-	-do-	07/04/22	partially complete
17	2/7	-do-	Indian standard recommendation for modular planning.	11/04/22	partially complete
18	2/8	-do-	-do-	12/04/22	complete
19	3/7	Earthquake Resistant construction	Building Configuration	13/04/22	Partially complete
20	3/2	-do-	-do-	18/04/22	Partially complete
21	3/3	-do-	Lateral Load resisting structures	19/04/22	Partially complete
22	3/4	-do-	-do-	20/04/22	Partially complete

23	3/5	- do -	Building characteristics	25/04/22	Partially complete
24	3/6	- do -	Effect of structural irregularities - vertical irregularities, plan configuration problems.	26/04/22	Partially complete
25	3/7	- do -	Safety consideration during additional construction and alteration of existing Buildings	27/04/22	Partially complete
26	3/8	- do -	Additional strengthening measures in masonry building - corner reinforcement, lintel band, sill band, plinth band, roof band, gable band etc.	28/04/22	complete
27	4/1	Retrofitting of structures	Seismic retrofitting of reinforced concrete buildings.	02/05/22	Partially complete
28	4/2	- do -	- do -	02/05/22	Partially complete
29	4/3	- do -	- do -	05/05/22	Partially complete

30	4/4	-do-	Sources of weakness in RC frame building	09/05/22	Partially complete
31	4/5	-do-	-do-	10/05/22	Partially complete
32	4/6	-do-	-do-	11/05/22	Partially complete
33	4/7	-do-	Classification of retrofitting techniques and their uses	12/05/22	Partially complete
34	4/8	-do-	-do-	17/05/22	complete
35	5/1	Building Services	cold water Distribution in high rise building lay out of installation	18/05/22	Partially complete
36	5/2	-do-	-do-	19/05/22	Partially complete
37	5/3	-do-	Hot water supply - General principles for central plants - layout	23/05/22	Partially complete
38	5/4	-do-	Sanitation - soil and waste installation in high rise buildings	24/05/22	Partially complete
39	5/5	-do-	Electrical services -) requirements in high rise building ii) Layout of wiring.	25/05/22	

40	5/6	- do	Lighting - Requirement of lighting, Measurement of light intensity	26/05/22	Partially complete
41	5/7	- do -	Ventilation - methods of ventilation (Natural and artificial systems of ventilation) Problems on ventilation.	31/05/22	Partially complete
42	5/8	- do -	Mechanical services - Lifts Escalator, elevators - types and uses.	01/06/22	Complete
43	6/1	Construction and earth moving equipments	Planning and selection of construction equipments	02/06/22	Partially complete
44	6/2	- do -	- do -	06/06/22	Partially complete
45	6/3	- do -	Study on earth moving equipments like drag line tractor, bulldozer power shovel	07/06/22	Partially complete
46	6/4	- do -	- do -	08/06/22	Partially complete
47	6/5	- do -	- do -	09/06/22	Partially complete

48	6/6	-do-	study and uses of compacting equipments like tamping rollers smooth wheel rollers pneumatic tired rollers and vibrating compactors	13/06/22	Partially complete
49	6/7	-do-	-do-	20/06/22	Partially complete
50	6/8	-do	Ownership and operating cost - problems	20/06/22	Partially complete
51	6/9	-do-	-do-	21/06/22	Partially complete
52	6/10	-do-	-do-	22/06/22	complete
53	7/1	soil reinforcing techniques	Necessity of soil reinforcing	23/06/22	Partially complete
54	7/2	-do-	-do-	27/06/22	Partially complete
55	7/3	-do-	Use wire mesh and geo synthetics.	27/06/22	Partially complete
56	7/4	-do-	-do-	28/06/22	Partially complete

57	7/5	-do-	Strengthening of embankments.	29/06/22	Partially complete
58	7/6	-do-	-do-	29/06/22	Partially complete
59	7/7	-do-	Slope stabilization in cutting and embankments by soil reinforcing techniques	30/06/22	Partially complete
60	7/8	-do-	-do-	30/06/22	Complete

Th 4(a) CONCRETE TECHNOLOGY (ELECTIVE)

Sl. No.	Lect. No.	Module	Lecture Details	Lect. Date	Status
01	1/1	Concrete as a construction material	Grades of concrete	14/03/22	Partially complete
02	1/2	-do-	Advantages and disadvantages of concrete	15/03/22	Complete
03	2/1	Cement	Composition, hydration of cement, water cement ratio and compressive strength,		Partially complete
04	2/2	-do-	-do-	16/03/22	Partially complete
05	2/3	-do-	Fineness of cement, setting time, soundness, types of cement.	17/03/22	Partially complete
06	2/4	-do-	-do-	21/03/22	complete
07	3/1	Aggregate water and Admixtures	classification and characteristics of aggregate, fineness modulus, grading of aggregate 1.5, 383	22/03/22	Partially complete
08	3/2	-do-	-do-	23/03/22	Partially complete

09	3/3	-do-	Quality of water for mixing and curing	24/03/22	Partially complete
10	3/4	-do-	-do-	28/03/22	Partially complete
11	3/5	-do-	Important functions, classification of admixtures 1.3 9103 accelerating admixtures, retarding admixtures, water reducing admixtures, air containing admixtures	29/03/22	Partially complete
12	3/6	-do-	-do-	30/03/22	complete
13	4/2	Properties of fresh concrete	concept of fresh concrete,	31/03/22	Partially complete
14	4/2	-do-	slump test, compacting factor test v-tee consistency test.	04/04/22	Partially complete
15	4/3	-do-	V-tee consistency test and flow test.	05/04/22	Partially complete
16	4/4	-do-	-do-	06/04/22	Partially complete
17	4/5	-do-	-do-	-do-	-do-

17	4/5		Concept of fresh concrete workability, slump test compacting factor test v-bee consistency test and flow test, <u>require</u> requirement of workability. I. S. 11019.	07/04/22	Partially complete
18	4/6		- do -	11/04/22	complete
19	5/2	Properties of hardened concrete	Cube and cylinder compressive strengths,	12/04/22	Partially complete
20	5/2	- do -	- do -	13/04/22	Partially complete
21	5/3	- do -	Flexural strength of concrete,	18/04/22	Partially complete
22	5/4	- do -	- do -	19/04/22	Partially complete
23	5/5	- do -	stress-strain and elasticity, phenomena of creep and shrinkage	20/04/22	Partially complete
24	5/6	- do -	Permeability, durability of concrete sulphate chloride and acid attack on concrete <u>efflorescence</u>	21/04/22	Partially complete
25	5/7	- do -	- do -	25/04/22	complete

26	6/1	Concrete mix Design	a) Introduction b) Data or input required for mix design.	26/04/22	Partially complete
27	6/2	-do-	-do-	27/04/22	Partially complete
28	6/3	-do-	Nominal mix concrete & design mix concrete	28/04/22	Partially complete
29	6/4	-do-	Basic consideration for concrete mix design. Methods of proportioning concrete mix - 1.5 code method of mix design (1.5/0962)	02/05/22	Complete
30	7/1	Production of concrete	Batching of materials	04/05/22	Partially complete
31	7/2	-do-	Mixing of concrete materials	05/05/22	Partially complete
32	7/3	-do-	Transportation, Placing of concrete, compaction of concrete.	09/05/22	Partially complete
34	7/4	-do-	-do-	10/05/22	Partially complete

35	7/5	- do -	Batching of materials mixing of concrete materials transportation placing of concrete compaction of concrete (vibrators) curing of concrete, Formwork requirements and types stripping of forms.	11/05/22	Partially complete
36	7/6	- do -	- do -	12/05/22	complete
37	8/1	Inspection and quality control of concrete	Quality control of concrete as per I.S. 456. factors causing the variations in the quality of concrete.	17/05/22	Partially complete
38	8/2	- do -	- do -	18/05/22	Partially complete
39	8/3	- do -	Mixing, Transporting placing & curing requirements of concrete as per I.S. 456	19/05/22	Partially complete
40	8/4	- do -	- do -	23/05/22	Partially complete

41	8/5	- do -	Inspection and Testing as per clause 17 of IS: 456.	24/05/22	Partially complete
42	8/6	- do -	Durability requirements of concrete as per I.S: 456.	25/05/22	complete
43	9/1	Special Concrete	Introduction to ready mix concrete.	26/05/22	Partially complete
44	9/2	- do -	- do -	31/05/22	Partially complete.
45	9/3	- do -	High performance concrete silica fume concrete.	01/06/22	Partially complete
46	9/4	- do -	- do -	02/06/22	Partially complete
47	9/5		Shot - crete concrete on gunnitting (Concepts only)	06/06/22	Partially complete
48	9/6		- do -	07/06/22	Partially complete

49	10/2	Deterioration of concrete and its prevention	Types of deterioration	08/06/22	Partially complete
50	10/2	- do -	- do -	09/06/22	Partially complete
51	10/3	- do -	Prevention of concrete deterioration,	13/06/22	Partially complete
52	10/4	- do -	- do -	13/06/22	Partially complete
53	10/5	- do -	Corrosion of reinforcement	20/06/22	Partially complete
54	10/6	- do -	Effects and prevention	21/06/22	complete
55	11/1	Repair technology for concrete structures	Symptom, cause and prevention and remedy of defects during construction,	22/06/22	Partially complete
56	11/2	- do -	- do -	23/06/22	Partially complete
57	11/3	- do -	Cracking of concrete due to different reasons	27/06/22	Partially complete

58	11/4	- do -	Repair of cracks for different purposes detection of techniques,	28/06/22	Partially complete
59	11/5	- do -	Polymer based repairs common types of repairs	29/06/22	Partially complete
60	11/6	- do -	- do -	30/06/22	complete