



Name of Faculty: SANA SHADAB

L (3) T (1) P ( )  
Department: CIVIL

Course Title: CCT

Course Number: CE-210-F

Semester/Section: 4<sup>th</sup> Sem

Session: JAN-MAY 2018

**Instruction Plan Details:**

Lecture No.	Topics to be covered	References	Remarks
<b>Section-B</b>			
1.	Concrete technology: Physical requirements of cement	M S SHETTY	
2.	Tests on Cement	M S SHETTY	
3.	Aggregates, water	M S SHETTY	
4.	Tests on Aggregates	M S SHETTY	
5.	Admixtures	M S SHETTY	
6.	Properties of fresh concrete	M S SHETTY	
7.	Properties of hardened concrete	M S SHETTY	
8.	Characteristic strength and characteristics loads, variability of concrete strength	M S SHETTY	
9.	Extreme Weather Concreting	M S SHETTY	
10.	Prestressed Concrete	M S SHETTY	
<b>Section-A</b>			
11.	CPM - Project Management	M L GAMBHIR	
12.	Bar Chart and Milestone Charts	M L GAMBHIR	
13.	Elements of Network	M L GAMBHIR	
14.	Development of network	M L GAMBHIR	
15.	Numericals based on Development of network	M L GAMBHIR	
16.	Numericals based on Development of network	M L GAMBHIR	
17.	Network analysis	M L GAMBHIR	
18.	Numericals on Network analysis	M L GAMBHIR	
<b>Section-C</b>			

19.	Mix Design-Principles of concrete mix design	M L GAMBHIR	
20.	Basic considerations, Factors in the choice of mix design	M L GAMBHIR	
21.	Mix design procedure	M L GAMBHIR	
22.	ACI mix design method	M L GAMBHIR	
23.	USBR method	M L GAMBHIR	
24.	ACI mix design	M L GAMBHIR	
25.	British mix design method	M L GAMBHIR	
26.	IS guidelines method	M L GAMBHIR	
<b>Section-D</b>			
27.	Heavy Construction - Construction of large structures	M S SHETTY	
28.	Construction of Dams	M S SHETTY	
29.	Forces on Dams	M S SHETTY	
30.	Construction of Bridges	M S SHETTY	
31.	Construction of Multi-Storeyed Buildings	M S SHETTY	
32.	Construction Equipments - Introduction to heavy construction equipment	M S SHETTY	
33.	Crushers, hot mix	M S SHETTY	
34.	Plants, dozers etc.	M S SHETTY	

**Signature of Faculty Member**

**HOD/Principal/Academic Coordinator**



Name of Faculty: SANA SHADAB

L( 3 ) T ( 1 ) P ( )  
Department: CIVIL

Course Title: DCS-I

Course Number: CE-204-F

Semester/Section: 4<sup>th</sup> Sem

Session: JAN-MAY 2018

**Instruction Plan Details:**

Lecture No.	Topics to be covered	References	Remarks
<b>Section-A</b>			
1.	<b>Unit-I:</b> Elementary treatment of concrete technology: Physical requirements of cement, aggregate	I S CODE	
2.	Admixture and reinforcement	I S CODE	
3.	Strength and durability, shrinkage and creep	I S CODE	
4.	Design of concrete mixes, Acceptability criterion, I.S. Specifications	I S CODE	
5.	<b>Unit-II:</b> Design Philosophies in Reinforced Concrete: Working stress and limit state Methods	B C Punmia	
6.	Limit state v/s working stress method	B C Punmia	
7.	Building code, Normal distribution curve,	B C Punmia	
8.	Characteristic strength and characteristics loads	B C Punmia	
9.	Design values, Partial safety factors	B C Punmia	
10.	Stress -strain relationship for concrete	B C Punmia	
<b>Section-B</b>			
11.	<b>Unit-III:</b> Working Stress Method: Basic assumptions, permissible stresses in concrete and steel	B C Punmia	
12.	Design of singly and doubly reinforced rectangular and flanged beams in Flexure	B C Punmia	
13.	Design problems of Singly reinforced beam	B C Punmia	
14.	Design problems of Doubly reinforced beam	B C Punmia	
15.	Design problems flanged beam	B C Punmia	
16.	Steel beam theory, inverted flanged beams	B C Punmia	
17.	Design problems of Inverted flanged beams	B C Punmia	
18.	Curtailment of reinforcement	B C Punmia	

19.	<b>Unit-IV:</b> Limit State Method: Basic assumptions	A K JAIN	
20.	Analysis and design of singly and doubly reinforced rectangular flanged beams	A K JAIN	
21.	Minimum and maximum reinforcement requirement	A K JAIN	
22.	Design problems of Singly reinforced beam	B C PUNMIA	
23.	Design problems of Doubly reinforced beam	B C PUNMIA	
24.	Design problems flanged beam	B C PUNMIA	
25.	<b>Unit-V:</b> Analysis and Design of Sections in shear, bond and torsion -Diagonal tension, shear reinforcement	A K JAIN	
26.	Anchorage and flexural bond, Torsional, stiffness, equivalent shear, Torsional reinforcement	A K JAIN	
27.	Design Examples of Shear	A K JAIN	
<b>Section-C</b>			
28.	<b>Unit-VI:</b> Concrete Reinforcement and Detailing-Requirements of good detailing, cover to reinforcement, spacing of reinforcement, reinforcement splicing	A K JAIN	
29.	Anchoring reinforcing bars in flexure and shear, curtailment of reinforcement	A K JAIN	
30.	<b>Unit-VII:</b> Serviceability Limit State -Control of deflection, cracking, slenderness and Vibrations	A K JAIN	
31.	Deflection and moment relationship for limiting values of span to depth, limit state of crack width	A K JAIN	
32.	Design Examples of Deflection		
33.	Design Examples of Deflection	B C Punmia	
34.	<b>Unit-VIII:</b> One way and Two Ways Slabs - General considerations, Design of one way and two ways slabs for distributed and concentrated loads	B C Punmia	
35.	Non-rectangular slabs, openings in slabs	B C Punmia	
36.	Design examples of one way slab	B C Punmia	
37.	Design examples of two way slab	B C Punmia	
38.	Design examples of non-rectangular slabs	B C Punmia	
<b>Section-D</b>			
39.	<b>Unit-IX:</b> Columns and Footings-Effective length, Minimum eccentricity, short columns under axial compression	B C Punmia	
40.	Uniaxial and biaxial bending, slender columns Isolated and wall footings	B C Punmia	
41.	Problems of wall footings	B C Punmia	
42.	Problems of Isolated footings	B C Punmia	

43.	<b>Unit-X:</b> Retaining Walls-Classification, Forces on retaining walls, design criteria, stability requirements, Proportioning of cantilever retaining walls	B C Punmia	
44.	Counterfort retaining walls, criteria for design of counterforts,	B C Punmia	
45.	Problems of horizontal Retaining wall	B C Punmia	
46.	Problems of inclined Retaining wall	B C Punmia	

**Signature of Faculty Member**

**HOD/Principal/Academic Coordinator**



Name of Faculty: DUSHYANT KUMAR  
Course Title: SA-II  
Semester/Section: 4<sup>th</sup> SEM

Department: CIVIL  
Course Number: CE-202-F  
Session: JAN-MAY 2018

**Instruction Plan Details:**

Lecture No.	<u>Topics to be covered</u>	References	Remarks
<b><u>SECTION-A</u></b>			
1	<b><u>Unit-I</u></b> Statically Indeterminate Structures- Introduction.	<b>THEORY OF STRUCTURE BY S.RAMAMRUTHAN</b>	
2	Static and Kinematic Indeterminacies,		
3	Castigliano`s theorems, Strain energy method		
4	Analysis of frames with one or two redundant members using Castigliano`s second theorem.		
5	Concept of rolling load		
6	Design of maximum bending moment		
7	Shear force due to rolling load, Concept of influence lines in beams.		
8	I.L diagram for shear force, B.M. deflection.		
9	<b><u>Unit-II</u></b> Slope deflection and moment Distribution Methods		
10	Analysis of continuous beams & portal frames		
11	Portal frames with inclined members		
12	Numerical based on Unit-I and Unit- II		
<b><u>SECTION-B</u></b>			
13	<b><u>Unit-III</u></b> Three hinged arch-horizontal thrust.	<b><u>R.K BANSAL &amp; THEORY OF STRUCTURE BY S.RAMAMRUTHAN</u></b>	
14	Shear force and bending moment diagrams.		
15	<b><u>Unit-IV</u></b> Bending moment and shear force in determinate beams and frames.		
16	Definition and signs, conventions		

17	Axial force , shear force and B.M diagrams		
<b><u>SECTION-C</u></b>			
18	<b><u>Unit-V</u></b> Unsymmetrical Bending Introduction	<b><u>S.S BHAVIKATTI</u></b>	
19	Centroidal principal axes of sections		
20	Bending stresses in beams subjected to unsymmetrical bending		
21	Shear Centre, shear Centre for channel		
22	Angles and Z sections		
23	<b><u>Unit-VI</u></b> Cable and suspension Bridges - Introduction		
24	Uniformly loaded cables, Temperature stresses		
25	Three hinged stiffening		
26	Girder and two hinged stiffening Girder		
27	Numerical based on Unit-V and Unit-VI		
<b><u>SECTION-D</u></b>			
28	<b><u>Unit-VII</u></b> Analysis of statically determinate trusses-Introduction	<b>THEORY OF STRUCTURE BY S.RAMAMRUTHAN</b>	
29	Various types, stability		
30	Analysis of plane trusses by method of joints and method of sections		
31	Analysis of space trusses using tension coefficient method		
31	Numerical based on unit-VII		
32	Numerical		
33	Numerical		
42	<b>Course Related Activity</b>	<b>MDU Papers</b>	
43	<b>Course Related Activity</b>	<b>MDU Papers</b>	



**DELHI COLLEGE OF  
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# **INSTRUCTIONAL PLAN**

**RECORD NO.: QF/ACD/01  
Revision No.: 00**

**Name of Faculty:** DIVAKAR SHARMA  
**Course Title:** SURVEYING-II  
**Semester/Section:** 4<sup>th</sup> SEM

**Department:** CIVIL  
**Course Number:** CE-208-F  
**Session:** JAN-MAY 2018

## **Instruction Plan Details:**

<b>Lecture No.</b>	<b>Topics to be covered</b>	<b>References</b>	<b>Remarks</b>
<b>Section-A</b>			
1.	<b>Unit-I:</b> Trigonometrically Leveling : Introduction, height and distances-base of the object accessible	<b>B.C. PUNMIA</b>	
2.	base of object inaccessible, geodetical observation		
3.	refraction and curvature, axis signal correction		
4.	difference in elevation between two points		
5.	<b>Unit-II:</b> Triangulation: Triangulation systems, classification		
6.	strength of figure, selection of triangulation stations		
7.	grade of triangulation, field work of triangulation		
8.	triangulation computations		
9.	Introduction to E.D.M. instruments.		
<b>Section-B</b>			
10.	<b>Unit-III:</b> Survey Adjustment and Treatment of Observations: Definite weight of an observation, most probable values	<b>B.C. PUNMIA</b>	
11.	type of error, principle of least squares		
12.	adjustment of triangulation figures by method of least squares		
13.	<b>Unit-IV:</b> Astronomy: Definitions of astronomical terms	<b>B.C. PUNMIA</b>	
14.	star at elongation, star at prime vertical star at horizon		
15.	star at culmination, celestial coordinate systems, Napier`s rule of circular parts, various time systems: sidereal		
16.	Napier`s rule of circular parts, various time systems: sidereal, apparent		



17.	solar and mean solar time, equation of time-its cause, effect		
18.	determination of longitude, inter-conversion of time		
19.	determination of time and azimuth		
20.	determination of latitude by astronomical observations		
<b>Section-C</b>			
21.	<b>Unit-V:</b> Elements of Photogrammetry: Introduction: types of photographs	<b>B.C. PUNMIA</b>	
22.	Terrestrial and aerial photographs aerial camera		
23.	height displacements in vertical photographs		
24.	stereoscopic vision and stereoscopies		
25.	height determination from parallax measurement		
26.	flight Planning		
27.	plotting by radiline method		
28.	principle of photo interpretation		
29.	photogram metric monitoring in Civil Engineering.		
<b>Section-D</b>			
30.	<b>Unit-VI:</b> Introduction of remote sensing and its systems	<b>B.C. PUNMIA</b>	
31.	Analysis on remote sensing		
32.	measurements on remote sensing		
33.	interpretation of data		
34.	<b>Unit-VII:</b> Concept of G.I.S		
35.	Concept of G.P.S		
36.	Basic Components of G.I.S and G.P.S		
37.	data input		
38.	storage & output.		
39.	<b>Courses related activity</b>	<b>MDU PAPERS</b>	
40.	<b>Courses related activity</b>	<b>MDU PAPERS</b>	



**DELHI COLLEGE OF  
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# INSTRUCTIONAL

## PLAN

**RECORD NO.: QF/ACD/009  
Revision No.: 00**

L( 4 ) T ( ) P ( )

Name of Faculty: Md. Sajid Akhtar Khan

Department: Business Administration

Course Title: ECONOMICS FOR ENGINEERS

Course Number: HUM-201-F

Semester/Section: 4<sup>TH</sup> SEM , MECH & CIVIL

Session: JAN2018 - MAY2018

### Instruction Plan Details :

Lecture No.	Topics to be covered	References	Remarks
<b>Plan for course, to be covered before 1<sup>st</sup> sessional Exam</b>			
<b>SECTION-A</b>			Numbers of lecture require
	Definition of economics		1
	Nature of economic problem		1
	PPC economic laws and their nature		1
	Relation between science ,engineering ,technology and economics		1
	Concept and measurement and utility		1
	Law of diminishing marginal utility		1
	Law of equi-marginal utility		1
	<b>CLASS TEST</b>		1
<b>TOTAL</b>			<b>9</b>
<b>SECTION-B</b>			
	Meaning of demand		1
	Law of demand,shape of demand curve		1
	Elasticity of demandand factors affecting elasticity of demand		1
	Meaning of production and factors of production and returns to scale		1
	Internal and external economies		1
	Diseconomies of scale		2
	<b>CLASS TEST</b>		1
<b>TOTAL</b>			<b>9</b>
<b>SECTION-C</b>			

	Explain fixed cost and variable cost		1
	Discuss average cost and marginal cost		2
	Explain shape of AC,MC,TC in short run		1
	Explain shape of AC,MC,TC in long run		1
	Meaning of market		1
	Types of market:perfect,monopoly,oligopoly and monopolistic competitions		2
	<b>CLASS TEST</b>		1
<b>TOTAL</b>			<b>9</b>
	<b>SECTION -D</b>		
	Discuss supply and law of supply		1
	Explain role of demand and supply in price determination and their effect		1
	Nature of Indian economy		2
	Characteristics of Indian economy		1
	Meaning of privatization and their merits and demerits		1
	Globalization of Indian economy		1
	Merits and demerits of Indian economy		1
	Elementary concepts of VAT,WTO,GATT and TRIPS agreement		1
	<b>CLASS TEST</b>		1
<b>TOTAL</b>			<b>10</b>

**Text Books:**

1. Principles of Economics: P.N. Chopra (Kalyani Publishers).
2. Modern Economic Theory – K.K. Dewett (S.Chand)

**Reference Book:**

1. A Text Book of Economic Theory Stonier and Hague (Longman's Landon)
2. Micro Economic Theory – M.L. Jhingan (S.Chand)
3. Micro Economic Theory – H.L. Ahuja (S.Chand)
4. Modern Micro Economics : S.K. Mishra (Pragati Publications)
5. Economic Theory – A.B.N. Kulkarni & A.B. Kalkundrikar (R.Chand & Co.)
6. Indian Economy: Rudar Dutt & K.P.M. Sundhram

**Signature of Faculty Member**  
**Date:**

**HOD/Principal/Academic Coordinator**



**DELHI COLLEGE OF  
TECHNOLOGY &  
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PALWAL**

# INSTRUCTIONAL *PLAN*

**RECORD NO.: QF/ACD/009  
Revision No.: 00**

Name of Faculty: Rajesh Kaushik

L( 3 ) T ( 1 ) P ( )  
Department: Mechanical

Course Title: FLUID MECHANICS-II

Course Number: CE-206-F

Semester/Section: 4<sup>th</sup> Sem

Session: JAN-MAY 2018

### Instruction Plan Details:

Lecture No.	Topics to be covered	References	Remarks
<b>Section-A</b>			
1.	Turbulent Flow: Shear stress in turbulent flow,	R.K. BANSAL	
2.	Prandtl mixing length hypothesis	R.K. BANSAL	
3.	Hydraulically smooth and rough pipes, velocity distribution in pipes	R.k. bansal	
4.	Friction coefficients for smooth and rough pipes, Problems.	MODI AND SETH	
5.	Flow Through Pipes: Major and minor losses in pipes, Hagen-Poiseuille law	MODI AND SETH	
6.	Power absorbed in bearings. Problems.	R.k. bansal	
7.	Hagen-Poiseuille law	Modi and seth	
8	Hydraulic gradient and total energy lines	D.S.KUMAR	
9	Series and parallel connection of pipes, Power transmission through pipes, Problems.	D.S.KUMAR	
10.	Branched pipes; equivalent pipe, power transmission through pipes, Problems.	D.S.KUMAR	
<b>Section-B</b>			
10	Uniform flow Basic concepts, Resistance equations, Chezy's and manning's formulae	<b>Section-C</b>	
11.	Uniform flow computations	R.K. BANSAL	
12.	Efficient channel section	MODI AND SETH	
13.	specific energy concept critical flow and its computations	Modi and seth	

14.	channel transitions	MODI AND SETH	
15.	Non-uniform flow gradually varied flow-basic assumptions	R.k. bansal	
16.	dynamic equations of gradually flow	MODI AND SETH	
17.	Types of slopes and their characteristics	D.S.KUMAR	
18.	analysis and computations of flow profiles	D.S.KUMAR	
19.	brink dept analysis	D.S.KUMAR	
20.	Surges in open channels	D.S.KUMAR	
Syllabus till Sessional-I			
<b>Section-C</b>			
21.	Classification definitions, similarly laws	R.K. BANSAL	
22.	specific speed and unit quantities	MODI AND SETH	
23.	Pelton turbines- their construction and settings	Modi and seth	
24.	speed regulation dimensions of various element	MODI AND SETH	
25.	Action of jet, torque, power and efficiency for ideal case, characteristic curves	R.k. bansal	
26.	Reaction turbines	MODI AND SETH	
27.	Construction & setting draft tube theory, runaway speed	D.S.KUMAR	
28.	working proportion of hydraulic turbines and characteristic curves	D.S.KUMAR	
29.	cavitation. Forces on immersed bodies: types of drag drag on a sphere	D.S.KUMAR	
30.	flat plate	D.S.KUMAR	
<b>Section-D</b>			
31.	Various types and their important components, manometric, total head	MODI AND SETH	
32.	net positive suction head, specific speed	R.k. bansal	
33.	shut off head, cavitation. Principle of working and characteristic curves	Modi and seth	
34.	Priming and maintenance. Submersible pumps	Modi and seth	
35.	principle of working, coefficient of discharge, slip	Modi and seth	
36.	single acting and double acting pump. Manometric head	MODI AND SETH	
37.	Acceleration head, Working of air vessels	MODI AND SETH	
38.	simplex, duplex and three throw pumps	R.K. BANSAL	
39.	construction and discharge	D.S.KUMAR	
40.	Air lift pump	D.S.KUMAR	
Syllabus till Sessional-II			

Text Books:

1. Fluid mechanics & Hydraulics – R.K. Bansal , Pub-Laxmi Publication.
2. Hydraulics & Fluid Mechanics – Modi & Seth, Pub. - Standard Book House, N. Delhi

Reference Books/Websites:

1. Introduction to Fluid Mechanics and Fluid Machines – S K Som and G Biswas, Tata McGraw Hill
2. Fluid Mechanics and Fluid Power Engineering – D S Kumar, S K Kataria and Sons

**Signature of Faculty Member**

**HOD/Principal/Academic Coordinator**

**Date**