LESSON PLAN OF 4TH SEMESTER CIVIL ENGINEERING(2021-22)

Discipline: CE	Semester: 4th	Name of the Teaching Faculty Ananta biswal	
Subject: **HIGHWAY ENGINEERING**	No. of Days/per week class allotted: 05	Semester From:- 10-03-2022 To:- 18-07-2022 No. of Weeks : **20**	
Week	**Class Day**	**Theory Topics**	Update/comment
1st	01	Introduction	
	02	functions of Indian Roads Congress	
	03	IRC classification of roads	
	04	Organisation of state highway department	
	05	Organisation of state highway department	
2nd	01	Road Geometric	
	02	Glossary of terms used in geometric	
	03	right of way, formation width, road margin, road shoulder	
	04	carriage way, side slopes, kerbs, formation level, camber and gradient	
	05	Design and average running speed, stopping and passing sight distance	
3rd	01	Necessity of curves, horizontal and vertical curves including transition curves and super elevation,	
	02	Methods o f providing super – elevation	
	03	Road Materials Difference types of road materials in use sol, aggregates, binders	
	04	California Bearing Ratio : methods of finding CBR valued in the laboratory and at site and their significance	
	05	Availability of road aggregate	
4th	01	Testing aggregates : Abrasion test, impact test, crushing strength test, water absorption test & soundness test Unit	
	02	Binders common binders : cement, bitumen and Tar, propertied as per IS specifications, penetration and viscosity test of bitumen	
	03	Road Pavements Road Pavement : Flexible and rigid pavement	
	04	Sub-grade preparation	
	05	Sub-grade preparation	
5th	01	Flexible pavements : necessity of sub	

		base, stabilized sub bade: purpose of stabilization	
	02	Types of stabilization	
	03	Mechanical stabilization	
	04	Lime stabilization	
	05	Cement stabilization and fly ash stabilisation	
6th	01	Preparation of base course	
	02	Metalling : Water Bound Macadam and Bituminous Macadam	
	03	Surfacing	
	04	Types of surfacing	
	05	Methods of constructions	
7th	01	Construction of concrete roads as per IRC specifications	
	02	Unit 5: **Hill Roads**	
	03	introduction	
	04	Typical cross-sections showing all details	
	05	A typical hill road in cut, partly in cutting and partly in filling	
8th	01	Breast Walls,	
	02	Retaining walls,	
	03	different types of bends	
	04	Unit 6: **Road Drainage**	
	05	Necessity of road drainage work,	
9th	01	cross drainage works	
	02	Surface and sub-surface drains	
	03	Location, spacing and typical details of side drains,	
	04	Intercepting drains, pipe drains in hill roads	
	05	details of drains in cutting embankment	
10th	01	typical cross sections	
	02	Road Maintenance introduction	
	03	Common types of road failures	
	04	causes and remedies	
	05	Maintenance of bituminous road	
11th	01	Maintenance of concrete roads	
	02	maintenance of traffic control devices	
	03	Construction equipment's Introduction	
	04	Hot mixing plant	
	05	Tipper, tractors (wheel and crawler)	

		scraper, bulldozer	
12th	01	dumpers, shovels, graders, roller dragline	
	02	Asphalt mixer and tar boilers	
	03	Road pavers	
	04	Modern construction equipments for roads.	
	05	Traffic studies introduction	
13th	01	Basic concept of traffic study	
	02	Basic concept of traffic study	
	03	Traffic safety and traffic control signal	
	04	Road junctions	
	05	Traffic island and refuge island; advantages and disadvantages	
14th	01	Landscaping and Arboriculture introduction	
	02	Meaning of landscaping and arboriculture	
	03	Aesthetics in road side development	
	04	Revision	
	05	Revision	
15th	01	Revision	
	02	Revision	
	03	Revision	
	04	Revision	
	05	Revision	
16th	01	Revision	
	02	Revision	
	03	Revision	
	04	Revision	
	05	Revision	
17th	01	Revision	
	02	Revision	
	03	Revision	
	04	Revision	
	05	Revision	
18th	01	Revision	
	02	Revision	
	03	Revision	
	04	Revision	
	05	Revision	
19th	01	Revision	
	02	Revision	
	03	Revision	
	04	Revision	
	05	Revision	
20th	01	Revision	

LESSON PLAN OF 4TH SEMESTER CIVIL ENGINEERING(2021-22)

Discipline :- CIVIL	Semester:-4TH	Name of the Teaching Faculty Suman sahoo
Subject:- Hydraulic and Irrigation Engineering	No of Days/per Week Class Allotted :-05	Semester From:- 10-03-2022 To:- 18-07-2022 No of Weeks:- **20**

Week	Class Day	Theory/ Practical Topics
1st	1st	HYDROSTATICS: Properties of fluid:density, specific gravity, surface tension,
	2nd	NUMERICAL PROBLEMS SOLVING
	3rd	capillarity, viscosity and their uses
	4th	NUMERICAL PROBLEMS SOLVING
	5th	Pressure and its measurements:intensity of pressure, atmospheric pressure, gauge pressure, absolute pressure and vacuum pressure;
2nd	1st	Relationship between atmospheric pressure, absolute pressure and gauge pressure; pressure head; pressure gauges.
	2nd	NUMERICAL PROBLEMS SOLVING
	3rd	NUMERICAL PROBLEMS SOLVING
	4th	Pressure exerted on an immersed surface:Total pressure, resultant pressure,
	5th	NUMERICAL PROBLEMS SOLVING
3rd	1st	Expression for total pressure exerted on horizontal & vertical surface.
	2nd	NUMERICAL PROBLEMS SOLVING
	3rd	Kinematics of fluid flow: Basic equation of fluid flow and their application:Rate of discharge, equation of continuity of liquid flow.
	4th	NUMERICAL PROBLEMS SOLVING
	5th	total energy of a liquid in motion- potential, kinetic & pressure
4th	1st	NUMERICAL PROBLEMS SOLVING
	2nd	Bernoulli's theorem and its limitations. Practical applications of Bernoulli's equation.
	3rd	NUMERICAL PROBLEMS SOLVING
	4th	Flow over Notches and Weirs**:** Notches, Weirs, types of notches and weirs,
	5th	Discharge through different types of notches and weirs-their application (No Derivation)
5th	1st	NUMERICAL PROBLEMS SOLVING
	2nd	Types of flow through the pipes:uniform and non uniform; laminar and turbulent; steady and unsteady
	3rd	Reynold's number and its application
	4th	Losses of head of a liquid flowing through pipes:Different types of major and minor losses.
	5th	Simple numerical problems on losses due to friction using Darcy's equation
6th	1st	Total energy lines & hydraulic gradient lines (Concept Only).
	2nd	Flow through the Open Channels:Types of channel sections-rectangular, trapezoidal and circular
	3rd	Chezy's and Manning's equation.
	4th	NUMERICAL PROBLEMS SOLVING

	5th	Best economical section.
7th	1st	PUMPS: Type of pumps
	2nd	Centrifugal pump: basic principles, operation,
	3rd	Discharge, horse power & efficiency.
	4th	Reciprocating pumps:types, operation
	5th	horse power & efficiency
8th	1st	Hydrology Hydrology Cycle Rainfall: types, intensity, hyetograph Estimation of rainfall, rain gauges, Its types(concept only), Concept of catchment area, types, run-off, estimation of flood discharge by Dicken's and Ryve's formulae
	2nd	Rainfall: types, intensity, hyetograph
	3rd	Estimation of rainfall, rain gauges, Its types(concept only)
	4th	Concept of catchment area, types, run-off, estimation of flood discharge by Dicken's and Ryve's formulae
	5th	Water Requirement of Crops Definition of irrigation, necessity, benefits of irrigation, types of irrigation
9th	1st	Crop season
	2nd	Duty, Delta and base period their relationship, overlap allowance, kharif and rabi crops
	3rd	Gross command area, culturable command area, Intensity of Irrigation, irrigable area, time factor, crop ratio
	4th	Flow irrigation Canal irrigation, types of canals, loss of water in canals
	5th	Perennial irrigation
10th	1st	Different components of irrigation canals
	2nd	and their functions
	3rd	Sketches of different canal cross-sections
	4th	classification of canals according to their alignment
	5th	Various types of canal lining – Advantages and disadvantages
11th	1st	WATER LOGGING AND DRAINAGE : Causes and effects of water logging
	2nd	detection, prevention and remedies
	3rd	DIVERSION HEAD WORKS AND REGULATORY STRUCTURES Necessity and objectives of diversion head works
	4th	weirs and barrages
	5th	General layout of barrage
12th	1st	functions of different parts of barrage
	2nd	Silting and scouring
	3rd	Functions of regulatory structures
	4th	CROSS DRAINAGE WORKS : Functions of Cross drainage works aqueduct

	5th	necessity of Cross drainage works
13th	1st	aqueduct concept with help of neat sketch
	2nd	Siphon concept with help of neat sketch
	3rd	concept with help of neat sketch
	4th	DAMS Necessity of storage reservoirs
	5th	types of dams
14th	1st	Earthen dams: types, description
	2nd	causes of failure and protection measures.
	3rd	Gravity dam- types, description
	4th	Causes of failure and protection measures.
	5th	Spillways- Types (With Sketch)
15th	1st	Necessity of spillway
	2nd	PREVIOUS YEAR QUESTIONS PRACTICE
	3rd	PREVIOUS YEAR QUESTIONS PRACTICE
	4th	PREVIOUS YEAR QUESTIONS PRACTICE
	5th	DOUBT CLEARING CLASS
16th	1st	Necessity of spillway
	2nd	PREVIOUS YEAR QUESTIONS PRACTICE
	3rd	PREVIOUS YEAR QUESTIONS PRACTICE
	4th	PREVIOUS YEAR QUESTIONS PRACTICE
	5th	DOUBT CLEARING CLASS
17th	1st	Necessity of spillway
	2nd	PREVIOUS YEAR QUESTIONS PRACTICE
	3rd	PREVIOUS YEAR QUESTIONS PRACTICE
	4th	PREVIOUS YEAR QUESTIONS PRACTICE
	5th	DOUBT CLEARING CLASS
18th	1st	Necessity of spillway
	2nd	PREVIOUS YEAR QUESTIONS PRACTICE
	3rd	PREVIOUS YEAR QUESTIONS PRACTICE
	4th	PREVIOUS YEAR QUESTIONS PRACTICE
	5th	DOUBT CLEARING CLASS
19th	1st	Necessity of spillway
	2nd	PREVIOUS YEAR QUESTIONS PRACTICE
	3rd	PREVIOUS YEAR QUESTIONS PRACTICE
	4th	PREVIOUS YEAR QUESTIONS PRACTICE
	5th	DOUBT CLEARING CLASS
20th	1st	Necessity of spillway
	2nd	PREVIOUS YEAR QUESTIONS PRACTICE
	3rd	PREVIOUS YEAR QUESTIONS PRACTICE
	4th	PREVIOUS YEAR QUESTIONS PRACTICE
	5th	DOUBT CLEARING CLASS

LESSON PLAN OF4THSEMESTERCIVIL ENGINEERING(2021-22)

Discipline :- CIVIL	Semester:-4TH	Name of the Teaching Faculty SoumyakantaSahoo
Subject:- LAND SURVEY-I	No of Days/per Week Class Allotted :-05	Semester From:- 10-03-2022 To:- 18-07-2022 No of Weeks:- **20**

Week	Class Day	Theory/ Practical Topics
1st	1st	INTRODUCTION TO SURVEYING, LINEAR MEASUREMENTS: Surveying: Definition, Aims and objectives
	2nd	Principles of survey-Plane surveying- Geodetic Surveying- Instrumental surveying.
	3rd	Precision and accuracy of measurements, instruments used for measurement of distance
	4th	Types of tapes and chains
	5th	Errors and mistakes in linear measurement – classification
2nd	1st	Sources of errors and remedies.
	2nd	Corrections to measured lengths due to-incorrect length, temperature variation, pull, sag
	3rd	numerical problem applying corrections
	4th	CHAINING AND CHAIN SURVEYING : Equipment and accessories for chaining
	5th	Ranging – Purpose, signalling, direct and indirect ranging, Line ranger – features and use, error due to incorrect ranging
3rd	1st	Methods of chaining –Chaining on flat ground, Chaining on sloping ground – stepping method, Clinometer-features and use, slope correction
	2nd	Setting perpendicular with chain & tape, Chaining across different types of obstacles –Numerical problems on chaining across obstacles
	3rd	Purpose of chain surveying, Its Principles, concept of field book. Selection of survey stations, base line, tie lines, Check lines
	4th	Offsets – Necessity, Perpendicular and Oblique offsets, Instruments for setting offset – Cross Staff, Optical Square.
	5th	Errors in chain surveying – compensating and accumulative errors causes & remedies, Precautions to be taken during chain surveying.
4th	1st	ANGULAR MEASUREMENT AND COMPAS SURVEYING : Measurement of angles with chain, tape & compass
	2nd	Compass – Types, features, parts, merits & demerits, testing & adjustment of compass
	3rd	Designation of angles- concept of meridians – Magnetic, True, arbitrary; Concept of bearings – Whole circle bearing, Quadrantal bearing, Reduced bearing, suitability of application
	4th	numerical problems on conversion of bearings
	5th	Use of compasses – setting in field-centering, leveling, taking readings, concepts of Fore bearing, Back Bearing
5th	1st	Numerical problems on computation of interior & exterior angles from bearings.
	2nd	Effects of earth's magnetism – dip of needle, magnetic declination, variation in declination
	3rd	Numerical problems on application of correction for declination.

	4th	Errors in angle measurement with compass – sources & remedies
	5th	Principles of traversing – open & closed traverse, Methods of traversing.
6th	1st	Local attraction – causes, detection, errors, corrections
	2nd	Numerical problems of application of correction due to local attraction.
	3rd	Errors in compass surveying – sources & remedies
	4th	Plotting of traverse – check of closing error in closed & open traverse, Bowditch's correction, Gales table
	5th	MAP READING CADASTRAL MAPS & NOMENCLATURE: Study of direction, Scale, Grid Reference
7th	1st	Grid Square Study of Signs and Symbols
	2nd	Cadastral Map Preparation Methodology
	3rd	Unique identification number of parcel
	4th	Positions of existing Control Points and its types
	5th	4.5 Adjacent Boundaries and Features, Topology Creation and verification.
8th	1st	PLANE TABLE SURVEYING : Objectives, principles and use of plane table surveying.
	2nd	Instruments & accessories used in plane table surveying.
	3rd	Methods of plane table surveying – (1) Radiation, (2) Intersection
	4th	(3) Traversing, (4) Resection.
	5th	Statements of TWO POINT and THREE POINT PROBLEM.
9th	1st	Errors in plane table surveying and their corrections, precautions in plane table surveying.
	2nd	THEODOLITE SURVEYING AND TRAVERSING: Purpose and definition of theodolite surveying
	3rd	Transit theodolite- Description of features, component parts,
	4th	Fundamental axes of a theodolite, concept of vernier, reading a vernier, Temporary adjustment of theodolite
	5th	Concept of transiting –Measurement of horizontal and vertical angles
10th	1st	Measurement of magnetic bearings, deflection angle, direct angle, setting out angles
	2nd	Prolonging a straight line with theodolite, Errors in Theodolite observations.
	3rd	Methods of theodolite traversing with – inclined angle method, deflection angle method, bearing method
	4th	Plotting the traverse by coordinate method, Checks for open and closed traverse
	5th	Traverse computation – consecutive coordinates, latitude and departure, Gale's traverse table
11th	1st	Numerical problems on omitted measurement of lengths & bearings
	2nd	Closing error – adjustment of angular errors, adjustment of bearings
	3rd	numerical problems
	4th	Balancing of traverse – Bowditch's method, transit method, graphical method, axis method, calculation of area of closed traverse.
	5th	NUMERICAL PROBLEM SOLVING

12th	1st	LEVELLING AND CONTOURING : Definition and Purpose and types of leveling	
	2nd	concepts of level surface, Horizontal surface, vertical surface, datum, R. L., B.M.	
	3rd	Instruments used for leveling	
	4th	concepts of line of collimation, axis of bubble tube, axis of telescope, Vertical axis	
	5th	Leveling staff – Temporary adjustments of level, taking reading with level, concept of bench mark, BS, IS, FS, CP, HI.	
13th	1st	Field data entry – level Book – height of collimation method and Rise & Fall method, comparison	
	2nd	Numerical problems on reduction of levels applying both methods, Arithmetic checks	
	3rd	Effects of curvature and refraction, numerical problems on application of correction.	
	4th	Reciprocal leveling – principles, methods, numerical problems, precise leveling.	
	5th	Errors in leveling and precautions, Permanent and temporary adjustments of different types of levels.	
14th	1st	Definitions, concepts and characteristics of contours	
	2nd	Methods of contouring, plotting contour maps, Interpretation of contour maps, top sheets	
	3rd	Use of contour maps on civil engineering projects – drawing cross-sections from contour maps, locating proposal routes of roads / railway / canal on a contour map	
	4th	Computation of volume of earthwork from contour map for simple structure.	
	5th	Map Interpretation: Interpret Human and Economic Activities (i.e.: Settlement, Communication, Land use etc.), Interpret Physical landform (i.e.: Relief, Drainage Pattern etc.), Problem Solving and Decision Making	
15th	1st	COMPUTATION OF AREA & VOLUME: Determination of areas, computation of areas from plans.	
	2nd	Calculation of area by using ordinate rule, trapezoidal rule, Simpson's rule	
	3rd	Calculation of volumes by prismoidal formula and trapezoidal formula, Prismoidal corrections, curvature correction for volumes.	
	4th	PREVIOUS YEAR QUESTIONS PRACTICE	
	5th	PREVIOUS YEAR QUESTIONS PRACTICE	
16th	1st	Necessity of spillway	
	2nd	PREVIOUS YEAR QUESTIONS PRACTICE	
	3rd	PREVIOUS YEAR QUESTIONS PRACTICE	
	4th	PREVIOUS YEAR QUESTIONS PRACTICE	
	5th	DOUBT CLEARING CLASS	
17th	1st	Necessity of spillway	
	2nd	PREVIOUS YEAR QUESTIONS PRACTICE	
	3rd	PREVIOUS YEAR QUESTIONS PRACTICE	
	4th	PREVIOUS YEAR QUESTIONS PRACTICE	
	5th	DOUBT CLEARING CLASS	
18th	1st	Necessity of spillway	
	2nd	PREVIOUS YEAR QUESTIONS PRACTICE	
	3rd	PREVIOUS YEAR QUESTIONS PRACTICE	
	4th	PREVIOUS YEAR QUESTIONS PRACTICE	
	5th	DOUBT CLEARING CLASS	

19th	1st	Necessity of spillway	
	2nd	PREVIOUS YEAR QUESTIONS PRACTICE	
	3rd	PREVIOUS YEAR QUESTIONS PRACTICE	
	4th	PREVIOUS YEAR QUESTIONS PRACTICE	
	5th	DOUBT CLEARING CLASS	
20th	1st	Necessity of spillway	
	2nd	PREVIOUS YEAR QUESTIONS PRACTICE	
	3rd	PREVIOUS YEAR QUESTIONS PRACTICE	
	4th	PREVIOUS YEAR QUESTIONS PRACTICE	
	5th	DOUBT CLEARING CLASS	

LESSON PLAN OF 4TH SEMESTER CIVIL ENGINEERING(2021-22)

Discipline :- CIVIL	Semester:-4TH	Name of the Teaching Faculty SWASTIK PRADHAN
Subject:- STRUCTURAL DESIGN I	No of Days/per Week Class Allotted :-05	Semester From:- 10-03-2022 To:- 18-07-2022 No of Weeks:- 20

Week	Class Day	Theory/ Practical Topics
1st	1st	Working stress method (WSM) Objectives of design and detailing.
	2nd	State the different methods of design of concrete structures.
	3rd	Introduction to reinforced concrete
	4th	R.C. sections their behaviour
	5th	Grades of concrete and steel
2nd	1st	Permissible stresses, assumption in W.S.M.
	2nd	Basic concept of under reinforced ,over reinforced and balanced section
	3rd	PROBLEM SOLVING
	4th	Flexural design & analysis of singly and doubly reinforced rectangular sections.
	5th	NUMERICAL PROBLEM SOLVING
3rd	1st	Limit state method (LSM) Definition, types of limit states, partial safety factors for materials strength
	2nd	Characteristic strength, characteristic load, design load, loading on structure as per I.S. 875
	3rd	I.S specification regarding spacing of reinforcement in slab, cover to reinforcement in slab, beam column & footing
	4th	minimum reinforcement in slab, beam & column, lapping, anchorage
	5th	effective span for beam & slab.
4th	1st	Analysis and design of singly reinforced sections (LSM) Limit state of collapse (flexure), Assumptions, Stress-Strain relationship for concrete and steel, neutral axis
	2nd	Stress block diagram and strain diagram for singly reinforced section.
	3rd	Concept of under- reinforced, over-reinforced and limiting section, neutral axis co-efficient
	4th	Numerical problems
	5th	limiting value of moment of resistance and limiting percentage of steel required for limiting singly R.C. section
5th	1st	Numerical problems on determining design constants
	2nd	Moment of resistance and area of steel for rectangular sections.
	3rd	Numerical problem solving
	4th	Analysis and design of doubly reinforced section (LSM) General features
	5th	Necessity of providing doubly reinforced section, reinforcement limitations. Analysis of doubly reinforced section, strain diagram, stress diagram

6th	1st	Numerical problem solving
	2nd	Depth of neutral axis, moment of resistance of the rectangular section.
	3rd	NUMERICAL PROBLEM SOLVING
	4th	Numerical problems on finding moment of resistance
	5th	Design of beam sections
7th	1st	Shear, Bond and Development Length (LSM) Nominal shear stress in R.C. section, design shear strength of concrete, maximum shear stress
	2nd	design of shear reinforcement, minimum shear reinforcement, forms of shear reinforcement
	3rd	Bond and types of bond, bond stress, check for bond stress, development length in tension and compression, anchorage value for hooks 90_0 bend and 45_0 bend standards lapping of bars, check for development length.
	4th	Numerical problem solving
	5th	Numerical problems on deciding whether shear reinforcement is required or not, check for adequacy of the section in shear. Design of shear reinforcement; Minimum shear reinforcement in beams
8th	1st	Determination of Development length required for tension reinforcement of cantilevers beam and slab, check for development length.
	2nd	Analysis and Design of T-Beam (LSM) General features, advantages, effective width of flange as per IS: 456-2000 code provisions.
	3rd	Analysis of singly reinforced T-Beam, strain diagram & stress diagram, depth of neutral axis
	4th	Numerical problem solving
	5th	Design of T-beam for moment and shear for neutral axis within or up to flange bottom.
9th	1st	Numerical problem solving
	2nd	Simple numerical problems on deciding effective flange width. (Problems only on finding moment of resistance of T-beam section when N.A. lies within or up to the bottom of flange shall be asked in written examination)..
	3rd	Numerical problem solving
	4th	Design of Slab and Stair case (LSM) Design of simply supported one-way slabs for flexure check for deflection control and shear.
	5th	Numerical problem solving
10th	1st	Numerical problem solving
	2nd	Design of one-way cantilever slabs and cantilevers chajjas for flexure check for deflection control and check for development length and shear
	3rd	Numerical problem solving
	4th	Numerical problem solving
	5th	Design of two-way simply supported slabs for flexure with corner free to lift
11th	1st	Numerical problem solving
	2nd	Numerical problem solving

		3rd	Design of dog-legged staircase and cantilever staircase.
		4th	Numerical problem solving
		5th	Numerical problem solving
12th		1st	Simple numerical problems on design of one-way simply supported slabs cantilever slab, two-way simply supported slab, dog-legged staircase and cantilever staircase
		2nd	Numerical problem solving
		3rd	Numerical problem solving
		4th	Design of Axially loaded columns and Footings (LSM) Assumptions in limit state of collapse- compression.
		5th	Definition and classification of columns, effective length of column
13TH		1st	Specification for minimum reinforcement; cover, maximum reinforcement
		2nd	Number of bars in rectangular, square and circular sections, diameter and spacing of lateral ties.
		3rd	Analysis and design of axially loaded short, square, rectangular columns with lateral ties only; check for short column and check for minimum eccentricity may be applied.
		4th	Numerical problem solving
		5th	Numerical problem solving
14TH		1st	Types of footing
		2nd	Design of isolated square column footing for flexure
		3rd	Design of isolated square column footing for shear
		4th	Numerical problem solving
		5th	Numerical problem solving
15TH		1st	Design of Strip footing for walls
		2nd	Numerical problem solving
		3rd	Numerical problem solving
		4th	Previous year questions solving
		5th	Previous year questions solving

16TH	1st	Numerical problem solving	
	2nd	Numerical problem solving	
	3rd	Numerical problem solving	
	4th	Previous year questions solving	
	5th	Previous year questions solving	
17TH	1st	Design of Strip footing for walls	
	2nd	Numerical problem solving	
	3rd	Numerical problem solving	
	4th	Previous year questions solving	
	5th	Previous year questions solving	
18TH	1st	Numerical problem solving	
	2nd	DOUBT CLEARING CLASS	
	3rd	DOUBT CLEARING CLASS	
	4th	DOUBT CLEARING CLASS	
	5th	DOUBT CLEARING CLASS	
19TH	1st	Revision	
	2nd	Revision	
	3rd	Revision	
	4th	Revision	
	5th	Revision	
20TH	1st	Revision	
	2nd	Revision	
	3rd	Revision	
	4th	Revision	
	5th	Revision	