

Discipline-Civil Engineering	Semestar- 6th	Name Of the teaching Faculty: Er.Narasingsh Mohanty
Subject-Land survey-II	No. of Days/per week class allotted:5	Semestar From Date : 10/03/2022 To Date: 10/06/2022
		No. Of Weeks: 14
Week	Class Day	Theory/Practical Topics
1st	1st	Principles, stadia constants determination
	2nd	Stadia tacheometry with staff held vertical and with line of collimation horizontal or inclined,
	3rd	numerical problems
	4th	Elevations and distances of staff stations – numerical problems
	5th	Elevations and distances of staff stations – numerical problems
2nd	1st	compound, reverse and transition curve, Purpose & use of different types of curves in field
	2nd	Elements of circular curves, numerical problems
	3rd	Elements of circular curves, numerical problems
	4th	Preparation of curve table for setting out
	5th	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,
3rd	1st	
	2nd	v) Rankine's method of tangent angles (No derivation)
	3rd	Obstacles in curve ranging – point of intersection inaccessible
	4th	Obstacles in curve ranging – point of intersection inaccessible
	5th	Fractional or Ratio Scale, Linear Scale, Graphical Scale
4th	1st	What is Map, Map Scale and Map Projections
	2nd	How Maps Convey Location and Extent
	3rd	How Maps Convey characteristics of features
	4th	How Maps Convey Spatial Relationship
5th	5th	Classification of Maps Classification of Maps Physical Map Topographic Map Road Map
		Political Map Economic & Resources Map Thematic Map Climate Map
	1st	
		2nd

	3rd	Map Nomenclature Quadrangle Name Latitude, Longitude, UTM's Contour Lines
	4th	Magnetic Declination Public Land Survey System Field Notes
	5th	Aerial Photography: Film, Focal Length, Scale Types of Aerial Photographs (Oblique, Straight)
6th	1st	Classification of Photogrammetry Aerial Photogrammetry Terrestrial Photogrammetry
	2nd	Acquisition of Imagery using aerial and satellite platform Control Survey Geometric Distortion in Imagery
	3rd	Application of Imagery and its support data Orientation and Triangulation
	4th	Stereoscopic Measurement X-parallax Y-parallax
	5th	Stereoscopic Measurement X-parallax Y-parallax
7th	1st	DTM/DEM Generation Ortho Image Generation
	2nd	DTM/DEM Generation Ortho Image Generation
	3rd	Principles, features and use of (i) Micro-optic theodolite, digital theodolite
	4th	Principles, features and use of (i) Micro-optic theodolite, digital theodolite
	5th	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.
8th	1st	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.
	2nd	Global Positioning Working Principle of GPS, GPS Signals, Errors of GPS, Positioning Methods

	3rd	Global Positioning Working Principle of GPS, GPS Signals, Errors of GPS, Positioning Methods
	4th	Differential Global Positioning System Base Station Setup Rover GPS Set up Download, Post-Process and Export GPS data
	5th	Differential Global Positioning System Base Station Setup Rover GPS Set up Download, Post-Process and Export GPS data
9th	1st	Sequence to download GPS data from flashcards Sequence to Post-Process GPS data
	2nd	Sequence to download GPS data from flashcards Sequence to Post-Process GPS data
	3rd	Sequence to export post process GPS data
	4th	7.2.7 Sequence to export GPS Time tags to file
	5th	Electronic Total Station
10th	1st	7.3.1 Distance Measurement
	2nd	7.3.2 Angle Measurement
	3rd	Leveling
	4th	7.3.4 Determining position
	5th	7.3.5 Reference networks
11th	1st	7.3.6 Errors and Accuracy
	2nd	Components of GIS, Integration of Spatial and Attribute Information
	3rd	Three Views of Information System
	4th	8.2.1 Database or Table View, Map View and Model View
	5th	8.3 Spatial Data Model
12th	1st	8.4 Attribute Data Management and Metadata Concept
	2nd	8.5 Prepare data and adding to Arc Map.
	3rd	8.6 Organizing data as layers.
	4th	8.6 Organizing data as layers.
	5th	8.7 Editing the layers.
13th	1st	8.7 Editing the layers.
	2nd	8.8 Switching to Layout View.
	3rd	8.8 Switching to Layout View.
	4th	8.9 Change page orientation.
	5th	8.9 Change page orientation.
14th	1st	8.10 Removing Borders.
	2nd	8.11 Adding and editing map information.
	3rd	8.11 Adding and editing map information.
	4th	8.12 Finalize the map
	5th	8.12 Finalize the map

Discipline-Civil Engineering	Semestar- 6th	Name Of the teaching Faculty: Er.Diptirani Mishra
Subject- Construction Management	No. of Days/per week class allotted:4	Semestar From Date : 10/3/2022 To Date:10/6/22
		No. Of Weeks:
Week	Class Day	Theory/Practical Topics
1st	1st	Aims and objectives of construction management, Functions of construction management.
	2nd	The construction team componentsowner,engineer,architect,contractor-their functions and interrelationship and jurisdiction.
	3rd	Resources for construction management-men,machines,materials,money
	4th	Importance of Construction Planning , Developing work breakdown structure for construction work
2nd	1st	Construction scheduling by Bar charts-preparation of Bar Charts for simple construction works
	2nd	Preparation of schedules for labour materials,machinery, finance for small works
	3rd	Limitation of Bar charts
	4th	Construction scheduling by network techniques-definition of terms
3rd	1st	PERT and CPM techniques, advantages and disadvantages of two techniques
	2nd	network analysis, estimation of time and critical path
	3rd	application of PERT and CPM techniques in sample construction works.
	4th	application of PERT and CPM techniques in sample construction works.
4th	1st	Classification of Stores-storage of stock
	2nd	Issue of materials-indent , invoice, bin card
	3rd	Job Lay out-Objectives, Review plans
	4th	Specifications, Lay out of equipments
5th	1st	Location of equipment, organizing labour at site
	2nd	Job lay out for different construction sites
	3rd	Principle of storing material at site
	4th	Introduction – Characteristics, Structure, importance of Construction Organization
6th	1st	Organization types-line and staff, functions and their characteristics
	2nd	Principles of organization- meaning and significance of terms- control, authority, responsibility, job & task
	3rd	Leadership-necessity, styles of leadership, role of leader

		Human relations-relations with subordinates, peers, Supervisors, characteristics of group behavior, mob psychology, handling of grievances, absenteeism,
	4th	
7th	1st	Conflicts in organization-genesis of conflicts, types- intrapersonal, interpersonal, intergroup, resolving conflicts
	2nd	Preparing Labour schedule
	3rd	Essential steps for optimum labour output
	4th	Labour characteristics , Wages & their payment
8th	1st	Labour incentives ,Motivation- Classification of motives, different approaches to motivation
	2nd	Preparing the equipment schedule
	3rd	Identification of different alternative equipment
	4th	Importance of Owning & operating costs in making decisions for hiring & purchase of equipment
9th	1st	Inspection and testing of equipment, Equipment maintenance
	2nd	Concept of quality in construction
	3rd	Quality Standards- during construction, after construction
	4th	Quality Standards- during construction, after construction
10th	1st	Destructive & non destructive methods
	2nd	Programme and progress of work
	3rd	Work study
	4th	Analysis and control of physical and financial progress corrective measures
11th	1st	importance of safety , causes and effects of accidents in construction works
	2nd	Safety measures in worksites for excavation, scaffolding, formwork, fabrication and erection, demolition.
	3rd	Safety measures in worksites for excavation, scaffolding, formwork, fabrication and erection, demolition.
	4th	Development of safety consciousness
12th	1st	Safety legislation- Workman's compensation act, contract labour act
	2nd	Safety legislation- Workman's compensation act, contract labour act

13th	1st	Earthquake hazard and vulnerability, Magnitude and intensity scales of earthquake, seismic zones
	2nd	Earthquake hazard maps, types of structures and damage classification, effects in housing and resistant measures
	3rd	Wind / Cyclone hazard and vulnerability, wind speed and pressures,
	4th	wind hazard and cyclone occurrence maps, storm surveys and cyclone resistant measures.
14th	1st	Flood hazard and vulnerability, Flood hazard and Flood prone areas of the country, General protection of habitants and flood resistant construction
	2nd	Flood hazard and vulnerability, Flood hazard and Flood prone areas of the country, General protection of habitants and flood resistant construction
	3rd	Landslides, Tsunamis and Thunderstorm hazards and vulnerability, Landslide & Thunderstorm incidence maps, Measures against Tsunami hazards
	4th	Housing vulnerability risk tables and usage of vulnerability atlas of India, Inclusion of vulnerability atlas in Tender documents

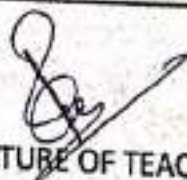
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Discipline-Civil Engineering	Semestar- 6th	Name Of the teaching Faculty: MRS. PRAMILA KUMARI GOUDA	
Subject- ADVANCED CONSTRUCTION TECHNIQUES & EQUIPMENT	No. of Days/per week class allotted:4	Semestar From Date : 05/09/2024	To Date: 10/6/2024
		No. Of Weeks:	
Week	Class Day	Theory/Practical Topics	
1st	1st	CHAPTER-1 Advanced construction materials. Fibers and Plastics- Types of fibers- Steel, Carbon, glass fibers	
	2nd	Use of fibers as construction material, properties of Fibers.	
	3rd	Types of plastics- PVC, RPVC, HDPE, FRP, GRP etc. Colored plastic sheets	
	4th	Types of plastics- PVC, RPVC, HDPE, FRP, GRP etc. Colored plastic sheets	
2nd	1st	Types of plastics- PVC, RPVC, HDPE, FRP, GRP etc. Colored plastic sheets	
	2nd	Use of plastic as construction material	
	3rd	Artificial Timbers – Properties and uses of artificial timber. Types of artificial timber available in market, strength of artificial timber.	
	4th	Artificial Timbers – Properties and uses of artificial timber. Types of artificial timber available in market, strength of artificial timber.	
3rd	1st	Miscellaneous materials – Properties and uses of acoustics materials, wall claddings, plaster boards, micro-silica, artificial sand, bonding agents, adhesives etc	
	2nd	Miscellaneous materials – Properties and uses of acoustics materials, wall claddings, plaster boards, micro-silica, artificial sand, bonding agents, adhesives etc	
	3rd	CHAPTER-2 Prefabrication Introduction, necessity and scope of prefabrication of buildings, history of prefabrication, current uses of prefabrication	
	4th	types of prefabricated systems, classification of prefabrication, advantages and disadvantages of prefabrication,	
4th	1st	types of prefabricated systems, classification of prefabrication, advantages and disadvantages of prefabrication,	
	2nd	The theory and process of prefabrication, design principle of prefabricated systems, types of prefabricated elements, modular coordination	
	3rd	The theory and process of prefabrication, design principle of prefabricated systems, types of prefabricated elements, modular coordination	

	4th	The theory and process of prefabrication, design principle of prefabricated systems, types of prefabricated elements, modular coordination
5th	1st	Indian standard recommendation for modular planning
	2nd	Indian standard recommendation for modular planning
	3rd	<b>CHAPTER-3 Earthquake Resistant Construction Building Configuration</b>
	4th	Lateral Load resisting structures
6th	1st	Lateral Load resisting structures
	2nd	Building characteristics
	3rd	Effect of structural irregularities-vertical irregularities, plan configuration problems
	4th	Effect of structural irregularities-vertical irregularities, plan configuration problems
7th	1st	Safety consideration during additional construction and alteration of existing Buildings.
	2nd	Additional strengthening measures in masonry building-corner reinforcement, lintel band, sill band, plinth band, roof band, gable band etc.
	3rd	<b>CHAPTER-4 Retrofitting of Structures. Seismic retrofitting of reinforced concrete buildings :</b>
	4th	Sources of weakness in RC frame building
8th	1st	Sources of weakness in RC frame building
	2nd	Sources of weakness in RC frame building
	3rd	Sources of weakness in RC frame building
	4th	Classification of retrofitting techniques and their uses
9th	1st	Classification of retrofitting techniques and their uses
	2nd	Classification of retrofitting techniques and their uses
	3rd	<b>CHAPTER -5 Building Services. Cold Water Distribution in high rise building, lay out of installation</b>
	4th	Hot water supply – General principles for central plants-layout
10th	1st	Sanitation –soil and waste water installation in high rise buildings
	2nd	Electrical services – i) requirements in high rise buildings ii) Layout of wiring - types of wiring iii) Fuses and their types iv)Earthing and their uses
	3rd	Electrical services – i) requirements in high rise buildings ii) Layout of wiring - types of wiring iii) Fuses and their types iv)Earthing and their uses
	4th	Lighting – Requirement of lighting, Measurement of light intensity



11th	1st	Ventilation - Methods of ventilation (Natural and artificial Systems of ventilation) problems on ventilation
	2nd	Mechanical Services- Lifts, Escalator, Elevators – types and uses.
	3rd	<b>CHAPTER -6 Construction and earth moving equipments –Planning and selection of construction equipments</b>
	4th	Study on earth moving equipments like drag line, tractor, bulldozer, Power shovel
12th	1st	Study on earth moving equipments like drag line, tractor, bulldozer, Power shovel
	2nd	Study on earth moving equipments like drag line, tractor, bulldozer, Power shovel
	3rd	Study and uses of compacting equipments like tamping rollers, Smooth wheel rollers, Pneumatic tired rollers and vibrating compactors
	4th	Study and uses of compacting equipments like tamping rollers, Smooth wheel rollers, Pneumatic tired rollers and vibrating compactors
13th	1st	Study and uses of compacting equipments like tamping rollers, Smooth wheel rollers, Pneumatic tired rollers and vibrating compactors
	2nd	Owning and operating cost – problems
	3rd	Owning and operating cost – problems
	4th	Owning and operating cost – problems
14th	1st	<b>CHAPTER-7 Soil reinforcing techniques. Necessity of soil reinforcing</b>
	2nd	Use wire mesh and geo-synthetics
	3rd	Use wire mesh and geo-synthetics
	4th	Use wire mesh and geo-synthetics
15th	1st	Strengthening of embankments, Slope stabilization in cutting and embankments by soil reinforcing techniques.
	2nd	Strengthening of embankments, Slope stabilization in cutting and embankments by soil reinforcing techniques.
	3rd	Strengthening of embankments, Slope stabilization in cutting and embankments by soil reinforcing techniques.
	4th	Strengthening of embankments, Slope stabilization in cutting and embankments by soil reinforcing techniques.



SIGNATURE OF TEACHER

Discipline-Civil Engineering	Semestar- 6th	Name Of the teaching Faculty: Er. Manoranjan Nayak
Subject-Concrete Technology	No. of Days/per week class allotted:4	Semestar From Date : 10/3/2022 To 10/6/2022
		No. Of Weeks:
Week	Class Day	Theory/Practical Topics
1st	1st	Grades of concrete
	2nd	Advantages and disadvantages of concrete
	3rd	Composition, hydration of cemen
	4th	water cement ratio and compressive strength
2nd	1st	Fineness of cement, setting time, soundness
	2nd	Types of cement
	3rd	Classification and characteristics of aggregate
	4th	Fineness modulus, grading of aggregate, I.S.383
3rd	1st	Quality of water for mixing and curing
	2nd	Important functions, classification of admixtures
	3rd	Accelerating admixtures, retarding admixtures
	4th	water reducing admixtures, air containing admixtures
4th	1st	Concept of fresh concrete
	2nd	workability, slump test, compacting factor test
	3rd	V-bee consistency test and flow test
	4th	Requirement of workability, I.S.1199
5th	1st	Cube and cylinder compressive strengths
	2nd	Flexural strength of concrete, stress-strain and elasticity
	3rd	Phenomena of creep and shrinkage, permeability
	4th	Durability of concrete, sulphate, chloride and acid attack on concrete, efflorescence
6th	1st	Introduction and Data or input required for mix design
	2nd	Nominal mix concrete
	3rd	Design mix concrete
	4th	Basic consideration for concrete mix design

7th	1st	Methods of proportioning concrete mix – I.S Code method of mix design(I.S.10262)
	2nd	Batching of materials, mixing of concrete materials
	3rd	Transportation, placing of concrete
	4th	compaction of concrete (vibrators), Curing of concrete
8th	1st	Formwork-requirements and types ,stripping of forms
	2nd	Quality control of Concrete as per I.S.456, Factors causing the variations in the quality of concrete
	3rd	Quality control of Concrete as per I.S.456, Factors causing the variations in the quality of concrete
	4th	Mixing, Transporting, Placing &curing requirements of Concrete as per I.S.456
9th	1st	Mixing, Transporting, Placing &curing requirements of Concrete as per I.S.456
	2nd	Inspection and Testing as per Clause 17 of IS:456
	3rd	Inspection and Testing as per Clause 17 of IS:456
	4th	Durability requirements of Concrete as per I.S:456
10th	1st	Introduction to ready mix concrete
	2nd	high performance concrete
	3rd	silica fume concrete
	4th	shot-crete concrete or gunitting
11th	1st	shot-crete concrete or gunitting
	2nd	Types of deterioration
	3rd	Types of deterioration
	4th	Prevention of concrete deterioration,
12th	1st	Prevention of concrete deterioration,
	2nd	corrosion of reinforcement
	3rd	Effects and prevention
	4th	Symptom, cause and prevention and remedy of defects during construction
13th	1st	Symptom, cause and prevention and remedy of defects during construction
	2nd	Cracking of concrete due to different reasons

	3rd	Repair of cracks for different purposes
	4th	Selection of techniques
14th	1st	Polymer based repairs
	2nd	Common types of repairs
	3rd	Common types of repairs
	4th	Common types of repairs