KALAM INSTITUTE OF TECHNOLOGY(P), BERHAMPUR

LESSON PLAN

DISCIPLINE: CIVIL ENGINEERING	SEMESTER: 5th	NAME OF THE TEACHING FACULTY: Er. Abhisek Muni
SUBJECT: Estimation & Cost Evaluation -II	NO. OF DAY/WEEK CLASS ALLOTED: 05	SEMESTER FROM DATE: 01-08-2023 TO DATE: 30-11-2023 NO. OF WEEKS: 15

WEEKS	CLASS DAYS	DATE	THEORY / PRACTICAL TOPIC
First	1st	2/8/23	**Introduction culvert & bridge**
	2nd	4/8/23	RCC slab culvert earthwork excavation, 1st class brick work
	3rd	5/8/23	1st class brick work, Cement concrete
	4th	7/8/23	RCC slab culvert RCC work, Steel Bar
	5th		
Second	1st	9/8/23	RCC slab cement concrete wearing coat, Cement pointing
	2nd	11/8/23	Estimate cost of RCC slab
	3rd	12/8/23	Doubt clear class
	4th	14/8/23	Revision
	5th		
Third	1st	16/8/23	Introduction of hume pipe culvert
	2nd	18/8/23	Humepipe earthwork excavation, cement concrete
	3rd	19/8/23	1st class brick work
	4th	21/8/23	Cement pointing
	5th		
Fourth	1st	23/8/23	Abstract estimate of humepipe
	2nd	25/8/23	Doubt clear class
	3rd	26/8/23	Revision / Practice
	4th	28/8/23	Introduction vertical fall
	5th		
Fifth	1st	01/9/23	Earthwork excavation
	2nd	02/9/23	Cement Concrete,1st class brickwork
	3rd	04/9/23	Brick on edge floor, Cement pointing
	4th		
	5th		
Sixth	1st	08/9/23	Brick Pitching, Abstract
	2nd	09/9/23	Revision
	3rd	11/9/23	Surprise Test
	4th	13/9/23	Introduction Syphon
	5th	15/9/23	Earth excavation, cement concrete
Seventh	1st	16/9/23	1st class brick work, RCC slab
	2nd	18/9/23	Brick Floor, Cement Struck
	3rd	22/9/23	Brick pitching, Abstract
	4th	23/9/23	Revision
	5th		
Eighth	1st	25/9/23	Introduction WBM road
	2nd	27/9/23	Problem solve
	3rd	29/9/23	Problem solve
	4th	30/9/23	Theory Discussion
	5th		

Ninth	1st	04/10/23	Introduction of flexible pavement
	2nd	06/10/23	Methods of Cutting/Filling
	3rd	07/10/23	Problem Solve
	4th	09/10/23	Revision
	5th		
Tenth	1st	11/10/23	Introduction of Septic tank, Soak pit
	2nd	13/10/23	Earthwork excavation, Cement concrete, 1st class brickwork
	3rd	16/10/23	R.B work, RCC work, Plastering, CC flooring
	4th		
	5th		
Eleventh	1st	18/10/23	2nd class brickwork, Jhama brick
	2nd	20/10/23	Introduction tube well
	3rd	30/10/23	Piles & pile cap
	4th		
	5th		
Twelfth	1st	01/11/23	Isolated footing
	2nd	03/11/23	Combined footing
	3rd	04/11/23	Problems
	4th	06/11/23	Surprise test
	5th		
Thirteenth	1st	08/11/23	Surprise test
	2nd	10/11/23	Classification of works
	3rd	11/11/23	Concept method of execution of works through contractor
	4th	13/11/23	Explanation of various terms
	5th		
Fourteenth	1st	15/11/23	Continue various terms
	2nd	17/11/23	Measurement book use & maintenance
	3rd	18/11/23	Muster roll
	4th	20/11/23	Acquittance roll
	5th		
Fifteenth	1st	22/11/23	Labour & labour report
	2nd	24/11/23	Classification of stores, receipt
	3rd	25/11/23	Building by laws & regulatory bodies
	4th	29/11/23	Revision
	5th		
Sixteenth	1st		
	2nd		
	3rd		
	4th		
	5th		

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LESSON PLAN

DISCIPLINE: CIVIL ENGINEERING	SEMESTER: 4th		NAME OF THE TEACHING FACULTY: Er. Abhisek Muni
SUBJECT: Highway Engineering	NO. OF DAY/WEEK CLASS ALLOTED: 04		SEMESTER FROM DATE: 16-01-2024 TO DATE: 26-04-2024 NO. OF WEEKS: 15
WEEKS	**CLASS DAYS**	**DATE**	**THEORY / PRACTICAL TOPIC**
First	1st	16/01/24	Importance of highway transportation
	2nd	17/01/24	Functions of IRC
	3rd	18/01/24	IRC classification
	4th	19/01/24	Organisation of state highway department
	5th		
Second	1st	22/01/24	Road Geometrics, various terms used
	2nd	24/01/24	Right of way, Formation width, road margin
	3rd	25/01/24	Road shoulder, Carriage way, side slope etc.
	4th		
	5th		
Third	1st	29/01/24	Design & avg. running speed, SSD & problems.
	2nd	31/01/24	OSD & related problems.
	3rd	01/02/24	Necessity of curve, horizontal & vertical curve
	4th		
	5th		
Fourth	1st	05/02/24	Transition curve, super elevation, related problems.
	2nd	07/02/24	Different types of road materials, soil , aggregate
	3rd	08/02/24	Function of soil as highway sub-grade
	4th	09/02/24	CBR test how to find CBR value
	5th		
Fifth	1st	12/02/24	Testing of aggregate, types of all test
	2nd	15/02/24	Road pavements, types of pavement, merits & demerits.
	3rd	16/02/24	Typical cross section, function of various components.
	4th		
	5th		
Sixth	1st	19/02/24	Sub grade preparation
	2nd	21/02/24	Continue previous class
	3rd	22/02/24	Sub base course, necessity of sub base
	4th	23/02/24	Type of stabilization
	5th		
Seventh	1st	26/02/24	Base Course, Preparation of base course
	2nd	28/02/24	WBM & WMM, difference, how to construct
	3rd	29/02/24	Bituminous constructions : types
	4th	01/03/24	Surfacing, surface dressing
	5th		
Eighth	1st	04/03/24	Bituminous concrete, discussion previous class topic
	2nd	06/03/24	Grouting, how it is used
	3rd	07/03/24	Surprise test
	4th		
	5th		

Ninth	1st	11/03/24	Rigid pavement fundamental idea
	2nd	13/03/24	Concept of concrete roads as per IRC
	3rd	14/03/24	Continue previous class
	4th	15/03/24	Hill road, introduction, typical cross section
	5th		
Tenth	1st	18/03/24	Continue
	2nd	20/03/24	Different parts of hill roads.
	3rd	21/03/24	Repeat & discuss previous class
	4th	22/03/24	Necessity of road drainage
	5th		
Eleventh	1st	27/03/24	Class test
	2nd	28/03/24	Cross Drainage work how it is constructed
	3rd		
	4th		
	5th		
Twelfth	1st	03/04/24	continue
	2nd	04/04/24	Surface & sub surface drains, how it is constructed
	3rd	05/04/24	Storm water discussion
	4th		
	5th		
Thirteenth	1st	08/04/24	Location, spacing of drains
	2nd	10/04/24	Typical details of side drains
	3rd	12/04/24	How side drains constructed etc
	4th		
	5th		
Fourteenth	1st	15/04/24	Side ditches for surface drainage
	2nd	18/04/24	Intercepting drains, Pipe drains ion hill roads
	3rd	19/04/24	Details of drains in cutting embankment
	4th		
	5th		
Fifteenth	1st	22/04/24	Typical cross section of drainage system
	2nd	24/04/24	Asphalt mixer & tar boilers, maintenance of concrete road
	3rd	25/04/24	Road paver, Construction equipment, hot mixing plant
	4th	26/04/24	Modern Construction equipments for road
	5th		

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LESSON PLAN

DISCIPLINE: CIVIL ENGINEERING	SEMESTER: 4th	NAME OF THE TEACHING FACULTY: Er. Sibani Sahu
SUBJECT: Land Survey-1 TH-3	NO. OF DAY/WEEK CLASS ALLOTED: 05	SEMESTER FROM DATE: 01-02-2024 TO DATE: 26-04-2024 NO. OF WEEKS:13

WEEKS	CLASS DAYS	DATE	THEORY
First	1st	01-02-24	Introduction to survey , LINEAR MEASUREMENTS, Surveying: Definition, Aims and objectives
	2nd	02-02-24	Principles of survey-Plane surveying- Geodetic Surveying- Instrumental surveying
	3rd		
	4th		
	5th		
Second	1st	05-02-24	Precision and accuracy of measurements, instruments used for measurement of distance, Types of tapes and chains.
	2nd	06-02-24	Errors and mistakes in linear measurement – classification, Sources of errors and remedies.
	3rd	07-02-24	Corrections to measured lengths due to-incorrect length, temperature variation, pull, sag, numerical problem applying corrections.
	4th	08-02-24	chaining and chain survey, Equipment and accessories for chaining
	5th	09-02-24	Ranging – Purpose, signalling, direct and indirect ranging, Line ranger – features and use, error due to incorrect ranging.
Third	1st	12-02-24	Methods of chaining – Chaining on flat ground, Chaining on sloping ground – stepping method, Clinometer-features and use, slope correction.
	2nd	13-02-24	Setting perpendicular with chain & tape, Chaining across different types of obstacles – Numerical problems on chaining across obstacles.
	3rd	15-02-24	Purpose of chain surveying, Its Principles, concept of field book. Selection of survey stations, base line, tie lines, Check lines.
	4th	16-02-24	Offsets – Necessity, Perpendicular and Oblique offsets, Instruments for setting offset – Cross Staff, Optical Square.
	5th		
Fourth	1st	19-02-24	Errors in chain surveying – compensating and accumulative errors causes & remedies, Precautions to be taken during chain surveying
	2nd	20-02-24	Angular measurements and compass surveying , Measurement of angles with chain, tape & compass
	3rd	21-02-24	Compass – Types, features, parts, merits & demerits, testing & adjustment of compass
	4th	22-02-24	Designation of angles- concept of meridians – Magnetic, True, arbitrary; Concept of bearings – Whole circle bearing, Quadrantal bearing, Reduced bearing, suitability of application, numerical problems on conversion of bearings
	5th	23-02-24	Use of compasses – setting in field- centering , levelling , taking readings, concepts of Fore bearing, Back Bearing, Numerical problems on computation of interior & exterior angles from bearings.
Fifth	1st	26-02-24	Effects of earth's magnetism – dip of needle, magnetic declination, variation in declination, numerical problems on application of correction for declination.
	2nd	27-02-24	Errors in angle measurement with compass – sources & remedies.
	3rd	28-02-24	Principles of traversing – open & closed traverse, Methods of traversing.
	4th	29-02-24	Local attraction – causes, detection, errors, corrections, Numerical problems of application of correction due to local attraction.
	5th	01-03-24	Errors in compass surveying – sources & remedies.

Sixth	1st	04-03-24	Plotting of traverse – check of closing error in closed & open traverse, Bowditch's correction, Gales table
	2nd	06-03-24	Study of direction, Scale, Grid Reference and Grid Square Study of Signs and Symbols
	3rd	07-03-24	Cadastral Map Preparation Methodology
	4th		
	5th		
Seventh	1st	11-03-24	Unique identification number of parcel
	2nd	12-03-24	Positions of existing Control Points and its types
	3rd	13-03-24	Adjacent Boundaries and Features, Topology Creation and verification.
	4th	14-03-24	PLANE TABLE SURVEYING, Objectives, principles and use of plane table surveying.
	5th	15-03-24	Instruments & accessories used in plane table surveying.
Eighth	1st	18-03-24	Methods of plane table surveying – (1) Radiation, (2) Intersection, (3) Traversing, (4) Resection.
	2nd	19-03-24	Statements of two point and three point problem.
	3rd	20-03-24	Errors in plane table surveying and their corrections, precautions in plane table surveying.
	4th	21-03-24	Theodolite surveying, Purpose, Definition of theodolite surveying
	5th	22-03-24	Transit theodolite- Description of features, component parts, Fundamental axes of a theodolite, concept of vernier, reading a vernier, Temporary adjustment of theodolite
Ninth	1st	27-03-24	Concept of transiting –Measurement of horizontal and vertical angles.
	2nd	28-03-24	Measurement of magnetic bearings, deflection angle, direct angle, setting out angles, prolonging a straight line with theodolite, Errors in Theodolite observations.
	3rd		
	4th		
	5th		
Tenth	1st	02-04-24	Methods of theodolite traversing with – inclined angle method, deflection angle method, bearing method, Plotting the traverse by coordinate method, Checks for open and closed traverse.
	2nd	03-04-24	Traverse computation – consecutive coordinates, latitude and departure, Gale's traverse table, Numerical problems on omitted measurement of lengths & bearings
	3rd	04-04-24	Closing error – adjustment of angular errors, adjustment of bearings, numerical problems
	4th	05-04-24	Balancing of traverse – Bowditch's method, transit method, graphical method, axis method, calculation of area of closed traverse
	5th		
Eleventh	1st	08-04-24	Levelling and contouring, Definition and Purpose
	2nd	09-04-24	Types of levelling – concepts of level surface, Horizontal surface, vertical surface, datum, R. L., B.M.
	3rd	10-04-24	Instruments used for levelling, concepts of line of collimation, axis of bubble tube, axis of telescope, Vertical axis.
	4th	12-04-24	Levelling staff – Temporary adjustments of level, taking reading with level, concept of bench mark, BS, IS, FS, CP, HI.
	5th		
Twelfth	1st	15-04-24	Field data entry – level Book – height of collimation method and Rise & Fall method, comparison, Numerical problems on reduction of levels applying both methods, Arithmetic checks.
	2nd	16-04-24	Effects of curvature and refraction, numerical problems on application of correction.
	3rd	18-04-24	Reciprocal levelling – principles, methods, numerical problems, precise levelling. Errors in levelling and precautions, Permanent and temporary adjustments of different types of levels.
	4th	19-04-24	Methods of contouring, plotting contour maps, Interpretation of contour maps, toposheets .Map Interpretation: Interpret Human and Economic Activities
	5th		

Thirteenth	1st	22-04-24	Interpret Physical landform, Problem Solving and Decision Making
	2nd	23-04-24	Determination of areas, computation of areas from plans.
	3rd	24-04-24	Calculation of area by using ordinate rule, trapezoidal rule, Simpson's rule.
	4th	25-04-24	Calculation of volumes by prismoidal formula and trapezoidal formula, Prismoidal corrections, curvature correction for volumes.
	5th	26-04-24	Revision class

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LESSON PLAN

DISCIPLINE: CIVIL ENGINEERING	SEMESTER: 6th	NAME OF THE TEACHING FACULTY: Er. Alok Kumar Biswal
SUBJECT: LAND SURVEY-II	NO. OF DAY/WEEK CLASS ALLOTED: -05	SEMESTER FROM DATE: 16-01-2024 TO DATE: 26-04-2024 NO. OF WEEKS:15

WEEKS	CLASS DAYS	DATE	THEORY / PRACTICAL TOPIC
First	1st	16/1/24	Principles, Stadia constant determination
	2nd	17/1/24	Stadia Tacheometry with staff held vertical
	3rd	18/1/24	Line of sight inclined with staff vertical and normal
	4th	1/1/24	Line of sigh inclined with staff held normal
	5th		
Second	1st	22/2/24	Problems
	2nd	24/1/24	Elevation and distance of staff station and problems
	3rd	24/1/24	Definition, use, types of curve
	4th		
	5th		
Third	1st	29/1/24	Elements of circular curves with problems
	2nd	30/1/24	Preparation of curve table for setting out
	3rd	31/1/24	Offsets from long chord and tangent
	4th	1/2/24	successive bisection of arc, offset from chord produced
	5th	2/2/24	Rankines method of tangent angles
Fourth	1st	5/2/24	Obstacles in curve ranging
	2nd	6/2/24	Definition and types of scale. What is map and map scale?
	3rd	7/2/24	How maps convey location, Extent and characteristics of features
	4th	8/2/24	How map convey spatial relationship
	5th	9/2/24	Physical map, Topographic map
Fifth	1st	12/2/24	Road map, Political map, Economic and resources map
	2nd	13/2/24	Thematic map and climatic map
	3rd	15/2/24	Open series map
	4th	16/2/24	Defense series map
	5th		
Sixth	1st	19/2/24	Quadrangle name, latitude, Longitude, UTMs
	2nd	20/2/24	Contour lines, Magnetic declination
	3rd	21/2/24	Public land survey, filed notes
	4th	22/2/24	Introduction to Aerial photography, film, scale
	5th	23/2/24	Types of aerial photography, focal length
Seventh	1st	26/2/24	Introduction and classification of Photogrammetry
	2nd	27/2/24	Aerial Photogrammetry
	3rd	28/2/24	Terrestrial Photogrammetry
	4th	29/2/24	Revision and question practices
	5th	1/3/24	Acquisition of imagery using aerial and satellite

Eighth	1st	4/3/24	control survey
	2nd	6/3/24	Geometric distortion in imagery
	3rd	7/3/24	Previous year question practice
	4th		
	5th		
Ninth	1st	11/3/24	DTM generation and ortho image generation
	2nd	12/3/24	Principle, feature of micro- optic theodolite
	3rd	13/3/24	Use of micro-optic theodolite
	4th	14/3/24	Principle, features of digital theodolite
	5th	15/3/24	
Tenth	1st	18/3/24	Use of digital theodolite
	2nd	19/3/24	Introduction to total station
	3rd	20/3/24	Working principle of a total station'
	4th	21/3/24	Measurement angle
	5th	22/3/24	Revision with question practice
Eleventh	1st	27/3/24	Introduction to GPS
	2nd	28/3/24	Working principle , signals and errors
	3rd		
	4th		
	5th		
Twelfth	1st	2/4/24	Introduction to DGPS
	2nd	3/4/24	Download, post-process and export gps data
	3rd	4/4/24	Sequence to download, post-process and export
	4th	5/4/24	ETS, Distance measurement
	5th		
Thirteenth	1st	8/4/24	Leveling and angle measurement
	2nd	9/4/24	Determination position, Reference network, Error
	3rd	10/4/24	Revision and question practice
	4th	12/4/24	Introduction to GIS, spatial and attribute info
	5th		
Fourteenth	1st	15/4/24	Three views of information system
	2nd	16/4/24	Attribute data and management and meta data concept
	3rd	18/4/24	Prepare and adding to Arc map, Organizing data as layer
	4th	19/4/24	Editing layer, switching layout view.
	5th		
Fifteenth	1st	22/4/24	Change page orientation, Removing boarders
	2nd	23/4/24	Adding, Editing and finalize the map
	3rd	24/4/24	Revision and Question practice of CH-1 and CH-2
	4th	25/4/24	Revision and Question practice
	5th	26/4/24	Revision and Question practice

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LESSON PLAN

DISCIPLINE: CIVIL ENGINEERING	SEMESTER: 6th	NAME OF THE TEACHING FACULTY: Er. G Bishnu Kumari
SUBJECT: Advance Construction Techniques& Equipments	NO. OF DAY/WEEK CLASS ALLOTED: 04	SEMESTER FROM DATE: 16-01-2024 TO DATE: 26-04-2024 NO. OF WEEKS: 15

WEEKS	CLASS DAYS	DATE	THEORY / PRACTICAL TOPIC
First	1st	16/01/2024	Advanced construction materials: Fibers and Plastics Types of fibers- Steel, Carbon, glass fibers,
	2nd	18/01/24	Use of fibers as construction material, properties of Fibers.
	3rd	19/01/24	Types of plastics- PVC, RPVC
	4th	20/01/24	HDPE, FRP, GRP etc
	5th		
Second	1st	25/01/24	Coloured plastic sheets. Use of plastic as construction material.
	2nd	27/01/24	Artificial Timbers – Properties and uses of artificial timber.
	3rd		
	4th		
	5th		
Third	1st	30/01/24	Types of artificial timber available in market
	2nd	01/02/24	strength of artificial timber.
	3rd	02/02/24	Miscellaneous materials – Properties and uses of acoustics materials,
	4th	03/02/24	wall claddings, plaster boards,
	5th		
Fourth	1st	06/02/24	micro-silica, artificial sand, bonding agents, adhesives etc.
	2nd	08/02/24	Discussion QNA of CH-1
	3rd	09/02/24	Prefabrication: Introduction, necessity and scope of prefabrication of buildings
	4th	10/02/24	history of prefabrication, current uses of prefabrication , types of prefabricated systems
	5th		
Fifth	1st	13/02/24	classification of prefabrication
	2nd	15/02/24	advantages and disadvantages of prefabrication
	3rd	16/02/24	The theory and process of prefabrication
	4th	17/02/24	design principle of prefabricated systems, types of prefabricated elements,
	5th		
Sixth	1st	20/02/24	Indian standard recommendation for modular planning.
	2nd	22/02/24	Discussion QNA of CH-2
	3rd	23/02/24	Earthquake Resistant Construction: Building Configuration
	4th	24/02/24	Lateral Load resisting structures
	5th		
Seventh	1st	27/02/24	Building characteristics
	2nd	29/02/24	Effect of structural irregularities-vertical irregularities, plan configuration problems.
	3rd	01/03/24	Safety consideration during additional construction and alteration of existing Buildings.
	4th	02/03/24	Additional strengthening measures in masonry building-corner reinforcement, lintel band, sill band, plinth band, roof band, gable band etc.
	5th		

Eighth	1st	07/03/24	Retrofitting of Structures: Seismic retrofitting of reinforced concrete buildings
	2nd	09/03/24	Sources of weakness in RC frame building
	3rd		
	4th		
	5th		
Ninth	1st	12/03/24	Classification of retrofitting techniques and their uses
	2nd	14/03/24	Discussion QNA of CH-3
	3rd	15/03/24	Building Services: Cold Water Distribution in high rise building, lay out of installation
	4th	16/03/24	Hot water supply – General principles for central plants-layout
	5th		
Tenth	1st	19/03/24	Sanitation –soil and waste water installation in high rise buildings
	2nd	21/03/24	Electrical services – i) requirements in high rise buildings ii) Layout of wiring - types of wiring
	3rd	22/03/24	iii) Fuses and their types iv) Earthing and their uses
	4th	23/03/24	Lighting – Requirement of lighting, Measurement of light intensity
	5th		
Eleventh	1st	28/03/24	Ventilation - Methods of ventilation (Natural and artificial Systems of ventilation) problems on ventilation
	2nd	30/03/24	Mechanical Services- Lifts, Escalator, Elevators – types and uses.
	3rd		
	4th		
	5th		
Twelfth	1st	02/04/24	Discussion QNA of CH-4
	2nd	04/04/24	Construction and earth moving equipments: Planning and selection of construction equipments
	3rd	05/04/24	Study on earth moving equipments like drag line, tractor, bulldozer, Power shovel
	4th	06/04/24	Study and uses of compacting equipments like tamping rollers,
	5th		
Thirteenth	1st	09/04/24	Smooth wheel rollers, Pneumatic tired rollers and vibrating compactors
	2nd	12/04/24	Owning and operating cost – problems
	3rd	13/04/24	Discussion QNA of CH -5
	4th		
	5th		
Fourteenth	1st	16/04/24	Class test of CH-1,2and 3
	2nd	18/04/24	Soil reinforcing techniques: Necessity of soil reinforcing.
	3rd	19/04/24	Use wire mesh and geo-synthetics.
	4th	20/04/24	Strengthening of embankments
	5th		
Fifteenth	1st	23/04/24	Slope stabilization in cutting and embankments by soil reinforcing techniques.
	2nd	25/04/24	Discussion QNA of CH-6&7
	3rd	26/04/24	Class test of CH-4,5,6and7
	4th		
	5th		

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LESSON PLAN

DISCIPLINE:CIVIL ENGINEERING	SEMESTER:5th	NAME OF THE TEACHING FACULTY: ANKITA CHOUDHURY
SUBJECT:TH-1 Water supply and waste water engg.	NO. OF DAY /WEEK CLASS ALLOTED:05	SEMESTER FROM DATE: 01-09-2023 TO DATE: 30-11-23 NO. OF WEEKS:15

WEEKS	CLASS DAYS	DATE	UNIT	THEORY -TOPIC
First	1	1/8/23	1	Introduction to water supply and it's necessity
	2	2/8/23	1	Per capita demand
	3	3/8/23	1	Forecasting population and water demand problem
	4	4/8/23	1	Impurities in H_2O , analysis of water
	5	5/8/23	1	Water quality standards
Second	1	8/8/23	2	Surface source
	2	9/8/23	2	Underground source
	3	10/8/23	2	Yield from well , problems
	4	11/8/23	2	Intakes
	5	12/8/23	2	Pumps , types , installation
Third	1	16/8/23	2	Pipe materials
	2	17/8/23	2	Types of pipe joints
	3	18/8/23	2	Detailed discussion about pipe joints
	4	19/8/23	3	Flow diagram of conventional water treatment
	5	22/8/23	3	Treatment process , aeration
Fourth	1	23/8/23	3	Plain sedimentation
	2	24/8/23	3	Sedimentation features , operation and maintenance
	3	25/8/23	3	Sedimentation with coagulation
	4	26/8/23	3	Types of coagulants , flocculator
	5	29/8/23	3	Filteration , necessity , principles
Fifth	1	31/8/23	3	Slow sand , rapid sand , pressure filter
	2	1/9/23	3	Disinfection
	3	2/9/23	3	Chlorination
	4	5/9/23	3	Break point chlorination , super chlorination
	5	7/9/23	3	Softening of water
Sixth	1	8/9/23	3	Lime soda process and ion exchange
	2	9/9/23	4	Types of distribution system
	3	12/9/23	4	Gravity , direct and combined
	4	13/9/23	4	Methods of supplying
	5	14/9/23	4	Intermittent and continuous
Seventh	1	15/9/23	4	Distribution system types
	2	16/9/23	4	Comparison and suitability
	3	21/9/23	4	Valve types
	4	22/9/23	4	Sluice , check , air valve
	5	23/9/23	4	Detailed discussion about types of valves

Eighth	1	26/9/23	5	Methods of connection from water mains to supply
	2	27/9/23	5	General layout of plumbing arrangement
	3	29/9/23	5	General layout of plumbing arrangement
	4	30/9/23	6	Aims & objectives of sanitary engg.
	5	3/10/23	6	Definition of related sanitary engg.
Ninth	1	4/10/23	6	System of collection
	2	5/10/23	6	Conservancy and water-carriage system
	3	6/10/23	6	Comparison suitability
	4	7/10/23	7	Quantity of sanitary sewage
	5	10/10/23	7	Variation in sewage flow
Tenth	1	11/10/23	7	Numerical problems
	2	12/10/23	7	Computation of size of sewer
	3	13/10/23	7	Computing self cleaning velocity using chezy's and manning's formula
	4	17/10/23	7	General importance , strength of sewage
	5	18/10/23	7	Characteristics of sewage
Eleventh	1	19/10/23	7	Detailed discussion about characteristics of sewage
	2	20/10/23	7	Test of sewage
	3	31/10/23	7	Types of test
	4	1/11/23	7	BOD , COD ,DO
	5	2/11/23	8	Types of system
Twelfth	1	3/11/23	8	Types of system
	2	4/11/23	8	Comparison between the types
	3	7/11/23	8	Shapes of sewer
	4	8/11/23	8	Types of shapes of sewer
	5	9/11/23	8	Avoid , features , suitability
Thirteenth	1	10/11/23	8	Laying of sewer
	2	11/11/23	9	Manhole , drop manhole & lamp manhole
	3	14/11/23	9	Inlets , grease & oil trap
	4	15/11/23	9	Storm regulator , sewage farming
	5	16/11/23	9	Disposal on land by dilution
Fourteenth	1	17/11/23	10	Principle and flow diagram of treatment
	2	18/11/23	10	Primary treatment
	3	21/11/23	10	Secondary treatment
	4	22/11/23	11	Requirements of building drainage , layout
	5	23/11/23	11	Plumbing arrangement of single storied building
Fifteen	1	24/11/23	11	Plumbing arrangement of multi storied building
	2	25/11/23	11	Sanitary fixtures – features , function and maintenance
	3	28/11/23	11	Water closets , flushing cisterns
	4	29/11/23	11	Urinals , inspection chamber
	5	30/11/23	11	Traps , anti-syphonage pipe

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LESSON PLAN

DISCIPLINE: CIVIL ENGINEERING	SEMESTER: 6th	NAME OF THE TEACHING FACULTY: Er. Sibani Sahu
SUBJECT: Construction management TH-2	NO. OF DAY/WEEK CLASS ALLOTED: 04	SEMESTER FROM DATE: 01-02-2024TO DATE: 26-04-2024 NO. OF WEEKS:13

WEEKS	CLASS DAYS	DATE	THEORY
First	1st	01-02-24	Introduction To Construction Management, Aims and objectives of construction management.
	2nd	02-02-24	Functions of construction management.
	3rd		
	4th		
Second	1st	05-02-24	The construction team components-owner, engineer, architect, contractor-their functions and interrelationship and jurisdiction.
	2nd	07-02-24	Resources for construction management-men, machines, materials, money
	3rd	08-02-24	Constructional Planning, Importance of Construction Planning
	4th	09-02-24	Developing work breakdown structure for construction work
Third	1st	12-02-24	Construction Planning stages-Pre-tender stage, Post-tender stage.
	2nd	15-02-24	Construction scheduling by Bar charts-preparation of Bar Charts for simple construction works.
	3rd	16-02-24	Preparation of schedules for labour materials, machinery, finance for small works
	4th		
Fourth	1st	19-02-24	Limitation of Bar charts, Construction scheduling by network techniques-definition of terms
	2nd	21-02-24	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.
	3rd	22-02-24	Materials and Stores Management, Classification of Stores-storage of stock.
	4th	23-02-24	Issue of materials-indent , invoice, bin card
Fifth	1st	26-02-24	Construction Site Management, Job Lay out-Objectives, Review plans, specifications, Lay out of equipments.
	2nd	2802-24	Location of equipment, organizing labour at site.
	3rd	29-02-24	Job lay out for different construction sites. Principle of storing material at site.
	4th	01-03-24	Construction Organization, Introduction – Characteristics, Structure, importance.
Sixth	1st	04-03-24	Organization types-line and staff, functions and their characteristics
	2nd	06-03-24	Principles of organization- meaning and significance of terms- control, authority, responsibility, job & task.
	3rd	07-03-24	Leadership-necessity, styles of leadership, role of leader
	4th		

Seventh	1st	11-03-24	Human relations-relations with subordinates, peers, Supervisors, characteristics of group behaviour, mob psychology, handling of grievances, absenteeism, labour welfare.
	2nd	13-03-24	Conflicts in organization-genesis of conflicts, types-intrapersonal, interpersonal, intergroup, resolving conflicts.
	3rd	14-03-24	Construction Labour and Labour Management, Preparing Labour schedule
	4th	15-03-24	Essential steps for optimum labour output, Labour characteristics
Eighth	1st	18-03-24	Wages & their payment, Labour incentives
	2nd	20-03-24	Motivation- Classification of motives, different approaches to motivation.
	3rd	21-03-24	Equipment Management, Preparing the equipment schedule
	4th	22-03-24	Identification of different alternative equipment, Importance of Owning & operating costs in making decisions for hiring & purchase of equipment
Ninth	1st	27-03-24	Inspection and testing of equipment, Equipment maintenance, Quality Control of Concept.
	2nd	28-03-24	Quality Standards- during construction, after construction, destructive & non destructive methods.
	3rd		
	4th		
Tenth	1st	03-04-24	Monitoring Progress, Programme and progress of work, Work study, Analysis and control of physical and financial progress corrective measures.
	2nd	04-04-24	Safety Management In Construction, Importance of safety
	3rd	05-04-24	Causes and effects of accidents in construction works, Safety measures in worksites for excavation, scaffolding, formwork, fabrication and erection, demolition.
	4th		
Eleventh	1st	08-04-24	Development of safety consciousness, Safety legislation- Workman's compensation act, contract labour act.
	2nd	10-04-24	Introduction to Vulnerability Atlas of India, Concepts of natural hazards and disasters and vulnerability profile of India. Definition of disaster.
	3rd	12-04-24	Earthquake hazard and vulnerability, Magnitude and intensity scales of earthquake, wind speed and pressures, seismic zones.
	4th		
Twelfth	1st	15-04-24	hazard and cyclone occurrence maps, storm surveys and cyclone resistant measures
	2nd	18-04-24	Flood hazard and vulnerability, Flood hazard and Flood prone areas of the country
	3rd	19-04-24	General protection of habitants and flood resistant construction. Landslide & Thunderstorm incidence maps, Measures against Tsunami
	4th		
Thirteenth	1st	24-04-24	Housing vulnerability risk tables and usage of vulnerability atlas of India,
	2nd	25-04-24	Inclusion of vulnerability atlas in Tender documents.
	3rd	26-04-24	Revision Class
	4th		

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LESSON PLAN

DISCIPLINE:CIVIL ENGINEERING	SEMESTER:THIRD	NAME OF THE TEACHING FACULTY: ER.G. BISHNU KUMARI
SUBJECT:TH 1 STRUCTURAL MECHANICS	NO. OF DAY /WEEK CLASS ALLOTED:05	SEMESTER FROM DATE: 01-08-2023 TO DATE: 30-11-23 NO. OF WEEKS:17

WEEKS	CLASS DAYS	DATE	UNIT	THEORY -TOPIC	REMARK
First	1st	1/8/23	1	Basic principle of mechanics ; force, moment, support conditions	
	2nd	2/8/23	1	Basic principle of mechanics ; conditions of equilibrium ,C.G & MI	
	3rd	3/8/23	1	Free body diagram , review of C.G & MI of different sections	
	4th	5/8/23	1	Review of C.G & MI of different sections	
	5th				
Second	1st	7/8/23	2	Introduction to stresses and strains, Mechanical properties of materials	
	2nd	8/8/23	2	Mechanical properties of materials ,types of stresses	
	3rd	9/8/23	2	Types of stresses , Types of strains	
	4th	10/8/23	2	Complimentary shear stress – compressive stresses due to shear	
	5th	12/8/23	2	Elongation and contraction, longitudinal and lateral strains, Poisson's ratio	
Third	1st	14/8/23	2	Volumetric strain, computation of stress,strain	
	2nd	16/8/23	2	Hooke's law-elastic constant ,Derivation of relationship between the elastic constants	
	3rd	17/8/23	2	Behaviour of ductile and brittle materials under direct loads ,Stress strain curve of ductile material	
	4th	19/8/23	2	Limit of proportionality ,elastic limit , yield stress , ultimate stress ,breaking stress,	
	5th				
Fourth	1st	21/8/23	2	Percentage elongation and reduction in area and its significance, deformation of prismatic bars due to its self weight and axial load	
	2nd	22/8/23	2	Numerical	
	3rd	23/8/23	2	Numerical	
	4th	24/8/23	2	Principal stresses and strains- concept and oreintation	
	5th	26/8/23	2	Mohr's circle and its application to solve problems of complex stresses	
Fifth	1st	28/8/23	3	Bending stress in beams, theory of simple bending, assumptions, moment of resistance	
	2nd	29/8/23	3	Equation for flexure, flexural stress distribution ,position of neutral axis & centroidal axis	
	3rd	31/8/23	3	Flexural rigidity- significance of section modulus, Numerical	
	4th	2/9/23	3	Numerical	
	5th				
Sixth	1st	4/9/23	3	Shear stress distribution in beams of rectangular beams symmetrical about vertical axis	
	2nd	5/9/23	3	Shear stress distribution in beams of circular and standard sections symmetrical about vertical axis	
	3rd	7/9/23	3	Numerical	
	4th	9/9/23	3	Concept of torsion ,assumption of pure tension, torsion of solid and hollow circular sections	
	5th				
Seventh	1st	11/9/23	3	Polar moment of inertia, torsional shearing stresses, angle of twist ,torsional rigidity, equation of torsion	
	2nd	12/9/23	3	Numerical	
	3rd	13/9/23	3	Combination of stresses ,maximum and minimum stresses in sections ,conditions for no tension	
	4th	14/9/23	3	Limit of eccentricity , core for square and rectangular sections	
	5th	16/9/23	3	Core for circular sections, chimneys dams and retaining walls introduction	
Eighth	1st	18/9/23	3	Numerical	
	2nd	21/9/23	3	Numerical	
	3rd	23/9/23	4	Columns and struts -definition ,types, end condition	
	4th				
	5th				

Ninth	1st	25/9/23	4	Columns and struts- effective length ,slenderness ratio	
	2nd	26/9/23	4	Axially loaded short and long column	
	3rd	27/9/23	4	Euler's theory of long columns ,critical load for columns with different end conditions	
	4th	30/9/23	4	Numerical	
	5th				
Tenth	1st	3/10/23	4	Numerical	
	2nd	4/10/23	5	Types of loads ,support of beams	
	3rd	5/10/23	5	Types of beams based on support conditions	
	4th	7/10/23	5	Calculation of support reactions using equations of static equilibrium	
	5th				
Eleventh	1st	9/10/23	5	Numerical	
	2nd	10/10/23	5	Shear force and bending moment	
	3rd	11/10/23	5	SFD & BMD for cantilever and simply supported beam	
	4th	12/10/23	5	SFD & BMD for over hanging beams, position of maximum BM	
	5th				
Twelfth	1st	16/10/23	5	Point of contra flexure, relation between intensity of load, SF & BM	
	2nd	17/10/23	5	Numerical	
	3rd	18/10/23	6	Slope and deflection – shape & nature of deflection curve	
	4th	19/10/23	6	Relationship between slope, deflection & curvature, importance of Slope and deflection	
	5th				
Thirteenth	1st	30/10/23	6	Numerical	
	2nd	31/10/23	6	Slope and deflection of cantilever and simply supported beams under concentrated and udl by double integration method	
	3rd	1/11/23	6	Slope and deflection of cantilever and simply supported beams under concentrated and udl by macaulay's method	
	4th	2/11/23	6	Numerical	
	5th	4/11/23	6	Numerical	
Fourteenth	1st	6/11/23	7	Indeterminate beams-indeterminacy in beams, principle of consistent deformation	
	2nd	7/11/23	7	Analysis of propped cantilever ,fixed beam by principle of superposition	
	3rd	8/11/23	7	Analysis of two span continuous beams by principle of superposition	
	4th	9/11/23	7	SF & BM diagram point load and udl covering full span	
	5th	11/11/23	7	Numerical	
Fifteenth	1st	13/11/23	7	Numerical	
	2nd	14/11/23	8	Types of trusses, statically determine and indeterminate trusses	
	3rd	15/11/23	8	Degree of indeterminacy, stable and unstable trusses	
	4th	16/11/23	8	Stable and unstable trusses	
	5th	18/11/23	8	Numerical	
	1st	20/11/23		Revision of chapter 1	
	2nd	21/11/23		Revision of chapter 2	
	3rd	22/11/23		Revision of chapter 2	
	4th	23/11/23		Revision of chapter 3	
	5th	25/11/23		Revision of chapter 4	

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LESSON PLAN

DISCIPLINE:CIVIL ENGINEERING	SEMESTER:SIXTH	NAME OF THE TEACHING FACULTY: ER .G. BISHNU KUMARI
SUBJECT:TH2 STRUCTURAL DESIGN-II	NO. OF DAY /WEEK CLASS ALLOTED:04	SEMESTER FROM DATE: 01-08-2023 TO DATE: 30-11-23 NO. OF WEEKS:17

WEEKS	CLASS DAYS	DATE	UNIT	THEORY -TOPIC	REMARK
First	1st	1/8/23	1	Introduction- Common steel structures ,Advantages &disadvantages, types of steel structure	
	2nd	2/8/23	1	Properties of structural steel, Rolled steel sections, special considerations in steel design	
	3rd	3/8/23	1	Loads &load combinations, structural analysis	
	4th				
Second	1st	7/8/23	1	Design philosophy, Brief review of principles of Limit State Design	
	2nd	8/8/23	2	Bolted Connections-Classification of bolts ,advantages& disadvantages of bolted connections	
	3rd	9/8/23	2	Different terminology, types of bolted connections	
	4th	10/8/23	2	Types of action of fasteners, assumptions & principles of design	
Third	1st	14/8/23	2	Strength of plates in a joint, Shear capacity & bearing capacity of HSFG bolts	
	2nd	16/8/23	2	Analysis & design of joints using bearing type and HSFG bolts, Numerical	
	3rd	17/8/23	2	Numerical on analysis & design of joints using bearing type and HSFG bolts	
	4th				
Fourth	1st	21/8/23	2	Efficiency of a joint, Numerical	
	2nd	22/8/23	2	Welded Connections- Advantages & Disadvantages ,types of welded joints	
	3rd	23/8/23	2	Specifications for welding, Design stresses in welds, Strength of welded joints	
	4th	24/8/23	2	Numerical on Design stresses in welds, Strength of welded joints	
Fifth	1st	28/8/23	2	Revision of chapter 2	
	2nd	29/8/23	3	Common shapes of tension members	
	3rd	31/8/23	3	Maximum values of effective slenderness ratio	
	4th		3		
Sixth	1st	4/9/23	3	Analysis of tension member	
	2nd	5/9/23	3	Design of tension member	
	3rd	7/9/23	3	Numerical on analysis and design of tension member	
	4th				
Seventh	1st	11/9/23	4	Common shapes of compression members	
	2nd	12/9/23	4	Buckling class of cross sections, slenderness ratio	
	3rd	13/9/23	4	Design compressive stress and strength of compression members	
	4th	14/9/23	4	Analysis of compression members (procedure)	
Eighth	1st	18/9/23	4	Design of compression members (procedure)	
	2nd	21/9/23	4	Numerical on analysis and design of compression members	
	3rd	25/9/23	4	Numerical on analysis and design of compression members	
	4th	26/9/23		Revision of chapter 3 and 4	
		27/9/23		Class test	

Ninth	1st	3/10/23	5	**Common cross sections of steel beams and their classification**	
	2nd	4/10/23	5	Deflection limit ,web buckling	
	3rd	5/10/23	5	Web buckling and web crippling	
	4th				
Tenth	1st	9/10/23	5	Design of laterally supported beams against bending and shear (procedure)	
	2nd	10/10/23	5	Numerical on Design of laterally supported beams against bending and shear	
	3rd	11/10/23	5	Numerical on Design of laterally supported beams against bending and shear	
	4th	12/10/23		Class test	
Eleventh	1st	16/10/23	6	Round tubular sections & permissible stresses	
	2nd	17/10/23	6	Tubular compression members	
	3rd	18/10/23	6	Tubular tension members	
	4th	19/10/23	6	Joints in Tubular trusses	
Twelfth	1st	30/10/23	6	Numerical on Design of tubular steel structures	
	2nd	31/10/23	6	Numerical on Design of tubular steel structures	
	3rd	1/11/23		Class test	
	4th	2/11/23	7	Introduction of masonry structures	
Thirteenth	1st	6/11/23	7	Design considerations for masonry walls and columns	
	2nd	7/11/23	7	Numerical on Design of masonry walls and columns	
	3rd	8/11/23	7	Numerical on Design of masonry walls and columns	
	4th	9/11/23	7	Load bearing & non- load bearing walls ,permissible stresses	
Fourteenth	1st	13/11/23	7	Load bearing & non- load bearing walls ,slenderness ratio ,effective length	
	2nd	14/11/23	7	Load bearing & non- load bearing walls, height and thickness	
	3rd	15/11/23	7	Numerical on analysis of Load bearing & non- load bearing walls	
	4th	16/11/23	7	Numerical on analysis of Load bearing & non- load bearing walls	
Fifteenth	1st	20/11/23	7	Numerical on Design of Load bearing & non- load bearing walls	
	2nd	21/11/23		Class test	
	3rd	22/11/23		Discussion of previous year questions	
	4th	23/11/23		Revision of chapter 2	
	1st	28/11/23		Revision of chapter 1 & 3	
	2nd	29/11/23		Revision of chapter 4 & 5	
	3rd	30/11/23		Revision of chapter 6 & 7	
	4th				

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LESSON PLAN

DISCIPLINE:CIVIL ENGINEERING	SEMESTER: 3rd	NAME OF THE TEACHING FACULTY : SATYABHAMA SETHI
SUBJECT:TH-5 ENVIRONMENTAL STUDIES	NO. OF DAY /WEEK CLASS ALLOTED:05	SEMESTER FROM DATE: 01-09-2023 TO DATE: 30-11-23 NO. OF WEEKS:14

WEEKS	CLASS DAYS	DATE	UNIT	THEORY -TOPIC
First	1	1/09/23	1	CH 1 definition , scope of environmental studies
	2	2/09/23	1	The multidisciplinary nature of environmental studies
	3	4/09/23	1	Importance need for public awareness
	4			
	5			
Second	1	4/0923	2	CH 2 Natural resources & associated problems
	2	7/09/23	2	Forest resource, use and over exploitation deforestation
	3	8/09/23	2	Timber extraction mining dam and their effects forests &tribal people
	4	9/09/23	2	Water resources ,use and over utilization of surface and ground water
	5	11/09/23	2	Floods, drought , conflicts over water ,dams benefits and problems .
Third	1	13/09/23	2	Mineral Resource, use and exploitation,
	2	14/09/23	2	Environmental effects of extracting and using mineral resource
	3	15/09/23	2	Food resource :world food problems changes caused by agriculture
	4	16/09/23	2	Food resource :over grazing , effects of modern agriculture
	5	18/09/23	2	Food resource: fertilizers ,pesticides problems .
Fouth	1	21/09/23	2	Food resource :water logging .salinity
	2	22/09/23	2	Energy resources :Growing energy need
	3	23/09/23	2	Energy resource: renewable and non renewable energy resource.
	4	25/09/23	2	Energy resource : use of alternate energy sources. Case studies
	5	27/09/23	2	Land resources: land as a resources,. land degradation
Fifth	1	29/09/23	2	Land resource :man induces land slides
	2	30/09/23	2	Land resource: soil erosion ,and desertification
	3	4/10/23	2	Role of individual in conservation of natural resources
	4	5/10/23	2	Equitable use of resources for sustainable
	5			
Sixth	1	6/10/23	3	Ecosystems :concept of an ecosystem
	2	7/10/23	3	Structure and function of an ecosystem producer consumer decomposer
	3	9/10/23	3	Energy flow in the ecosystem ecological succession, food chains food web and ecological pyramids
	4	11/10/23	3	Introduction type characteristic features structure and function of the of the following ecosystem
	5			
Seventh	1	12/10/23	3	Forest ecosystem aquatic ecosystem (ponds ,streams , lakes, rivers oceans ,estuaries)
	2	13/10/23	4	Biodiversity introduce definition : genetic spices and ecosystem diversity
	3	16/10/23	4	Biographical classification of India value of biodiversity consumptive use social ethical aesthetic and option
	4			
	5			

Eighth	1	18/10/23	4	Biodiversity at global national and local level
	2	19/10/23	4	Threats to biodiversity habits loss poaching of wild life ,man wild life conflicts
	3	20/10/23	5	Definition causes ,effects and control measure of Air pollution water pollution ,soil pollution , marine pollution noise pollution , thermal pollution , nuclear hazards.
	4			
	5			
Ninth	1	30/10/23	5	Solid Waste Management: causes effects and control measures of urban and industrial wastes.
	2	1/11/23	5	Role of an individual in prevention of pollution
	3	2/11/23	5	Disaster management floods , earth, quake, cyclone and landslides.
	4			
	5			
Tenth	1	3/11/23	6	Social issues and the environment : sustainable environment
	2	4/11/23	6	Form unsustainable to sustainable development .
	3	6/11/23	6	Urban problems related to energy.
	4	8/11/23	6	Water conservation , rain water harvesting , water shed management.
	5			
Eleventh	1	9/11/23	6	Resettlement and rehabilitation of people ; its problems and concern.
	2	10/11/23	6	Environmental ethics : issue and possible solutions.
	3	11/11/23	6	Climate change , global warming .acid rain, ozone layer depletion,
	4			
	5			
Twelfth	1	13/11/23	6	Nuclear accidents and holocaust case studies
	2	15/11/23	6	The environment air act.
	3	16/11/23	6	Air (prevention and control of pollution) Act.
	4	17/11/23	6	Water (prevention and control of pollution)Act.
	5			
Thirteenth	1	18/11/23	6	public awareness .
	2	20/11/23	7	Human population and the environment.
	3	22/11/23	7	Population growth and variation among nation s.
	4	23/11/23	7	Population explosion –family welfare program.
	5			
Fourteenth	1	24/11/23	7	Environment and human health.
	2	25/11/23	7	Human rights
	3	29/11/23	7	Value education.
	4	30/11/23	7	Role of information technology in environment and human health.
	5			

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LESSON PLAN

DISCIPLINE:CIVIL ENGINEERING	SEMESTER:5th	NAME OF THE TEACHING FACULTY: SUBHASWAGATI DASH
SUBJECT:TH-1 Entrepreneurship and management & smart technology	NO. OF DAY /WEEK CLASS ALLOTED:05	SEMESTER FROM DATE: 01-09-2023 TO DATE: 30-11-23 NO. OF WEEKS:14

WEEKS	CLASS DAYS	DATE	UNIT	THEORY -TOPIC
First	1	1/09/23	1	Concept , need, meaning of entrepreneurship
	2	2/09/23	1	Characteristics, qualities, functions of entrepreneurship
	3			
	4			
	5			
Second	1	4/09/23	1	Types of entrepreneurship, barriers in entrepreneurship
	2	5/09/23	1	Entrepreneurship vs manager, forms of business ownership
	3	7/09/23	1	Sole proprietorship, partnership forms & others
	4	8/09/23	1	Types of industries, concept of start-ups
	5	9/09/23	1	Entrepreneurial support agencies at national, state, district, TBT
Third	1	11/09/23	2	Business planning , SSI
	2	12/09/23	2	Ancillary units , tiny units, service sector units
	3	14/09/23	2	Time schedule plan , agencies to be contacted for project implementation
	4	15/09/23	2	Assessment of demand and supply
	5	16/09/23	2	Potential areas of growth
Fourth	1	18/09/23	2	Identify business opportunity
	2	21/09/23	2	Final product selection
	3	22/09/23	3	Preliminary project report
	4	23/09/23	3	Detailed project report, techno economic feasibility
	5			
Fifth	1	25/09/23	3	Project viability
	2	26/09/23	4	Definition of management , principles of management
	3	29/09/23	4	Principles of management , functions of management- planning, organizing
	4	30/09/23	4	Functions of management – staffing , directing , controlling
	5			
Sixth	1	3/10/23	4	Level of management in an organization
	2	5/10/23	5	Production management – function , activities
	3	6/10/23	5	Productivity, quality control
	4	7/10/23	5	Production planning and control
	5			
Seventh	1	9/10/23	5	Inventory management – need & models
	2	10/10/23	5	Financial management – functions , management of working capital
	3	12/10/23	5	Costing , break even analysis
	4	13/10/23	5	Brief idea about accounting terminologies
	5			

Eighth	1	16/10/23	5	Petty cash book , P&L accounts balance sheets
	2	17/10/23	5	Marketing management – concept, techniques
	3	19/10/23	5	Concept of 4Ps
	4	20/10/23	5	Human resource management – functions , manpower planning
Ninth	1	30/10/23	5	Recruitment , sources of manpower , selection process , method of testing
	2	31/10/23	5	Methods of training and development , payment of wages
	3			
	4			
	5			
Tenth	1	2/11/23	6	Leadership – definition and need , qualities and functions of a leader
	2	3/11/23	6	Manager vs leader ,
	3	4/11/23	6	Style of leadership
	4			
	5			
Eleventh	1	6/11/23	6	Motivation – definition and characteristics , importance
	2	7/11/23	6	Factors affecting motivation , theories of motivation
	3	9/11/23	6	Methods of improving motivation
	4	10/11/23	6	Importance of communication in business
	5	11/11/23	6	Types & barriers of communication
Twelfth	1	13/11/23	7	Human relationship & performance in organization
	2	14/11/23	7	Relations with peer , superiors & subordinates
	3	16/11/23	7	TQM concepts , quality management
	4	17/11/23	7	Quality system , accidents & safety , cause , PPE
	5	18/11/23	8	Intellectual property rights , patent
Thirteenth	1	20/11/23	8	Trademarks , copyrights
	2	21/11/23	8	Features of factories Act 1948 with amendment
	3	23/11/23	8	Features of payment wages Act 1936
	4	24/11/23	9	Concept of IOT , how IOT works
	5	25/11/23	9	Components of IOT , characteristics of IOT
Fourteenth	1	28/11/23	9	Categories of IOT , application of IOT – smart cities
	2	30/11/23	9	Smart home , smart healthcare , smart industries etc.
	3			
	4			
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LESSON PLAN

DISCIPLINE: *CIVIL ENGINEERING*	SEMESTER:4TH	NAME OF THE TEACHING FACULTY: *ER .G. BISHNU KUMARI*
SUBJECT:*TH 1 STRUCTURAL DESIGN -1*	NO. OF DAY /WEEKCLASS ALLOTED:05	SEMESTER FROM DATE: 16-01-2024 TO DATE: 26-04-2024 NO. OF WEEKS:17

WEEKS	CLASS DAYS	DATE	UNIT	THEORY-TOPIC	REMARK
First	1st	16/01/24	1	Working stress method-introduction ,Objectives of design and detailing	
	2nd	17/01/24	1	Different methods of design of concrete structures, introduction to reinforced concrete	
	3rd	18/01/24	1	RC sections and their behavior , grades of concrete and steel	
	4th	19/01/24	1	Permissible stresses, assumption in W.S.M	
	5th				
Second	1st	22/01/24	1	Flexural design and analysis of single reinforced sections from first principles	
	2nd	24/01/24	1	Concept of under reinforced ,over reinforced and balanced sections, Advantages & disadvantages of W.S.M	
	3rd	25/01/24	2	Definition, Advantages of L.S.M over W.S.M ,IS code suggestions regarding design philosophy	
	4th		2	Types of limit states, partial safety factors for materials strength,	
	5th		2	Characteristic strength, characteristic load	
Third	1st	29/01/24	2	Design load, loading on structure as per I.S. 875,	
	2nd	30/01/24	2	Study of I.S specification regarding spacing of reinforcement in slab	
	3rd	31/01/24	2	cover to reinforcement in slab, beam column &	
	4th	01/02/24	2	footing, minimum reinforcement in slab, beam & column,	
	5th	02/02/24		footing, minimum reinforcement in slab, beam & column,	
Fourth	1st	05/02/24	2	lapping, anchorage,	
	2nd	06/02/24	2	Effective span for beam & slab.	
	3rd	07/02/24	3	Limit state of collapse (flexure), Assumptions,	
	4th	08/02/24	3	Stress-Strain relationship for concrete and steel, neutral axis	
	5th	09/02/24	3	stress block diagram and strain diagram for singly reinforced section	
Fifth	1st	12/02/24	3	Concept of under- reinforced, over-reinforced and limiting section	
	2nd	13/02/24	3	Concept of under- reinforced, over-reinforced and limiting section	
	3rd	15/02/24	3	Concept of under- reinforced, over-reinforced and limiting section	
	4th	16/02/24	3	Neutral axis co-efficient	
	5th				
Sixth	1st	19/02/24	3	limiting value of moment of resistance and limiting percentage of steel required for limiting singly R.C. section.	
	2nd	20/02/24	3	limiting value of moment of resistance and limiting percentage of steel required for limiting singly R.C. section.	
	3rd	21/02/24	3	Analysis and design: Determination of design constants	
	4th	22/02/24	3	Moment of resistance and area of steel for rectangular sections	
	5th	23/02/24			
Seventh	1st	26/02/24	3	Moment of resistance and area of steel for rectangular sections	
	2nd	27/02/24	3	Necessity of doubly reinforced section	
	3rd	28/02/24	3	Design of doubly reinforced rectangular section	
	4th	29/02/24	3	Design of doubly reinforced rectangular section	
	5th	01/03/24	4	Nominal shear stress in R.C. section	
	1st	04/03/24	4	Design shear strength of concrete, maximum shear stress, design of shear reinforcement	

Eighth	2nd	06/03/24	4		
	3rd	07/03/24	4	Minimum shear reinforcement, forms of shear reinforcement	
	4th				
	5th				
Ninth	1st	11/03/24	4	Bond and types of bond, bond stress	
	2nd	12/03/24	4	Check for bond stress,	
	3rd	13/03/24	4	Development length in tension and compression	
	4th	14/03/24	4	Anchorage value for hooks 900 bend and 450 bend standards lapping of bars,	
	5th	15/03/24			
Tenth	1st	18/03/24	4	Check for development length	
	2nd	19/03/24	4	Numerical problems on deciding whether shear reinforcement is required or not,	
	3rd	20/03/24	4	Check for adequacy of the section in shear	
	4th	21/03/24	4	Design of shear reinforcement;	
	5th	22/03/24	4		
Eleventh	1st	27/03/24	4	Minimum shear reinforcement in beams (Explain through examples only)	
	2nd	28/03/24	5	General features, advantages	
	3rd		5	Effective width of flange as per IS: 456-2000 code provisions	
	4th		5	Analysis of singly reinforced T-Beam, strain diagram	
	5th		5		
Twelfth	1st	02/04/24	5	Stress diagram, depth of neutral axis,	
	2nd	03/04/24	5	Moment of resistance of T-beam section with neutral axis lying within the flange	
	3rd	04/04/24	5	Simple numerical problems on deciding effective flange width	
	4th	05/04/24	6	Design of simply supported one-way slabs for flexure check for deflection control and shear.	
	5th		6	Design of one-way cantilever slabs and cantilevers chajjas for flexure check for deflection control and	
Thirteenth	1st	08/04/24	6	Check for development length and shear	
	2nd	09/04/24	6	Design of two-way simply supported slabs for flexure with corner free to lift.	
	3rd	10/04/24	6	Design of dog-legged staircase	
	4th	12/04/24	6	Detailing of reinforcement in stairs spanning longitudinally	
	5th		7	Assumptions in limit state of collapse- compression.	
Fourteenth	1st	15/04/24	7	Definition and classification of columns, effective length of column	
	2nd	16/04/24	7		
	3rd	18/04/24	7	Specification for minimum reinforcement; cover	
	4th	19/04/24	7	Maximum reinforcement, number of bars in rectangular,	
	5th		8	Square and circular sections, diameter and spacing of lateral ties	
Fifteenth	1st	22/04/24	8	Analysis and design of axially loaded short square	
	2nd	23/04/24	8	Rectangular and circular columns (with lateral ties only)	
	3rd	24/04/24	8	Types of footing	
	4th	25/04/24		Design of isolated square column footing of uniform thickness for flexure and shear	
	5th	26/04/24		Design of isolated square column footing of uniform thickness for flexure and shear	

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