

Department of Civil Engineering

6th Sem (3rd Year) Summer 2021

Theory No: 2

Subject: CONSTRUCTION MANAGEMENT

Sl No	Week No	Period		Numbers of Classes to be Scheduled	Topics to be covered	Remarks
		From	To			
1	W 1	15-04-2021	20-04-2021	5	Introduction To Construction Management 1.1 Aims and objectives of construction management. 1.2 Functions of construction management. 1.3 The construction team components- owner,engineer,architect,contractor-their functions and interrelationship and jurisdiction. 1.4 Resources for construction management- man machines materials money	18-04-2021 is public holiday
2	W 2	22-04-2021	28-04-2021	5	1Constructional Planning 2.1 Importance of Construction Planning 2.2 Developing work breakdown structure for construction work 2.3 Construction Planning stages-Pre-tender stage, Post-tender stage. 2.4 Construction scheduling by Bar charts-preparation of Bar Charts for simple construction works. 2.5 Preparation of schedules for labour materials,machinery, finance for small works	24-04-2021 and 25-04-2021 are public holiday
3	W 3	29-04-2021	04-05-2021	5	2.6 Limitation of Bar charts 2.7 Construction scheduling by network techniques- defination 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.	02-05-2021 is pubic holiday.
4	W 4	05-05-2021	11-05-2021	5	Materials and Stores Management 3.1 Classification of Stores-storage of stock. 3.2 Issue of materials-indent . invoice. bin card	08-05-2021 and 09-05-2021 are pubic holiday.

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5	W 5	12-05-2021	18-05-2021	5	Construction Site Management 4.1 Job Lay out-Objectives, Review plans, specifications, Lay out of equipments. 4.2 Location of equipment, organizing labour at site. 4.3 Job lay out for different construction sites. 4.4 Principle of storing material at site	14-05-2021 and 16-05-2021 are public holiday
6	W 6	19-05-2021	25-05-2021	5	Construction Organization: 5.1 Introduction – Characteristics, Structure, importance. 5.2 Organization types-line and staff, functions and their characteristics 5.3 Principles of organization- meaning and significance of terms- control, authority, responsibility, job & task. 5.4 Leadership-necessity, styles of leadership, role of leader 5.5 Human relations-relations with subordinates, peers, Supervisors, characteristics of group behavior, mob psychology, handling of grievances, absenteeism, labour welfare. 5.6 Conflicts in organization-genesis of conflicts, types-intrapersonal, interpersonal, intergroup, resolving conflicts.	22-05-2021 and 23-05-2021 are public holiday.
7	W 7	26-05-2021	31-05-2021	5	Construction Labour and Labour Management: 6.1 Preparing Labour schedule 6.2 Essential steps for optimum labour output 6.3 Labour characteristics 6.4 Wages & their payment 6.5 Labour incentives 6.6 Motivation- Classification of motives, different approaches to motivation	30-05-2021 is Holiday
8	W 8	01-06-2021	05-06-2021	5	Equipment Management 7.1 Preparing the equipment schedule 7.2 Identification of different alternative equipment 7.3 Importance of Owning & operating costs in making decisions for hiring & purchase of equipment 7.4 Inspection and testing of equipment 7.5 Equipment maintenance	

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		From	To			
9	W 9	07-06-2021	17-06-2021	5	Quality Control 8.1 Concept of quality in construction 8.2 Quality Standards- during construction, after construction. destructive & non destructive methods.	10-05-2021, 12-05-2021 14-05-2021, 15-05-2021 is Holiday
10	W 10	18-06-2021	23-06-2021	5	3.3 Different components of irrigation canals and their functions 3.4 Sketches of different canal cross-sections 3.5 Classification of canals according to their alignment, Various types of canal lining – Advantages and disadvantages	20-06-2021 is holiday.
11	W 11	24-06-2021	30-06-2021	5	Monitoring Progress 9.1 Programme and progress of work 9.2 Work study 9.3 Analysis and control of physical and financial progress corrective measures	26-06-2021 and 27-06-2021 are holidays.
12	W 12	01-07-2021	06-07-2021	5	Safety Management In Construction 10.1 Importance of safety 10.2 causes and effects of accidents in construction works 10.3 Safety measures in worksites for excavation, scaffolding, formwork, fabrication and erection, demolition. 10.4 Development of safety consciousness 10.5 Safety legislation- Workman's compensation act, contract labour act.	04-07-2021 is holiday.
13	W 13	07-07-2021	14-07-2021	5	Role of Vulnerability Atlas of India in construction projects 11.1 Introduction to Vulnerability Atlas of India, Concepts of natural hazards and disasters and vulnerability profile of India. Definition of disaster related terms. 11.2 Earthquake hazard and vulnerability, Magnitude and intensity scales of earthquake, seismic zones, earthquake hazard maps, types of structures and damage classification, effects in housing and resistant measures.	10-07-2021 to 12-07-2021 are holidays.

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14	W 14	15-07-2021	19-07-2021	5	11.3 Wind / Cyclone hazard and vulnerability, wind speed and pressures, wind hazard and cyclone occurrence maps, storm surveys and cyclone resistant measures. 11.4 Flood hazard and vulnerability, Flood hazard and Flood prone areas of the country, General protection of habitants and flood resistant construction	18-07-2021 is holiday.
15	W 15	20-07-2021	26-07-2021	5	11.5 Landslides, Tsunamis and Thunderstorm hazards and vulnerability, Landslide & Thunderstorm incidence maps, Measures against Tsunami hazards. 11.6 Housing vulnerability risk tables and usage of vulnerability atlas of India, Inclusion of vulnerability atlas in Tender documents	21-07-2021 & 24-07-2021 are holidays.
16	W 16	28-07-2021	29-07-2021	2	Revision	
Total	15			77		

Department of Civil Engineering
6th Sem (3rd Year) Summer 2021

Theory No: 4

Subject: CONCRETE TECHNOLOGY

Sl No	Week No	Period		Numbers of Classes to be	Topics to be covered	Remarks
		From	To			
1	W 1	15-04-2021	20-04-2021	5	Concrete as a construction material: 1.1 Grades of concrete. 1.2 Advantages and disadvantages of concrete	18-04-2021 is public holiday
2	W 2	22-04-2021	28-04-2021	5	Cement: 2.1 Composition, hydration of cement, water cement ratio and compressive strength, fineness of cement, setting time, soundness, types of cement.	24-04-2021 and 25-04-2021 are public holiday
3	W 3	29-04-2021	04-05-2021	4	3.1 Classification and characteristics of aggregate, fineness modulus, grading of aggregate, I.S.383 3.2 Quality of water for mixing and curing. 3.3 Important functions, classification of admixtures, I.S 9103, accelerating admixtures, retarding admixtures, water reducing admixtures, air containing admixtures	02-05-2021 is public holiday.
4	W 4	05-05-2021	11-05-2021	4	Properties of fresh concrete: 4.1 Concept of fresh concrete, workability, slump test, compacting factor test, V-tee consistency test and flow test, requirement of workability I.S 1199	08-05-2021 and 09-05-2021 are public holiday.

Theory No: 4		Subject: CONCRETE TECHNOLOGY				
Sl No	Week No	Period		Numbers of Classes to be	Topics to be covered	Remarks
		From	To			
5	W 5	12-05-2021	18-05-2021	4	Properties of hardened concrete: 5.1 Cube and cylinder compressive strengths, flexural strength of concrete, stress-strain and elasticity, phenomena of creep and shrinkage, permeability, durability of concrete, sulphate, chloride and acid attack on concrete, efflorescence.	14-05-2021 and 16-05-2021 are public holiday
6	W 6	19-05-2021	25-05-2021	4	6 Concrete mix Design 6.1 a) Introduction b) Data or input required for mix design.	22-05-2021 and 23-05-2021 are public holiday.
7	W 7	26-05-2021	31-05-2021	4	6.2 Nominal mix concrete & design mix concrete. 6.3 Basic consideration for concrete mix design, Methods of proportioning concrete mix – I.S Code method of mix design (I.S. 10262)	30-05-2021 is Holiday
8	W 8	01-06-2021	05-06-2021	4	Production of concrete: 7.1 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. (Concepts only)	
10	W 10	18-06-2021	23-06-2021	4	Building Services 5.1 Cold Water Distribution in high rise building, lay out of installation 5.2 Hot water supply – General principles for central plants-lavout	20-06-2021 is holiday.
11	W 11	24-06-2021	30-06-2021	4	Inspection and Quality Control of Concrete 10.1 Quality control of Concrete as per I.S.456, Factors causing the variations in the quality of concrete 10.2 Mixing, Transporting, Placing & curing requirements of Concrete as per I.S.456.	26-06-2021 and 27-06-2021 are holidays.
12	W 12	01-07-2021	06-07-2021	5	10.3 Inspection and Testing as per Clause 17 of IS:456. 10.4 Durability requirements of Concrete as per I.S:456.	04-07-2021 is holiday.
13	W 13	07-07-2021	14-07-2021	5	Special Concrete 11.1 Introduction to ready mix concrete, high performance concrete, silica fume concrete, shot-crete concrete or gunniting (Concepts only)	10-07-2021 to 12-07-2021 are holidays.

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Sl No	Week No	Period		Numbers of Classes to be	Topics to be covered	Remarks
		From	To			
14	W 14	15-07-2021	19-07-2021	4	Deterioration of concrete and its prevention: 12.1 Types of deterioration, prevention of concrete deterioration, corrosion of reinforcement, effects and prevention	18-07-2021 is holiday.
15	W 15	20-07-2021	26-07-2021	4	Repair technology for concrete structures: 13.1 Symptom, cause and prevention and remedy of defects during construction, cracking of concrete due to different reasons. Repair of cracks for different purposes, selection of techniques, polymer based repairs, common types of repairs	21-07-2021 & 24-07-2021 are holidays.
Total	15			60		

Department of Civil Engineering						
6th Sem (3rd Year) Summer 2021						
Theory No: 1				Subject: LAND SURVEY- II		
Sl No	Week No	Period		Numbers of Classes to be	Topics to be covered	Remarks
		From	To			
1	W 1	15-04-2021	20-04-2021	5	TACHEOMETRY: (Only concepts; applications without derivation) 1.1 Principles, stadia constants determination 1.2 Stadia tacheometry with staff held vertical and with line of collimation horizontal or inclined, numerical problems	18-04-2021 is public holiday
2	W 2	22-04-2021	28-04-2021	5	1.3 Elevations and distances of staff stations – numerical problems	24-04-2021 and 25-04-2021 are public holiday
3	W 3	29-04-2021	04-05-2021	5	2.1 compound, reverse and transition curve, Purpose & use of different types of curves in field	02-05-2021 is public holiday.
4	W 4	05-05-2021	11-05-2021	5	2.2 Elements of circular curves, numerical problems 2.3 Preparation of curve table for setting out 2.4 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) 2.5 Obstacles in curve ranging – point of intersection	08-05-2021 and 09-05-2021 are public holiday.

Theory No: 1				Subject: LAND SURVEY- II		
Sl No	Week No	Period		Numbers of Classes to be	Topics to be covered	Remarks
		From	To			
5	W 5	12-05-2021	18-05-2021	5	BASICS ON SCALE AND BASICS OF MAP: 3.1 Fractional or Ratio Scale, Linear Scale, Graphical Scale 3.2 What is Map, Map Scale and Map Projections 3.3 How Maps Convey Location and Extent 3.4 How Maps Convey characteristics of features 3.5 How Maps Convey Spatial Relationship	14-05-2021 and 16-05-2021 are public holiday
6	W 6	19-05-2021	25-05-2021	5	3.5.1 Classification of Maps 3.5.1 Physical Map 3.5.2 Topographic Map 3.5.3 Road Map 3.5.4 Political Map 3.5.5 Economic & Resources Map 3.5.6 Thematic Map 3.5.7 Climate Map	22-05-2021 and 23-05-2021 are public holiday.
7	W 7	26-05-2021	31-05-2021	5	SURVEY OF INDIA MAP SERIES: 4.1 Open Series map 4.2 Defense Series Map	30-05-2021 is Holiday
8	W 8	01-06-2021	05-06-2021	5	4.3 Map Nomenclature 4.3.1 Quadrangle Name 4.3.2 Latitude, Longitude, UTM's 4.3.4 Contour Lines 4.3.5 Magnetic Declination 4.3.6 Public Land Survey System 4.3.7 Field Notes	

Theory No: 1						
Subject: LAND SURVEY- II						
Sl No	Week No	Period		Numbers of Classes to be	Topics to be covered	Remarks
		From	To			
9	W 9	07-06-2021	17-06-2021	5	BASICS OF AERIAL PHOTOGRAPHY, PHOTOGRAMMETRY, DEM AND ORTHO IMAGE GENERATION: 5.1 Aerial Photography: 5.1.1 Film, Focal Length, Scale 5.1.2 Types of Aerial Photographs (Oblique, Straight) 5.2 Photogrammetry: 5.2.1 Classification of Photogrammetry 5.2.2 Aerial Photogrammetry 5.2.3 Terrestrial Photogrammetry 5.3 Photogrammetry Process: 5.3.1 Acquisition of Imagery using aerial and satellite platform 5.3.2 Control Survey 5.3.3 Geometric Distortion in Imagery Application of Imagery and its support data Orientation and Triangulation Stereoscopic Measurement 19.9.1 X-parallax	10-05-2021, 12-05-2021 14-05-2021, 15-05-2021 is Holiday
10	W 10	18-06-2021	23-06-2021	5	5.4 DTM/DEM Generation 5.5 Ortho Image Generation	20-06-2021 is holiday.
11	W 11	24-06-2021	30-06-2021	5	MODERN SURVEYING METHODS : 6.1 Principles, features and use of (i) Micro-optic theodolite, digital theodolite 6.2 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	26-06-2021 and 27-06-2021 are holidays.
12	W 12	01-07-2021	06-07-2021	5	6.5 Detailing of reinforcement in stairs spanning longitudinally. 7 Design of Axially loaded columns and Footings (LSM)7.1 Assumptions in limit state of collapse- compression.	04-07-2021 is holiday.

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13	W 13	07-07-2021	14-07-2021	5	BASICS ON GPS & DGPS AND ETS: 7.1 GPS: - Global Positioning 7.1.1 Working Principle of GPS,GPS Signals, 7.1.2 Errors of GPS,Positioning Methods 7.2 DGPS: - Differential Global Positioning System 7.2.1 Base Station Setup 7.2.2 Rover GPS Set up 7.2.3 Download, Post-Process and Export GPS data 7.2.4 Sequence to download GPS data from flashcards 7.2.5 Sequence to Post-Process GPS data 7.2.6 Sequence to export post process GPS data 7.2.7 Sequence to export GPS Time tags to file	10-07-2021 to 12-07-201 are holidays.
14	W 14	15-07-2021	19-07-2021	5	7.3 ETS: - Electronic Total Station 7.3.1 Distance Measurement 7.3.2 Angle Measurement 7.3.3 Leveling 7.3.4 Determining position 7.3.5 Reference networks 7.3.6 Errors and Accuracy	18-07-2021 is holiday.
15	W 15	20-07-2021	26-07-2021	5	BASICS OF GIS AND MAP PREPARATION USING GIS 8.1 Components of GIS, Integration of Spatial and Attribute Information 8.2 Three Views of Information System 8.2.1 Database or Table View, Map View and Model View 8.3 Spatial Data Model 8.4 Attribute Data Management and Metadata Concept 8.5 Prepare data and adding to Arc Map. 8.6 Organizing data as layers. 8.7 Editing the layers. 8.8 Switching to Layout View. 8.9 Change page orientation. 8.10 Removing Borders. 8.11 Adding and editing map information.	21-07-2021 & 24-07-2021 are holidays.

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		From	To			
16	W 16	28-07-2021	29-07-2021	2	Revision	
Total	15			77		