LESSON PLAN

Name of the Faculty : MANISH

Discipline : CIVIL

Semester : 4TH

Subject : S.A-II (CE-202N)

Lesson Plan Duration : 15 weeks (from January, 2018 to April, 2018)

Work Load (Lecture/Practical) per week (in hours): Lectures - 03

WEEK	THEORY	
	LECTURE DAY	TOPIC (including assignment / test)
1st	1st	Introduction, Static and Kinematic Indeterminacies,
	2nd	Castigliano's theorems
	3rd	Castigliano's theorems
2nd	1st	Strain energy method
	2nd	Analysis of frames with one or two redundant members using Castigliano's 2nd theorem.
	3rd	Analysis of frames with one or two redundant members using Castigliano's 2nd theorem.
3rd	1st	**Slope deflection** - introduction
	2nd	Analysis of continuous beams
	3rd	portal frames
4th	1st	Numerical related slope deflection method

4th	**2nd**	Numerical related slope deflection method
	3rd	Numerical related slope deflection method
5th	**1st**	**moment Distribution Methods**: introduction
	2nd	Portal frames with inclined members.
	3rd	Numerical related moment distribution method
6th	**1st**	Numerical related moment distribution method
	2nd	Numerical related moment distribution method
	3rd	**Assignment : above topic**
7th	**1st**	**Column Analogy Method:** Elastic centre
	2nd	Properties of analogous column,
	3rd	Applications to beam & frames.
8th	**1st**	Related numerical of above topic
	2nd	Related numerical of above topic
	3rd	**Analysis of Two hinged Arches: introduction**
9th	**1st**	Parabolic and circular Arches,
	2nd	Bending Moment Diagram for various loadings,
	3rd	Temperature effects, Rib shortening,
10th	**1st**	Axial thrust and Radial Shear force diagrams.
	2nd	Related numerical of above topic
	3rd	**Assignment of above topic**
11th	**1st**	**Unsymmetrical Bending : Introduction**
	2nd	Centroidal principal axes of sections,

	3rd	Bending stresses in beam subjected to unsymmetrical bending,
12th	**1st**	shear centre, shear centre for channel
	2nd	Angles and Z sections.
		Related numerical of above topic
13th	**1st**	**Cable and suspension Bridges: introduction**
	2nd	uniformly loaded cables,
	3rd	Temperature stresses,
14th	**1st**	three hinged stiffening Girder
	2nd	Related numerical of above topic
	3rd	Related numerical of above topic
15th	**1st**	two hinged stiffening Girder
	2nd	Related numerical of above topic
	3rd	Assignment of above topic

LESSON PLAN

Name of the Faculty : RIMPI CHOPRA

Discipline : CIVIL

Semester : 4TH

Subject : D.S.S –I (CE-204N)

Lesson Plan Duration : 15 weeks (from January, 2018 to April, 2018)

Work Load (Lecture/Practical) per week (in hours): Lectures - 03

WEEK	THEORY	
	LECTURE DAY	TOPIC (including assignment / test)
1st	1st	**Introduction:** Loads, structural steels and their specifications, structural elements, steel vs. concrete and timber
	2nd	design specifications as per IS: 800, structural layout, strength and stiffness considerations, efficiency of cross-section, safety and serviceability considerations.
	3rd	**RIEVTED CONNECTION: Riveting and bolting their types , failures of riveting joint, efficiency of a joint, ,**
2nd	1st	**Design of riveted joint , advantages and disadvantages of riveted joint, Stress in bolts**
	2nd	**Welded connection, types of welded joints, design of welded joint , subjected to axial loads, welded joints subjected to eccentric loads**
	3rd	**Semi rigid and rigid connections.**
3rd	1st	**Design of tension members, introduction, types of tension**

3rd		**members, net sectional areas.**
	2nd	Design of tension members. Lug angles and splices.
	3rd	strength and stiffness considerations, efficiency of cross-section, safety and serviceability considerations.
4th	**1st**	**advantages and disadvantages of riveted joint, Stress in bolts**
	2nd	**subjected to axial loads, welded joints subjected to eccentric loads**
	3rd	structural elements, steel vs. concrete and timber.
5th	**1st**	**Design of compression meters:**
	2nd	Introduction, effective length and slenderness ratio , various types of section used for columns
	3rd	Design of built up columns.
6th	**1st**	**Numerical**
	2nd	**Numerical**
	3rd	**Lacing and battens**
7th	**1st**	Numerical
	2nd	**Numerical**
	3rd	**Columns basis and footings**
8th	**1st**	Introduction types of columns basis
	2nd	**Design of slab base and gusted base**
	3rd	Design of grillage foundation
9th	**1st**	**Numerical**
	2nd	**Numerical**
	3rd	**Numerical**

10th	**1st**	**Design of beams**
	2nd	**Introduction: types of section, supported and unsupported beams.**
	3rd	**Design of built up beams**
11th	**1st**	**Web buckling and web crippling**
	2nd	Diagonal buckling
	3rd	**Numerical**
12th	**1st**	**Numerical**
	2nd	**Numerical**
		Numerical
13th	**1st**	**Gantry girder**
	2nd	Design and types
	3rd	**Design steps**
14th	**1st**	**Numerical**
	2nd	Eccentric loading and concentric clouding
	3rd	**Crane load**
15th	**1st**	**Plate girder**
	2nd	**Stiffeners**
	3rd	Necessity of plate girder

LESSON PLAN

Name of the Faculty : Mr.Manoj Tiwari

Discipline : Mechanical

Semester : 4TH

Subject : FM-I (CE-206N) & FM-II (P) (CE-212N)

Lesson Plan Duration : 15 weeks (from January, 2018 to April, 2018)

Work Load (Lecture/Practical) per week (in hours): Lectures - 03

WEEK	THEORY		PRATICAL	
	LECTURE DAY	TOPIC (including assignment / test)	PRACTICAL DAY	TOPIC
1st	1st	LAMINAR FLOW	1	To determine the coefficient of drag by Stoke's law for spherical bodies.
	2nd	NAVIER STOCK EQUATION, LAMINAR FLOW BETWEEN PARELLAL PLATES.		
	3rd	Coutte' flow laminar flow through pipes, laminar flow around a sphere,		
2nd	1st	Stock' law	2	To study the phenomenon of cavitations in pipe flow.
	2nd	flow through pipes:- types of flow		
	3rd	Reynolds experiment, shear stress on turbulent flow, boundary layer in pipes		
3rd	1st	Establishment of flow , velocity distribution through rough and		

3rd		**smooth pipes**		
	2nd	Resistance	**3**	To determine the critical Reynolds's number for flow through commercial pipes.
	3rd	Station and moody diagram		
4th	**1st**	Darcy weisbach equation , energy looses in pipes	**4**	To determine the coefficient of discharge for flow over a broad crested weir.
	2nd	**Loss due to sudden expansion**		
	3rd	**Total energy line , pipes in series and in parallel .branched pipe, pipe networks, hardy cross method, water hammer.**		
5th	**1st**	**Drag and lift force, types of drag**	**5**	**Copy check and viva voce**
	2nd	Drag on a sphere,		
	3rd	Flat plate		
6th	**1st**	**Cylinder**	**6**	To study the characteristics of a hydraulic jump on a horizontal floor and sloping glacis including friction blocks.
	2nd	**And airfoil development of lift on immersed bodies likes circular cylinder and airfoil.**		
	3rd	**Open channel flow**		
7th	**1st**	Types of flow in open channels	**7**	To study the scouring phenomenon around a bridge pier model.
	2nd	**Geometric parameters of channels section**		
	3rd	**Uniform flow**		
8th	**1st**	Most economical section	**8**	To study the scouring phenomenon for flow past a spur.
	2nd	**Rectangular and trapezoidal specific energy and critical**		

		depth		
	3rd	Momentum in open channel		
9th	**1st**	**Specific force**	**9**	**Copy check and viva voce**
	2nd	**Critical flow in rectangular channel**		
	3rd	**Applications of specific energy and discharge diagram**		
10th	**1st**	**Surges in channel**	**10**	To determine the characteristics of a centrifugal pump.
	2nd	**Compressible flow**		
	3rd	**Basic relationship of thermodynamics of continuity momentum and energy equation.**		
11th	**1st**	**Mach no and its signification**	**11**	To study the momentum characteristics of a given jet.
	2nd	Subsonic and supersonic flows		
	3rd	**Stagnation pressure**		
12th	**1st**	**Pumps and turbines**	**12**	To determine head loss due to various pipe fittings.
	2nd	**Reciprocating and centrifugal pumps**		
		Single and double acting reciprocating pumps.		
13th	**1st**	**Parts and working**	**13**	**Final copies check**
	2nd	Types of turbines		
	3rd	**Peloton wheel turbine**		
	1st	**Kaplan turbines**		

14th	**2nd**	Reaction turbines		
	3rd	**Cavitations**	**14**	**Internal viva**
15th	**1st**	**Numerical**	**15**	**Internal viva**
	2nd	**Numerical**		
	3rd	Numerical		

LESSON PLAN

Name of the Faculty : Mr. DEEPAK KUMAR

Discipline : civil

Semester : 4TH

Subject : soil mechanics (CE-208N)

Lesson Plan Duration : 15 weeks (from January, 2018 to April, 2018)

Work Load (Lecture/Practical) per week (in hours): Lectures - 03

WEEK	THEORY	
	LECTURE DAY	TOPIC (including assignment / test)
1st	1st	Soil formation and composition
	2nd	Origin , weathering, soil formation major soil deposits of India
	3rd	Principle clay minerals
2nd	1st	Basic soil properties
	2nd	Three phase system, wt vol. relationship, sil grain properties, soil aggregate properties, grain size analysis, sieve analysis, consistency of soil, consistency limits , sedimentation
	3rd	Activity of clays, relative density of sands
3rd	1st	Classification of soil
	2nd	Purpose of classification , classification on te basis of plasticity , plasticity cart, Indian standard ,classification system

	3rd	Permeability of soil
4th	**1st**	Introduction , Darcy law and its validity discharge velocity and seepage velocity, factors affecting permeability
	2nd	**Coefficient of permeability and its determination.**
	3rd	**Effective stress concept:- principle, hydrostatic condition, capillary rise in soil and its zones.**
5th	**1st**	**2 D flow, seepage force, Laplace ' Eqn PROPERTIES and utilize of flow net, graphical method of constriction of flow nets in piping, protective filter compaction.**
	2nd	Role of moisture , moisture density relationship, compaction in field, compaction of cohesive soil.
	3rd	Compaction of cohesion less soil . Field control of compaction.
6th	**1st**	**Vertical stress below applied load**
	2nd	**Bousinezq Eqn, VERTICAL STRESS**
	3rd	**Distribution diagrams, vertical stress loaded areas , new marks influence chart , approximate stress distribution method for loaded areas.**
7th	**1st**	Westergaurd analysis.
	2nd	**Contact pressure .**
	3rd	**Compressibility and consolidation**
8th	**1st**	Components of total settlement, consolidation process
	2nd	**1D,consolidation test**
	3rd	Terzaghi's one dimensional consolidation eqn.
9th	**1st**	**Determination of coefficients of consolidation, consolidation settlements.**
	2nd	**Construction periods settlement , secondary consolidation**

	3rd	**Shear strength :-introduction, Mohr' stress circle, Mohr coulomb failure, relationship between principle stresses at failure**
10th	**1st**	**Shear test, direct shear test, vane shear test, unconfined compression test, triaxial compression test, drainage condition and parameters,**
	2nd	**Shear strength characteristic of strength**
	3rd	**Normally consolidation**
11th	**1st**	**Sensitivity and thixotropy**
	2nd	Earth pressure
	3rd	**Earth pressure at rest**
12th	**1st**	**Rankin's theory**
	2nd	**Active and passive pressure**
		Numerical
13th	**1st**	**Numerical**
	2nd	Cullman Graphical construction
	3rd	**Rebhanns constriction**
14th	**1st**	**Numerical**
	2nd	Numerical
	3rd	**Numerical**
15th	**1st**	**Numerical**
	2nd	**Active and passive pressure**
	3rd	**Plastic equilibrium**
		Coulombs earth pressure theory

LESSON PLAN

Name of the Faculty : Mr.SUKHDEV SINGH

Discipline : civil

Semester : 4TH

Subject : surveying-II (CE-210N) & surveying – II (P) (CE-216N)

Lesson Plan Duration : 15 weeks (from January, 2018 to April, 2018)

Work Load (Lecture/Practical) per week (in hours): Lectures – 03, Practical - 04

WEEK	THEORY		Practical	
	LECTURE DAY	TOPIC (including assignment / test)	Practical day	Topic
1st	1st	TRIGNOMETRY LEVELING:- introduction	1	. To study the functions of various parts of theodolite.
	2nd	Height and distance, base of the object accessible		
	3rd	Numerical		
2nd	1st	Numerical	2	. To carry out permanent adjustments of a transit theodolite.
	2nd	Base is inaccessible		
	3rd	Geoadatical observation		
3rd	1st	Refraction and curvature	3	To measure horizontal and vertical angles using a theodolite.
	2nd	Axis signal correction		
	3rd	Difference in elevation between two points		

4th **4th**	**1st**	Triangulation:- systems, classification strength of figure, selection of triangulation stations , grade of triangulation, field work of triangulation, EDM	4	
	2nd	**NUMERICAL**		To determine the constants of a given tachometer.
	3rd	**NUMERICAL**		
5th	**1st**	**NUMERICAL**	**5**	To determine the horizontal distance & elevations of a given traverse with the help of a tachometer.
	2nd	Survey adjustment and treatment of observations		
	3rd	Types of errors		
6th	**1st**	**Definition of weight of an observation, law of accidental errors.**	**6**	**Copy check and viva voce**
	2nd	**Law of weights**		
	3rd	**Most probable values**		
7th	**1st**	Determination of probable errors	7	To set out simple curves by offsets from tangents.
	2nd	**Different cases with examples**		
	3rd	**Numerical**		
8th	**1st**	Numerical	8	To set out curves by offsets from chords produced.
	2nd	**Principle of least square**		
	3rd	Adjustment of triangulation figures by methods of least squares.		
9th	**1st**	**types of Arial photograph, Arial camera, and height**		

9th	**2nd**	**displacements in verticals photographs**	**9**	To set out simple curves by offsets from long chords.
	3rd	**Stereoscopic vision, stereoscopies, height determination from parallax.**		
10th	**1st**	**Flight planning**	**10**	To set out simple curves by Rankine's method of tangential deflection angles.
	2nd	**Introduction of remote sensing and its system:-GIS**		
	3rd	**Concept of G.I.S and G.P.S**		
11th	**1st**	**Components , data input and output.**	**11**	**Copy checks and viva**
	2nd	Astronomy :-study of stars.		
	3rd	**Definitions of astronomical terms**		
12th	**1st**	**Star at elongation.**	**12**	To measure the length of base line in triangulation survey.
	2nd	**Star at prime vertical**		
		Star at horizon		
13th	**1st**	**Star culmination**	**13**	Triangulation with total station.
	2nd	Celestial co-ordinates systems,		
	3rd	**Napier's rule**		
14th	**1st**	**Various time systems:- sidereal , apparent , solar and mean solar times.**	**14**	**Final copy check of all practicals**
	2nd	Equation of time its causes		

	3rd	Total station		
15th	1st	Working Principle	15	Internal viva
	2nd	Survey with total station		
	3rd	Numerical		

LESSON PLAN

Name of the Faculty : Dr. D.K MAHARAJ

Discipline : CIVIL

Semester : 4TH

Subject : SOIL MECHANICS (P) (CE-214N)

Lesson Plan Duration : 15 weeks (from January, 2018 to April, 2018)

Work Load (Lecture/Practical) per week (in hours): practical -04

	PRACTICAL	
WEEK	**PRACTICAL DAY**	**TOPIC**
1st	**1st and2nd**	Visual Soil Classification and water content determination.
2nd	**1st and2nd**	Determination of specific gravity of soil solids.
3rd	**1st and2nd**	Grain size analysis-sieve analysis.
4th	**1st and2nd**	**Copies check and viva voce**
5th	**1st and2nd**	Liquid limit and plastic limit determination.
6th	**1st and2nd**	Field density by: Sand replacement method
7th	**1st and2nd**	Field density by: Core cutter method
8th	**1st and2nd**	Proctor's compaction test.
9th	**1st and2nd**	**Copies check and viva voce**
10th	**1st and2nd**	Coefficient of permeability of soils.
11th	**1st and2nd**	Unconfined compressive strength test.

12th	**1st and2nd**	Direct shear test on granular soil sample.
13th	**1st and2nd**	Unconsolidated undrained (UU) triaxial shear test of fine grained soil sample.
14th	**1st and2nd**	**Final copies check**
15th	**1st and2nd**	**Internal viva**

Lesson Plan

Name of faculty : **Ms. Megha**

Discipline : **B.Tech (Civil)**

Semester : **4tn**

Subject : **Fundamentals of Management**

Lesson Plan during : **15 Weeks (From January 2018 to April, 2018)**

**** Work load (Lecture / practical) per week (In hours): lectures-03, practical – 00**

WEEK	THEORY	
	LECTURE DAY	TOPIC (INCLUDING ASSIGNMENT/ TEST)
1.	1.	Meaning, Definition, Nature Of FOM
	2.	Importance & Functions Of FOM
	3.	Management As Art, Science & Profession
2.	4.	Management As Social System
	5.	Concepts Of Management-Administration
	6.	Evolution Of Management Thought
3.	7.	Development Of Management Thought
	8.	Scientific Management
	9.	Administrative Theory Of Management
4.	10.	Bureaucratic Organization, Behavioral Approach
	11.	Human Relations Movement
	12.	Behavioral Science Approach
5.	13.	Modern Approach To Management
	14.	Systems Approach And Contingency Approach
	15.	Nature, Purpose And Functions, Types Of Plans
6.	16.	Planning Process
	17.	Strategies And Policies

	18.	Concept Of Corporate Strategy, Formulation Of Strategy
7.	19.	Types Of Strategies
	20.	Management By Objectives (MBO)
	21.	SWOT Analysis, Types Of Policies
8.	22.	Principles Of Formulation Of Policies
	23.	Nature, Importance, Process, Organization Structure
	24.	Line And Staff Organization
9.	25.	Delegation Of Authority And Responsibility
	26.	Centralization And Decentralization
	27.	Decision Making Process & Models
10.	28.	Departmentalization: Concept And Types
	29.	Formal & Informal Organizations
	30.	Concept, Process, Features; Manpower Planning; Job Analysis: Concept And Process
11.	31.	Recruitment And Selection: Concept, Process, Sources Of Recruitment
	32.	Performance Appraisal, Training And Development
	33.	Communication- Nature, Process, Formal And Informal, Barriers To Effective Communication
12.	34.	Theories Of Motivation-Maslow, Herzberg, McGregor
	35.	Concept And Theories, Managerial Grid, Situational Leadership
	36.	Transactional And Transformational Leadership
13.	37.	Concept, Process, Types, Barriers To Controlling, Controlling Techniques:
	38.	Budgetary Control, Return On Investment
	39.	Management Information System-MIS , TQM-Total Quality Management, Network Analysis- PERT And CPM

14.	40.	Social Responsibility Of Management–Management Of Crisis, Total Quality Management, Stress Management
	41.	Concept Of Corporate Social Responsibility (CSR) And Business Ethics. Functional Aspects Of Business
	42.	Conceptual Framework Of Functional Areas Of Management
15.	43.	Finance
	44.	Marketing
	45.	Human Resources