CMR Institute of Technology, Bangalore		
Department(s): IS,CIV		
Semester: 03		
Engineering Mathematics III	15MAT31	Lectures/week: 06
Course Instructor(s): Uma Raju		
Course duration: 25th July to 19th November 2016		

Class	Chapter Title / Reference Literature	Topic	Percentage of portion covered	
			Reference	Cumulative
01-13	**Module 1 Fourier Series**	Periodic functions, Dirichlet's conditions, Fourier series of periodic functions of period 2π and arbitrary period, half range Fourier series. practical harmonic analysis	12.5	12.5
14-27	**Module 4 Finite differences**	Forward and backward differences, Newton's forward and backward interpolation formulae, divided differences-Newton's divided difference formula, Lagrange's interpolation formula and inverse interpolation formula. Numerical integration Simpson' s 1/3,3/8 rule ,Weddle's rule (only problems)	12.5	25.0
28-39	**Module 3 Numerical methods Statiscal methods**	Numerical solution of algebraic and transcendental equations, Regula-Falsi method Secent method, Newton Raphson method, and Grapfical method, Correlation , Regression Coefficients, lines of Regression. Curve fitting by the method of least squares, Fitting of curves of the form $y=a+bx$, $y=ax^2+bx+c$, $y=ae^{bx}$, $y=ax^b$	12.5	50.0
40-56	**Module 2 Fourier Transforms Z transforms**	Infinite Fourier transform, Fourier sine and cosine transforms, inverse transforms. Z transform: difference equations,Basic definition, standard z transforms, Damping rule, shifting rule,Initial and final value theorem(without proof)and problems ,Inverse Z-Transform. Application: to solve difference equations	12.5	62.5
57-67	**Module 5 Vector integration**	Line integral_defnition and problems,surface and volume integrals-defnition,Green' s theorem in a plane,Stokes and Gaus-divergence theorem(without proof)and problems.	12.5	75.0

		Calculus of variations:variation of function and functional,variational problems,Eulers equation,Geodesics, minimal surface of revolution, hanging chain ,problems.		

Sessional	Syllabus
T1	Class 01-31
T2	Class 32-56
T3	Class 57-64

Literature:

Book Type	Code	Author & Title	Publication information	
			Edition & Publisher	ISBN
Text Book	TB1	B.S. Grewal, Higher Engineering Mathematics, Latest Edition, Khanna publishers	Latest edition, Khanna publications	8174091955
Text Book	TB2	Erwin Kreyszig, Advanced Engineering Mathematics	Latest Edition Wiley India publishers	978812653135
References	RB1	B.V Ramana, Higher Engineering Mathematics,.	Latest Edition, Tata Mc. Graw Hill Publications	---
References	RB2	Peter V . O'Neil, Engineering Mathematics.	Cengage Learning India Pvt. Ltd. Publishers	---
References	RB3	Dr. D.S.C , Engineering Mathematics III	5^{th} Edition 2011 6^{th} edition 2016	978-81-7686-675-4
References	RB4	Dr. K.S.C , Engineering Mathematics III	2011-2012 2016 edition	---

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CMR INSTITUTE
OF TECHNOLOGY

Session wise – Course Plan

Department of Civil Engineering

SEMESTER : III
BRANCH : CIV
SUBJECT : Strength of materials
SUBJECT CODE : 15CV32
NO OF HRS/WK : 5

NAME OF THE FACULTY : Mr. Dr.Giridhar
DATE OF COMMENCEMENT : 01.08.2016
DATE OF CLOSING : 09.11.2016
CLASS STRENGTH :
TOTAL HRS :

Session No	DATE	Topics planned for the session	Teaching Aids	Assignments/ Tests planned for the chapter	Topics covered As per plan
1.	01.08.16 Monday	Introduction			
2.	02.08.16 Tuesday	Definition and concept and of stress			
3.	02.08.16 Tuesday	Definition and concept and of stain	Board, chalk, duster		
4.	04.08.16 Thursday	Hooke's law			
5.	05.08.16 Friday	Stress-Strain diagrams for ferrous and non ferrosus	,,		
6.	05.08.16 Friday	Elongation of tapering bars of circular cross section	,,		
7.	08.08.16 Monday	Numericals on tapering bars	,,		
8.	09.08.16 Tuesday	Elongation due to selfweight. Numericals	,,		
9.	09.08.16 Tuesday	Elongation due to selfweight. Numericals	,,		
10	11.08.16 Thursday	Saint Venant's principle, Numericals	,,	Assignment- I	
11	12.08.16 Friday	Compound bars, Temperature stresses, Compound section subjected to temperature stresses, state of simple shear, Elastic constants and their relationship.	Board, chalk, duster		

12	12.08.16 Friday	Compound section subjected, Elastic constants and their relationship.	,,		
13	17.08.16 Wednesday	Compound section subjected to temperature stresses, Elastic constants and their relationship.	,,		
14	18.08.16 Thursday	Module -2: Compound Stresses: Introduction, state of stress at a point, Numericals	,,		
15	18.08.16 Thursday	General two dimensional stress system, Principal stresses and principal planes. Numericals	,,		
16	20.08.16 Saturday	Mohr's circle of stresses, Numericals			
17	22.08.16 Monday	Mohr's circle of stresses, Numericals	,,	Assignment -II	
18	22.08.16 Monday	Thin and Thick Cylinders: Introduction, Thin cylinders subjected to internal pressure; Numericals	,,		
19	24.08.16 Wednesday	Hoop stresses, Longitudinal stress and change in volume. Numericals			
20	25.08.16 Thursday	Hoop stresses, Longitudinal stress and change in volume. Numericals			
21	25.08.16 Thursday	Thick cylinders subjected to both internal and external pressure; Numericals			
22	27.08.16 Saturday	Thick cylinders subjected to both internal and external pressure; Numericals	,,		
23	29.08.16 Monday	Lame's equation, radial and hoop stress distribution. Numericals.	,,	Assignment –III	
24	29.08.16 Monday	Lame's equation, radial and hoop stress distribution. Numericals.	,,		
25	31.08.16 Wednesday	Module-3:Shear Force and Bending Moment in Beams: Introduction to types of beams, supports and loadings.	,,		
26	01.09.16 Thursday	Module-3:Shear Force and Bending Moment in Beams: Introduction to types of beams, supports and loadings.	,,	Assignment –III	
27	01.09.16 Thursday	Definition of bending moment and shear force, Sign conventions, relationship between load intensity,			
28	09.09.16 Friday	Definition of bending moment and shear force, Sign conventions, relationship between load intensity,	Board, chalk, duster		
29	10.09.16 Saturday	Shear force and bending moment diagrams for statically determinate beams subjected to points load, Numericals.	,,		
30	10.09.16 Saturday	Shear force and bending moment diagrams for statically determinate beams subjected to uniformly distributed loads. Numericals	,,		
31	14.09.16 Wednesday	Shear force and bending moment diagrams for statically determinate beams subjected to uniformly distributed loads. Numericals	,,		
32	15.09.16 Thursday	Shear force and bending moment diagrams for statically determinate beams subjected to uniformly distributed loads.	,,		
33	15.09.16 Thursday	Shear force and bending moment diagrams for statically determinate beams subjected to uniformly distributed loads.	,,		
34	17.09.16 Saturday	Shear force and bending moment diagrams for statically determinate beams subjected to uniformly distributed loads.Numericals	,,		
35	19.09.16 Monday	Shear force and bending moment diagrams for statically determinate beams subjected to uniformly distributed loads.Numericals	,,	Assignment –IV	

36	19.09.16 Monday	Shear force and bending moment diagrams for statically determinate beams subjected to uniformly distributed loads.	,,		
37	21.09.16 Wednesday	Shear force and bending moment diagrams for statically determinate beams subjected tocouple and their combinations. Numericals	Board , chalk, duster		
38	22.09.16 Thursday	Shear force and bending moment diagrams for statically determinate beams subjected tocouple and their combinations. Numericals	,,		
39	22.09.16 Thursday	Shear force and bending moment diagrams for statically determinate beams subjected tocouple and their combinations.Numericals	,,		
40	24.09.16 Saturday	Module -4:Bending and Shear Stresses in Beams: Introduction,	,,		
41	26.09.16 Monday	Pure bending theory, Assumptions, derivation of bending equation, Numericals	,,		
42	26.09.16 Monday	Pure bending theory, Assumptions, derivation of bending equation, Numericals	,,		
43	28.09.16 Wednesday	modulus of rupture, section modulus, flexural rigidity.	,,		
44	29.09.16 Thursday	modulus of rupture, section modulus, flexural rigidity.	,,	Assignment -V	
45	29.09.16 Thursday	Expression for transverse shear stress in beams,	,,		
46	04.10.16 Tuesday	Expression for transverse shear stress in beams,	,,		
47	05.10.16 Wednesday	Bending and shear stress distribution diagrams for circular,	,,		
48	05.10.16 Wednesday	Bending and shear stress distribution diagrams for circular,	,,		
49	07.10.16 Friday	Bending and shear stress distribution diagrams for rectangular, 'I', and 'T' sections. Shear centre(only concept)	,,		
50	08.10.16 Saturday	Bending and shear stress distribution diagrams for rectangular, 'I', and 'T' sections. Shear centre(only concept)	,,		
51	08.10.16 Saturday	Bending and shear stress distribution diagrams for rectangular, 'I', and 'T' sections. Shear centre(only concept) , Numericals.	,,	Assignment -VI	
52	14.10.16 Friday	Bending and shear stress distribution diagrams for rectangular, 'I', and 'T' sections. Shear centre(only concept) , Numericals.	,,		
53	17.10.16 Monday	Columns and Struts: Introduction, short and long columns. Numericals.	Board , chalk, duster		
54	17.10.16 Monday	Columns and Struts: Introduction, short and long columns. Numericals.	,,		
55	19.10.16 Wednesday	Columns and Struts: Introduction, short and long columns. Numericals.	,,		
56	20.10.16 Thursday	Euler's theory; Assumptions, Numericals	,,		
57	20.10.16 Thursday	Euler's theory; Assumptions, Numericals	,,		
58	22.10.16 Saturday	Derivation for Euler's Buckling load for different end conditions, Numericals	,,		
59	27.10.16 Thursday	Derivation for Euler's Buckling load for different end conditions, Numericals	,,		

60	27.10.16 Thursday	Limitations of Euler's theory. Rankine-Gordon's formula for columns, Numericals	,,		
61	02.11.16 Wednesday	Limitations of Euler's theory. Rankine-Gordon's formula for columns, Numericals	,,		
62	03.11.16 Thursday	Module -5:MTorsion in Circular Shaft: Introduction, pure torsion, Assumptions, Numericals	,,	Assignment -VII	
63	03.11.16 Thursday	derivation of torsion equation for circular shafts, torsional rigidity and polar modulus	,,		
64	05.11.16 Saturday	Power transmitted by a shaft, combined bending and torsion.	,,		
65	07.11.16 Monday	Theories of Failure: Introduction, maximum principal stress theory (Rankine's theory), Maximum shearing stress theory (Tresca's theory), S	,,		
66	07.11.16 Monday	Theories of Failure: Introduction, maximum principal stress theory (Rankine's theory), Maximum shearing stress theory (Tresca's theory), S	,,		
67	09.11.16 Wednesday	Strain energy theory (Beltrami and Haigh), and maximum strain theory (St. Venant's theory).	,,		
68	01.08.16 Monday	Strain energy theory (Beltrami and Haigh), and maximum strain theory (St. Venant's theory).	,,		

CMR INSTITUTE OF TECHNOLOGY

Session wise – Course Plan

Department of Civil Engineering

SEMESTER	III-A	FACULTY	AMRUTH CHAND B
BRANCH	CIVIL	DATE OF COMMENCEMENT	8-AUG-2016
SUBJECT	FLUID MECHANICS	DATE OF CLOSING	9-NOV-2016
SUBJECT CODE	15CV33	CLASS STRENGTH	56
NO OF HRS/WEEK	06	TOTAL HRS	60

Date	Day	Topics Planned for the Session	Teaching Aids	Assignments / Test	Topics covered as per plan
08/08/16	1	**Fluids & Their Properties-** Concept of fluid. Units.	Chalk-Power Point Presentation-Discussion	Assignment 1- Submission of class notes Assignment 2- Types of Pressure Measuring Devices Class Test 1	
09/08/16	2	Mass density, Specific weight, Specific gravity, Specific volume			
10/08/16	3	Fluid as a continuum, Vapor pressure.			
12/08/16	5	Compressibility & Bulk Modulus			
12/08/16	5	Surface tension, Cohesion, Adhesion			
16/08/16	6	Viscosity & Capillarity.			
17/08/16	1	Newton's law of viscosity			
18/08/16	2	Numerical Problems			
19/08/16	3	Capillary rise in a vertical tube & between two plane surfaces			
22/08/16	5	Pressure inside a water droplet, Soap bubble & Liquid jet.			
22/08/16	5	Numerical problems			
23/08/16	6	Numerical problems			
24/08/16	1	**Fluid Pressure & Its Measurements**			
25/08/16	2	Definition of pressure, Pressure at a point, Pascal's law			
26/08/16	3	Variation of pressure with depth. Types of pressure.			
29/08/16	5	Simple, Differential & Inclined Manometers			
29/08/16	5	Mechanical & electronic pressure measuring devices.			
30/08/16	6	**Hydrostatic forces-** Total pressure, Centre of Pressure	Chalk-Power Point Presentation-Discussion		
31/08/16	1	Total Pressure on Horizontal and Vertical surface,			
01/09/16	2	Total Pressure on Inclined plane			
02/09/16	3	Total Pressure on Curved Surfaces			
10/09/16	5	Numerical Problems.			
10/09/16	5	Numerical Problems.			
13/09/16	6	**Fundamentals of Fluid Kinematics**			
14/09/16	1	Introduction. Methods of describing fluid motion.			
15/09/16	2	Velocity & Total Acceleration of a fluid particle.			

16/09/16	3	Types of fluid flow, Description of flow pattern.			
19/09/16	5	3D Continuity Equation in Cartesian coordinate system.			
19/09/16	5	Derivation for Rotational & Irroational Motion.			
20/09/16	6	Potential function. Stream Function			
21/09/16	1	Orthogonality of Streamlines & Equipotential Lines.			
22/09/16	2	Numerical Problems			
23/09/16	3	Numerical Problems			
26/09/16	5	Introduction to flow net.			
26/09/16	5	**Fluid Dynamics-** Forces acting on fluid in motion.	Chalk-Power Point Presentation-Discussion		
27/09/16	6	Euler's equation of motion along a streamline			
28/09/16	1	Bernoulli's equation. Assumptions & limitations			
29/09/16	2	Modified Bernoulli's equation. Problems			
03/10/16	3	Vortex motion. Forced Vortex. Free vortex. Problems			
05/10/16	5	Momentum equation problems on pipe bends.			
05/10/16	5	Venturimeter, Orificemeter, Pitot tube			
06/10/16	6	Numerical Problems			
07/10/16	1	**Orifice & Mouthpiece**- Classification, flow through orifice,	Chalk-Power Point Presentation-Discussion		
08/10/16	2	Hydraulic coefficients, Numerical problems. .			
13/10/16	3	Mouthpiece, classification, Borda's Mouthpiece			
17/10/16	5	**Notches & Weirs-** Introduction. Classification,			
17/10/16	5	Discharge over Rectangular, Triangular, Trapezoidal Notches			
18/10/16	6	Cippoletti notch, Broad crested weirs.			
19/10/16	1	Numerical problems. Ventilation of weirs, submerged weirs			
20/10/16	2	**Flow through Pipes-** Darcy-Weisbach Equation	Chalk-Power Point Presentation-Discussion		
21/10/16	3	Introduction. Major & minor losses in pipe flow.			
27/10/16	5	Pipes in series, pipes in parallel, equivalent pipe-problems.			
27/10/16	5	Minor losses in pipe flow. Problems			
28/10/16	6	Numerical problems.			
02/11/16	1	Hydraulic gradient line, energy gradient line.			
03/11/16	2	Pipe Networks, Hardy Cross method, Numerical problems			
04/11/16	3	**Surge Analysis in Pipes-** Water hammer in pipes,			
07/11/16	5	Pressure rise- Gradual & sudden closure for rigid & elastic pipes.			
07/11/16	5	Numerical Problems			
08/11/16	6	Revision			
09/11/16	1	Revision			

Syllabus for Sessional:

Sessional #	Syllabus
1	Module 1
2	Module 2 & 3
3	Module 4 & 5

Literature/Reference Books:

1. P N Modi & S M Seth, “Hydraulics & Fluid Mechanics, including Hydraulic Machines”, 20th edition, 2015, Standard Book House, New Delhi.
2. R.K. Bansal, “A Text book of Fluid Mechanics & Hydraulic Machines”, Laxmi Publications, New Delhi.
3. S K SOM & G Biswas, “Introduction to Fluid Mechanics & Fluid Machines”, Tata McGraw Hill, New Delhi.

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Session wise – Course Plan

Department of Civil Engineering

SEMESTER : III 'A' | NAME OF THE : Mr Kiran RG
BRANCH : CIV | FACULTY DATE OF : 01.08.2016
SUBJECT : Basic Surveying | DATE OF CLOSING : 09.11.16
SUBJECT CODE : 15CV34 | CLASS STRENGTH : 56
NO OF HRS/WK : 6 | TOTAL HRS : 55

Session No	DATE	Topics planned for the session	Teaching Aids	Assignm ents/ Tests planned for the chapter	Topics covered As per plan
1.	01.08.16 Monday	**Module -1** Introduction: Definition of surveying, Objectives and importance of surveying.	**Chalk-talk**		
2.	03.08.16 Wednesday	Classification of surveys. Principles of surveying.	**„**		
3.	03.08.16 Wednesday	Units of measurements, Surveying measurements and errors, types of errors, precision and accuracy.	**„**		
4.	05.08.16 Friday	Classification of maps, map scale, conventional symbols, topographic maps, map layout	**Visual Aids**		
5.	06.08.16 Saturday	Survey of India Map numbering systems	**Chalk-talk**		
6.	08.08.16 Monday	Measurement of Horizontal Distances: Measuring tape and types. Measurement using tapes, Taping on level ground and sloping ground.	**„**		
7.	10.08.16 Wednesday	Errors and corrections in tape measurements, ranging of lines, direct and indirect methods of ranging, Electronic distance measurement, basic principle	**„**		
8.	10.08.16 Wednesday	Numerical problems	**„**		
9.	12.08.16 Friday	Booking of tape survey work, Field book entries	**Visual aids**		
10.	16.08.16 Tuesday	Conventional symbols with toposheets	**Chalk-talk**		
11.	17.08.16 Wednesday	Obstacles in tape survey, Numerical problems	**„**		
12.	19.08.16 Friday	Numerical problems	**„**		

13.	19.08.16 Friday	Numerical problems	**„**		
14.	22.08.16 Monday	Numerical problems	**„**	**Assignment 1**	
15.	23.08.16 Tuesday	**Module -2** Measurement of Directions and Angles: Compass survey- Introduction	**„**		
16.	24.08.16 Wednesday	Basic definitions; meridians, bearings, magnetic and True bearings	**„**		
17.	26.08.16 Friday	Prismatic and surveyor's compasses, temporary adjustments, declination	**„**		
18.	26.08.16 Friday	Quadrantal bearings, whole circle bearings- Numericals	**PPT**		
19.	29.08.16 Monday	Local attraction and related problems	**Chalk-talk**		
20.	30.08.16 Tuesday	Numerical problems	**„**		
21.	31.08.16 Wednesday	Numerical problems	**„**	**Assignment 2**	
22.	02.09.16 Friday	**Module -3** Traversing: Introduction	**„**		
23.	02.09.16 Friday	Traverse Survey and Computations: Latitudes and departures, rectangular coordinates	**„**		
24.	10.09.16 Saturday	Traverse adjustments, Bowditch rule and transit rule	**„**		
25.	13.09.16 Tuesday	Numerical problems	**„**		
26.	14.09.16 Wednesday	Numerical problems	**„**	**Assignment 3**	
27.	16.09.16 Friday	**Module-2 Cont**. Theodolite Survey and Instrument Adjustment: Introduction	**„**		
28.	16.09.16 Friday	Theodolite and types, Fundamental axes and parts of Transit theodolite, uses of theodolite	**„**		
29.	19.09.16 Monday	Temporary adjustments of transit theodolite, measurement of horizontal and vertical angles	**„**		
30.	20.09.16 Tuesday	Step by step procedure for obtaining permanent adjustment of Transit theodolite	**„**	**Assignment 4**	
31.	21.09.16 Wednesday	**Module -3 Cont**. Tacheometry: basic principle	**„**		
32.	23.09.16 Friday	Types of tacheometry, distance equation for horizontal and inclined line of sight in fixed hair method	**„**		
33.	23.09.16 Friday	Numerical problems	**„**		
34.	26.09.16 Monday	Numerical problems	**„**	**Assignment 5**	
35.	27.09.16 Tuesday	**Module -4** Leveling: Basic terms and definitions	**PPT**		
36.	28.09.16 Wednesday	Methods of leveling, Dumpy level, auto level, digital and laser levels	**„**		
37.	03.10.16 Monday	Curvature and refraction corrections. Booking and reduction of levels	**„**		

38.	03.10.16 Monday	Differential leveling, profile leveling, fly leveling	**Chalk-talk**		
39.	05.10.16 Wednesday	Check leveling, reciprocal leveling	**„**		
40.	06.10.16 Thursday	Numerical problems	**„**		
41.	07.10.16 Friday	Numerical problems	**„**		
42.	13.10.16 Thursday	Trigonometric leveling (heights and distances-single plane and double plane methods)	**„**		
43.	13.10.16 Thursday	Numerical problems	**„**		
44.	17.10.16 Monday	Numerical problems	**„**	**Assignment 6**	
45.	18.10.16 Tuesday	**Module -5:** Areas and Volumes: Introduction	**„**		
46.	19.10.16 Wednesday	Measurement of area – by dividing the area into geometrical figures	**„**		
47.	21.10.16 Friday	Area from offsets, mid ordinate rule, trapezoidal rule	**„**		
48.	21.10.16 Friday	Numerical problems	**„**		
49.	27.10.16 Thursday	Simpson's one third rule, area from co-ordinates	**„**		
50.	28.10.16 Friday	Numerical problems	**„**		
51.	02.11.16 Wednesday	Introduction to planimeter, digital planimeter	**„**		
52.	04.11.16 Friday	Measurement of volumes-trapezoidal and prismoidal formula	**„**		
53.	04.11.16 Friday	Contouring: Contours, Methods of contouring, Interpolation of contours	**„**		
54.	07.11.16 Monday	Contour gradient, characteristics of contours and uses	**„**	**Assignment 7**	
55.	08.11.16 Tuesday	Revision	**„**		
56.	09.11.16 Wednesday	Revision	**„**		

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CMR INSTITUTE OF TECHNOLOY

DEPARTMENT OF CIVIL ENGINEERING

Lesson Plan for the odd sem – 2016 (For A Section)

Semester – 3

Subject Code: 15CV035 **Subject Name: ENGINEERING GEOLOGY**

SEMESTER : III A **NAME OF THE FACULTY : Mr. Karthik M**

BRANCH : CIVIL **DATE OF COMMENCEMENT : 28-07-2016**

SUBJECT : ENGINEERING GEOLOGY **DATE OF CLOSING : 09-11-2016**

SUBJECT CODE: 10CV54 **CLASS STRENGTH :**

NO OF HRS/ WEEK: 5 **TOTAL HRS :**

Session No	Chapter no (No of hrs planned for the chapter)	DATE	Topics planned for the session	Teaching Aids	Assignments/ Tests planned for the chapter
1	1/1	02.08.16 Tuesday	Application of Earth Science in Civil Engineering	Board, chalk	
2	1/2	03.08.16 Wednesday	Internal Structure and composition of the Earth.	"	
3	1/3	03.08.16 Wednesday	Internal Structure and composition of the Earth	"	
4	¼	05.08.16 Friday	Mineral properties, composition and their use	"	
5	1/5	06.08.16 Saturday	Mineral properties, composition and their use	,,	
6	1/6	09.08.16 Tuesday	Physical properties and uses of Quartz Group (Glass);	"	

7	1/7	10.08.16 Wednesday	Properties and uses Carbonate Group (Cement) ; Gypsum (POP, gypsum sheets, cement);	,,	
8	1/8	10.08.16 Wednesday	Mica Group (Electrical industries	"	
9	1/9	12.08.16 Friday	Kaolin (Paper, paint and textile); Asbestos (AC sheets)	"	
10	1/10	16.08.16 Tuesday	Uses and Identification Ore minerals - Iron ores (Steel); Chromite (Alloy);	"	
11	1/11	18.08.16 Thursday	Feldspar Group (Ceramic wares and Flooring tiles);	"	
12	1/12	19.08.16 Friday	Bauxite (aluminum); Chalcopyrite (copper)	"	
13	2/1	19.08.16 Friday	Formation and Classification of Rocks.	"	
14	2/2	22.08.16 Monday	Formation and Classification of Rocks.	,,	
15	2/3	23.08.16 Tuesday	Engineering Properties of rocks	"	
16	2/4	25.08.16 Thursday	Rock as construction material, concrete Aggregate and railway ballast	,,	
17	2/5	26.08.16 Friday	Rock as roofing, flooring, cladding and foundation material	,,	
18	2/6	26.08.16 Friday	Deformation of rocks and structural features	,,	
19	2/7	29.08.16 Monday	Development of Joints, Folds, Faults and Unconformities.	,,	
20	2/8	30.08.16 Tuesday	Development of Joints, Folds, Faults and Unconformities.	"	
21	2/9	01.09.16 Thursday	Development of Joints, Folds, Faults and Unconformities.	"	
22	2/10	02.09.16 Friday	Selection of sites for Dams, Reservoirs, Tunnels, Highways and Bridges.	Board, chalk	
23	2/11	02.09.16 Friday	Selection of sites for Dams, Reservoirs, Tunnels, Highways and Bridges.	,,	
24	2/12	10.09.16 Saturday	Determination of Rock Quality Designation (RQD) and Rock Structure Rating (RSR).	,,	

25	2/13	13.09.16 Tuesday	Properties of Igneous Rocks - Granite, Gabbro, Dolerite and Basalt	,,	
26	2/14	15.09.16 Thursday	Properties of Sedimentary rocks - Sandstone, Shale, Limestone and Laterite	,,	
27	2/15	16.09.16 Friday	Properties of Metamorphic rocks - Gneiss, Quartzite, Slate and Charnockite. Decorative stones - Porphyries, Marble and Quartzite	ppt and video	
28	3/1	16.09.16 Friday	Introduction to Geomorphology and Various Landforms.	ppt and video	
29	3/2	19.09.16 Monday	Rock weathering, types and its effects on Civil Engineering Projects	Board, chalk	
30	3/3	20.09.16 Tuesday	Study of Geo-morphological aspects in the selection of sites for Dams and Reservoirs	Board, chalk	
31	¾	22.09.16 Thursday	Study of Geo-morphological aspects in the selection of sites for Tunnels, Highways and Bridges.	Board, chalk	
32	3/5	23.09.16 Friday	Watershed management. Floods and their control.	Board, chalk	
33	3/6	23.09.16 Friday	Drainage pattern – parameters and development	Board, chalk	
34	3/7	26.09.16 Monday	Coastlines and their engineering considerations.	Board, chalk	
35	3/8	27.09.16 Tuesday	Seismic waves and their types	,,	
36	3/9	29.09.16 Thursday	Earthquake - Causes and Effects.	,,	
37	3/10	03.10.16 Monday	Problems related to Earthquakes, Earthquake intensity, Richter Scale and Seismograph.	ppt and video	
38	3/11	03.10.16 Monday	Seismic zones- World and India.	Board, chalk	

39	3/12	05.10.16 Wednesday	Tsunami – causes and effects. Early warning system.	,,	
40	3/13	06.10.16 Thursday	Reservoir Induced Seismicity; Landslides – causes and their control.	,,	
41	4/1	08.10.16 Saturday	Hydrological cycle, Occurrence of Groundwater in different terrains -Weathered, Hard and Stratified rocks.	,,	
42	4/2	13.10.16 Thursday	Hydrological cycle, Occurrence of Groundwater in different terrains -Weathered, Hard and Stratified rocks.	ppt and video	
43	4/3	13.10.16 Thursday	Determination of Quality aspects - SAR, RSC and TH of Groundwater.	,,	
44	4/4	17.10.16 Monday	Determination of Quality aspects - SAR, RSC and TH of Groundwater.	,,	
45	4/5	18.10.16 Tuesday	Groundwater Pollution, Groundwater Exploration	,,	
46	4/6	20.10.16 Thursday	Electrical Resistivity and Seismic methods and Resistivity curves		
47	4/7	21.10.16 Friday	Groundwater Pollution, Groundwater Exploration- Electrical Resistivity and Seismic methods and Resistivity curves	,,	
48	4/8	21.10.16 Friday	Water Bearing Formations, Aquifer types.	Board, chalk	
49	4/9	27.10.16 Thursday	Porosity, Specific yield and retention, Permeability, Transmissibility and Storage Coefficient		
50	4/10	28.10.16 Friday	Methods of Artificial Recharging of Groundwater.	,,	
51	4/11	3.11.16	Sea water intrusion and remedies.	ppt and video	
52	5/1	4.11.16	Study of Topographic maps and Contour maps;	Board, chalk	
53	5/2	4.11.16	Remote Sensing – Concept, Application and its Limitations;	,,	
54	5/3	7.11.16	Geographic Information System (GIS) and Global Positioning System (GPS) – Concept and their use resource mapping.	,,	

55	5/4	8.11.16	Geographic Information System (GIS) and Global Positioning System (GPS)	,,	
56	5/5	8.11.16	LANDSAT Imagery – Definition and its use.	,,	
57	5/6	9.11.16	Impact of Mining, Quarrying and Reservoirs on Environment.	,,	
58	5/7	9.11.16	Impact of Mining, Quarrying and Reservoirs on Environment.	,,	
59	5/8	10.11.16	Natural Disasters and their mitigation.	,,	
60	5/9	10.11.16	Concept and their use resource mapping.	,,	

Syllabus for Internals:

Internal Test #	Syllabus
T1	Module 1 and 2
T2	Module 2, 3 and 4
Improvement Test	Module 4and 5

Literature:

Book Type	Code	Author & Title	Publication info	
			Edition & Publisher	ISBN #
Text book		"Text Book of Engineering and General Geology" by Parbin Singh	S.K. Kataria and Sons.	
Text book		"A Text Book of Geology" by P K Mukerjee	World Press Pvt., Ltd	
Reference book		"Groundwater Hydrology" by David K Todd	TATA Macgraw Hill	

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CMR INSTITUTE

OF TECHNOLOGY

Session wise – Course Plan

BUILDING MATERIALS AND CONSTRUCTION

Department of Civil Engineering

SEMESTER : III

BRANCH : CIV

SUBJECT : BMC

SUBJECT CODE : 10CV36

NO OF HRS/WK : 5

NAME OF THE FACULTY : Mrs. SREELAKSHMI.G

DATE OF COMMENCEMENT : 23.07.2015

DATE OF CLOSING : 20.11.2015

CLASS STRENGTH : 113

TOTAL HRS : 50

Class No	Date	Day	Chapter no (No of hrs planed for the chapter)	Topics planned for the session	Teaching Aids	Assignments/ Tests planned for the chapter
1.	28.07.16	4	**1/2**	**MODULE - 2** Masonry: Definition and terms used in masonry.	Board, chalk, duster	
2.	29.07.16	5	2/2	Brick masonry, characteristics and requirements of good brick masonry	Board, chalk, duster	
3.	30.07.16	6	3/2	Bonds in brick work, Header, Stretcher	Models	
4.	01.08.16	1	4/2	English bond	Models	
5.	02.08.16	2	5/2	Flemish Bond	,,	

6.	03.08.16	3	6/2	Stone masonry	Board, chalk, duster	
7.	04.08.16	4	7/2	Requirements of good stone Masonry. Classification of different stone masonry	,,	
8.	05.08.16	5	8/2	characteristics of different stone masonry, Joints in stone masonry		
9.	06.08.16	6	9/2	Preliminary investigation of soil, safe bearing capacity of soil	,,	
10	08.08.16	1	10/2	Function and requirements of good foundation , types of foundation , introduction to spread, combined , strap, mat and pile foundation		
11	09.08.16	2	**1/1**	**MODULE - 1** Stone as building material;	,,	
12	10.08.16	3	2/1	Requirement of good building stones	,,	Assignment-I
13	11.08.16	4	3/1	Dressing of stones,	Board, chalk, duster	
14	12.08.16	5	4/1	Deterioration of stone work, Preservation of stone work.	,,	
15	16.08.16	6	5/1	Bricks; Classification, Manufacturing of clay bricks	,,	
16	17.08.16	1	6/1	Requirement of good bricks, Field and laboratory tests on bricks; compressive strength , water absorption, efflorescence, dimension and warpage.	,,	
17	18.08.16	2	7/1	Fine aggregate: Natural and manufactured: Sieve analysis, zoning, specify gravity, bulking, moisture content, deleterious materials.	,,	
18	19.08.16	3	8/1	Coarse aggregate: Natural and manufactured: Importance of size, shape and texture. Grading of	Videos on tests	

				Aggregates Sieve analysis, specific gravity		
19	20.08.16	4	9/1	Flakiness and elongation index, crushing, impact and abrasion tests , Cement Concrete blocks, Stabilized Mud Blocks, Sizes, requirement of good blocks.	,,	Assignment - II
20	22.08.16	5	10/1	Mortar: types and requirements. Timber as construction material	,,	
21	23.08.16	6	1/4	**MODULE 4** Doors, Windows and Ventilators: Location of doors and windows, technical terms,	,,	
22	24.08.16	1	2/4	Materials for doors and windows, Paneled door, Flush door, Collapsible door, Rolling shutter, PVC	,,	
23	25.08.16	2	3/4	Door, Paneled and glazed Window, Bay Window, French window. Ventilators. Sizes as per IS recommendations	,,	
24	26.08.16	3	4/4	Stairs: Definitions, technical terms and types of stairs,	,,	
25	29.08.16	4	5/4	Requirements of good stairs	,,	
26	30.08.16	5	6/4	Geometrical Design of RCC doglegged and open-well stairs.	,,	
27	31.08.16	6	7/4	Formwork: Introduction to form work,	,,	Assignment –III
28	01.09.16	1	8/4	scaffolding	,,	
29	02.09.16	3	9/4	shoring	Board, chalk, duster	
30	02.09.16	3	10/4	under pinning	,,	
31	09.09.16	4	1/5	**MODULE -5** Plastering and Pointing : purpose	,,	
32	10.09.16	5	2/5	materials and methods of plastering and pointing,	,,	
33	14.09.16	1	3/5	defects in plastering-Stucco plastering, lathe	,,	

				plastering		
34	15.09.16	2	4/5	Damp proofing- causes, effects and methods.	,,	
35	16.09.16	3	5/5	Paints- Purpose, types, ingredients and defects	,,	
36	16.09.16	3	6/5	Preparation and applications of paints to new and old plastered surfaces,	PPT	Assignment –IV
37	17.09.16	4	7/5	applications of paints to new plastered surfaces	,,	
38	19.09.16	5	8/5	applications of paints to old plastered surfaces	Board, chalk,	
39	21.09.16	1	9/5	Applications of paints to wooden and steel surfaces.	,,	
40	22.09.16	2	10/5	applications of paints to steel surfaces	,,	
41	23.09.16	3	1/3	**Module -3** Lintels and Arches: Definition, function and classification of lintels,	,,	
42	23.09.16	3	2/3	Balconies, chejja and canopy	,,	
43	24.09.16	4	3/3	Arches; Elements and Stability of an Arch.	,,	
44	28.09.16	1	4/3	Floors and roofs: Floors; Requirement of good floor,	,,	
45	29.09.16	2	5/3	Components of ground floor,	,,	Assignment - V
46	03.10.16	3	6/3	Selection of flooring material,	,,	
47	03.10.16	3	7/3	Laying of Concrete, Mosaic, Marble, Granite flooring	,,	
48	04.10.16	4	8/3	Tile flooring, Cladding of tiles.	,,	
49	05.10.16	5	9/3	Roof;-Requirement of good roof, Types of roof and roof materials	,,	
50	07.10.16	1	10/3	Elements of a pitched roof, Trussed roof, King and Queen post truss	,,	Assignment - VI

51	13.10.16	3		Revision on Module 1	,,	
52	13.10.16	3		Revision on Module 1	,,	
53	14.10.16	4		Revision on Module 1	,,	
54	17.10.16	5		Revision on Module 1		
55	19.10.16	1		Revision on Module 2		
56	20.10.16	2		Revision on Module 2		
57	21.10.16	3		Revision on Module 2		
58	21.10.16	3		Revision on Module 2		
59	22.10.16	4		Revision on Module 3		
60	27.10.16	5		Revision on Module 3		
61	02.11.16	6		Revision on Module 3		
62	03.11.16	1		Revision on Module 4		
63	04.11.16	2		Revision on Module 4		
64	04.11.16	3		Revision on Module 5		
65	05.11.16	4		Revision on Module 5		
66	09.11.16	5		Revision on Module 5		

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Session wise – Course Plan

Department of Civil Engineering

CMR Institute of Technology, Bangalore		
Department(s): IS,CIV		
Semester: 03		
Engineering Mathematics III	15MAT31	Lectures/week: 06
Course Instructor(s): Uma Raju		
Course duration: 25th July to 19th November 2016		

Class	Chapter Title / Reference Literature	Topic	Percentage of portion covered	
			Reference	Cumulative
01-13	**Module 1 Fourier Series**	Periodic functions, Dirichlet's conditions, Fourier series of periodic functions of period 2π and arbitrary period, half range Fourier series. practical harmonic analysis	12.5	12.5
14-27	**Module 4 Finite differences**	Forward and backward differences, Newton's forward and backward interpolation formulae, divided differences-Newton's divided difference formula, Lagrange's interpolation formula and inverse interpolation formula. Numerical integration Simpson' s 1/3,3/8 rule ,Weddle's rule (only problems)	12.5	25.0
28-39	**Module 3 Numerical methods Statiscal methods**	Numerical solution of algebraic and transcendental equations, Regula-Falsi method Secent method, Newton Raphson method, and Grapfical method, Correlation ,	12.5	50.0

		Regression Coefficients, lines of Regression. Curve fitting by the method of least squares, Fitting of curves of the form y=a+bx, $y=ax^2+bx+c$, $y=ae^{bx}$, $y=ax^b$		
40-56	**Module 2** **Fourier Transforms** **Z transforms**	Infinite Fourier transform, Fourier sine and cosine transforms, inverse transforms. Z transform: difference equations,Basic definition, standard z transforms, Damping rule, shifting rule,Initial and final value theorem(without proof)and problems ,Inverse Z-Transform. Application: to solve difference equations	12.5	62.5
57-67	**Module 5** **Vector integration**	Line integral_defnition and problems,surface and volume integrals-defnition,Green' s theorem in a plane,Stokes and Gaus-divergence theorem(without proof)and problems. Calculus of variations:variation of function and functional,variational problems,Eulers equation,Geodesics, minimal surface of revolution, hanging chain ,problems.	12.5	75.0

Sessional	**Syllabus**
T1	Class 01-31
T2	Class 32-56
T3	Class 57-64

Literature:

Book Type	**Code**	**Author & Title**	**Publication information**	
			Edition & Publisher	**ISBN**
Text Book	TB1	B.S. Grewal, Higher Engineering Mathematics, Latest Edition, Khanna publishers	Latest edition, Khanna publications	8174091955
Text Book	TB2	Erwin Kreyszig, Advanced Engineering Mathematics	Latest Edition Wiley India publishers	978812653135
References	RB1	B.V Ramana, Higher Engineering Mathematics,.	Latest Edition, Tata Mc. Graw Hill Publications	---
References	RB2	Peter V . O'Neil, Engineering Mathematics.	Cengage Learning India Pvt. Ltd. Publishers	---
References	RB4	Dr. K.S.C , Engineering Mathematics III	2011-2012 2016 edition	---

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CMR INSTITUTE

OF TECHNOLOGY

Session wise – Course Plan

Department of Civil Engineering

SEMESTER : III B

BRANCH : CIV

SUBJECT : Strength of materials

SUBJECT CODE : 15CV32

NO OF HRS/WK : 5

NAME OF THE FACULTY : Mr. Dr.Giridhar

DATE OF COMMENCEMENT : 01.08.2016

DATE OF CLOSING : 09.11.2016

CLASS STRENGTH : 63

TOTAL HRS :

Session No	DATE	Topics planned for the session	Teaching Aids	Assignments/ Tests planned for the chapter	Topics covered As per plan
69.	01.08.16 Monday	Introduction			
70.	02.08.16 Tuesday	Definition and concept and of stress			
71.	02.08.16 Tuesday	Definition and concept and of stain	Board, chalk,		

			duster		
72.	04.08.16 Thursday	Hooke's law			
73.	05.08.16 Friday	Stress-Strain diagrams for ferrous and non ferrosus	,,		
74.	05.08.16 Friday	Elongation of tapering bars of circular cross section	,,		
75.	08.08.16 Monday	Numericals on tapering bars	,,		
76.	09.08.16 Tuesday	Elongation due to selfweight. Numericals	,,		
77.	09.08.16 Tuesday	Elongation due to selfweight. Numericals	,,		
78.	11.08.16 Thursday	Saint Venant's principle, Numericals	,,	Assignment- I	
79.	12.08.16 Friday	Compound bars, Temperature stresses, Compound section subjected to temperature stresses, state of simple shear, Elastic constants and their relationship.	Board, chalk, duster		
80.	12.08.16 Friday	Compound section subjected, Elastic constants and their relationship.	,,		
81.	17.08.16 Wednesday	Compound section subjected to temperature stresses, Elastic constants and their relationship.	,,		
82.	18.08.16 Thursday	Module -2: Compound Stresses: Introduction, state of stress at a point, Numericals	,,		
83.	18.08.16 Thursday	General two dimensional stress system, Principal stresses and principal planes. Numericals	,,		
84.	20.08.16 Saturday	Mohr's circle of stresses, Numericals			
85.	22.08.16 Monday	Mohr's circle of stresses, Numericals	,,	Assignment -II	
86.	22.08.16 Monday	Thin and Thick Cylinders: Introduction, Thin cylinders subjected to internal pressure; Numericals	,,		
87.	24.08.16 Wednesday	Hoop stresses, Longitudinal stress and change in volume. Numericals			
88.	25.08.16 Thursday	Hoop stresses, Longitudinal stress and change in volume. Numericals			
89.	25.08.16 Thursday	Thick cylinders subjected to both internal and external pressure; Numericals			

90	27.08.16 Saturday	Thick cylinders subjected to both internal and external pressure; Numericals	,,		
91	29.08.16 Monday	Lame's equation, radial and hoop stress distribution. Numericals.	,,	Assignment –III	
92	29.08.16 Monday	Lame's equation, radial and hoop stress distribution. Numericals.	,,		
93	31.08.16 Wednesday	Module-3:Shear Force and Bending Moment in Beams: Introduction to types of beams, supports and loadings.	,,		
94	01.09.16 Thursday	Module-3:Shear Force and Bending Moment in Beams: Introduction to types of beams, supports and loadings.	,,	Assignment –III	
95	01.09.16 Thursday	Definition of bending moment and shear force, Sign conventions, relationship between load intensity,			
96	09.09.16 Friday	Definition of bending moment and shear force, Sign conventions, relationship between load intensity,	Board, chalk, duster		
97	10.09.16 Saturday	Shear force and bending moment diagrams for statically determinate beams subjected to points load, Numericals.	,,		
98	10.09.16 Saturday	Shear force and bending moment diagrams for statically determinate beams subjected to uniformly distributed loads. Numericals	,,		
99	14.09.16 Wednesday	Shear force and bending moment diagrams for statically determinate beams subjected to uniformly distributed loads. Numericals	,,		
100	15.09.16 Thursday	Shear force and bending moment diagrams for statically determinate beams subjected to uniformly distributed loads.	,,		
101	15.09.16 Thursday	Shear force and bending moment diagrams for statically determinate beams subjected to uniformly distributed loads.	,,		
102	17.09.16 Saturday	Shear force and bending moment diagrams for statically determinate beams subjected to uniformly distributed loads.Numericals	,,		
103	19.09.16 Monday	Shear force and bending moment diagrams for statically determinate beams subjected to uniformly distributed loads.Numericals	,,	Assignmnt –IV	
104	19.09.16 Monday	Shear force and bending moment diagrams for statically determinate beams subjected to uniformly distributed loads.	,,		

10	21.09.16 Wednesday	Shear force and bending moment diagrams for statically determinate beams subjected tocouple and their combinations. Numericals	Board, chalk, duster		
10	22.09.16 Thursday	Shear force and bending moment diagrams for statically determinate beams subjected tocouple and their combinations. Numericals	,,		
10	22.09.16 Thursday	Shear force and bending moment diagrams for statically determinate beams subjected tocouple and their combinations.Numericals	,,		
10	24.09.16 Saturday	Module -4:Bending and Shear Stresses in Beams: Introduction,	,,		
10	26.09.16 Monday	Pure bending theory, Assumptions, derivation of bending equation, Numericals	,,		
11	26.09.16 Monday	Pure bending theory, Assumptions, derivation of bending equation, Numericals	,,		
11	28.09.16 Wednesday	modulus of rupture, section modulus, flexural rigidity.	,,		
11	29.09.16 Thursday	modulus of rupture, section modulus, flexural rigidity.	,,	Assignment -V	
11	29.09.16 Thursday	Expression for transverse shear stress in beams,	,,		
11	04.10.16 Tuesday	Expression for transverse shear stress in beams,	,,		
11	05.10.16 Wednesday	Bending and shear stress distribution diagrams for circular,	,,		
11	05.10.16 Wednesday	Bending and shear stress distribution diagrams for circular,	,,		
11	07.10.16 Friday	Bending and shear stress distribution diagrams for rectangular, 'I', and 'T' sections. Shear centre(only concept)	,,		
11	08.10.16 Saturday	Bending and shear stress distribution diagrams for rectangular, 'I', and 'T' sections. Shear centre(only concept)	,,		
11	08.10.16 Saturday	Bending and shear stress distribution diagrams for rectangular, 'I', and 'T' sections. Shear centre(only concept) , Numericals.	,,	Assignment -VI	
12	14.10.16 Friday	Bending and shear stress distribution diagrams for rectangular, 'I', and 'T' sections. Shear centre(only concept) , Numericals.	,,		
12	17.10.16 Monday	Columns and Struts: Introduction, short and long columns. Numericals.	Board, chalk,		

			duster		
12	17.10.16 Monday	Columns and Struts: Introduction, short and long columns. Numericals.	,,		
12	19.10.16 Wednesday	Columns and Struts: Introduction, short and long columns. Numericals.	,,		
12	20.10.16 Thursday	Euler's theory; Assumptions, Numericals	,,		
12	20.10.16 Thursday	Euler's theory; Assumptions, Numericals	,,		
12	22.10.16 Saturday	Derivation for Euler's Buckling load for different end conditions, Numericals	,,		
12	27.10.16 Thursday	Derivation for Euler's Buckling load for different end conditions, Numericals	,,		
12	27.10.16 Thursday	Limitations of Euler's theory. Rankine-Gordon's formula for columns, Numericals	,,		
12	02.11.16 Wednesday	Limitations of Euler's theory. Rankine-Gordon's formula for columns, Numericals	,,		
13	03.11.16 Thursday	Module -5:MTorsion in Circular Shaft: Introduction, pure torsion, Assumptions, Numericals	,,	Assignment -VII	
13	03.11.16 Thursday	derivation of torsion equation for circular shafts, torsional rigidity and polar modulus	,,		
13	05.11.16 Saturday	Power transmitted by a shaft, combined bending and torsion.	,,		
13	07.11.16 Monday	Theories of Failure: Introduction, maximum principal stress theory (Rankine's theory), Maximum shearing stress theory (Tresca's theory), S	,,		
13	07.11.16 Monday	Theories of Failure: Introduction, maximum principal stress theory (Rankine's theory), Maximum shearing stress theory (Tresca's theory), S	,,		
13	09.11.16 Wednesday	Strain energy theory (Beltrami and Haigh), and maximum strain theory (St. Venant's theory).	,,		
13	01.08.16 Monday	Strain energy theory (Beltrami and Haigh), and maximum strain theory (St. Venant's theory).	,,		

CMR INSTITUTE OF TECHNOLOGY

Session wise – Course Plan

Department of Civil Engineering

SEMESTER	III-B	FACULTY	AMRUTH CHAND B
BRANCH	CIVIL	DATE OF COMMENCEMENT	8-AUG-2016
SUBJECT	FLUID MECHANICS	DATE OF CLOSING	9-NOV-2016
SUBJECT CODE	15CV33	CLASS STRENGTH	67
NO OF HRS/WEEK	06	TOTAL HRS	60

Date	Day	Topics Planned for the Session	Teaching Aids	Assignments / Test	Topics covered as per plan
08/08/16	1	**Fluids & Their Properties-** Concept of fluid. Units.	Chalk- Power Point Presentation- Discussion	Assignment 1- Submission of class notes Assignment 2- Types of Pressure Measuring Devices Class Test 1	
09/08/16	2	Mass density, Specific weight, Specific gravity, Specific volume			
10/08/16	3	Fluid as a continuum, Vapor pressure.			
10/08/16	3	Compressibility & Bulk Modulus			
11/08/16	4	Surface tension, Cohesion, Adhesion			
16/08/16	6	Viscosity & Capillarity.			
17/08/16	1	Newton's law of viscosity			
18/08/16	2	Numerical Problems			
19/08/16	3	Capillary rise in a vertical tube & between two plane surfaces			
19/08/16	3	Pressure inside a water droplet, Soap bubble & Liquid jet.			
20/08/16	4	Numerical problems			
23/08/16	6	Numerical problems			
24/08/16	1	**Fluid Pressure & Its Measurements**			
25/08/16	2	Definition of pressure, Pressure at a point, Pascal's law			

26/08/16	3	Variation of pressure with depth. Types of pressure.			
26/08/16	3	Simple, Differential & Inclined Manometers			
27/08/16	4	Mechanical & electronic pressure measuring devices.			
30/08/16	6	**Hydrostatic forces-** Total pressure, Centre of Pressure	Chalk- Power Point Presentation- Discussion		
31/08/16	1	Total Pressure on Horizontal and Vertical surface,			
01/09/16	2	Total Pressure on Inclined plane			
02/09/16	3	Total Pressure on Curved Surfaces			
02/09/16	3	Numerical Problems.			
09/09/16	4	Numerical Problems.			
13/09/16	6	**Fundamentals of Fluid Kinematics**			
14/09/16	1	Introduction. Methods of describing fluid motion.			
15/09/16	2	Velocity & Total Acceleration of a fluid particle.			
16/09/16	3	Types of fluid flow, Description of flow pattern.			
16/09/16	3	3D Continuity Equation in Cartesian coordinate system.			
17/09/16	4	Derivation for Rotational & Irroational Motion.			
20/09/16	6	Potential function. Stream Function			
21/09/16	1	Orthogonality of Streamlines & Equipotential Lines.			
22/09/16	2	Numerical Problems			
23/09/16	3	Numerical Problems			
23/09/16	3	Introduction to flow net.			
24/09/16	4	**Fluid Dynamics-** Forces acting on fluid in motion.	Chalk- Power Point Presentation- Discussion		
27/09/16	6	Euler's equation of motion along a streamline			
28/09/16	1	Bernoulli's equation. Assumptions & limitations			
29/09/16	2	Modified Bernoulli's equation. Problems			
03/10/16	3	Vortex motion. Forced Vortex. Free vortex. Problems			
03/10/16	3	Momentum equation problems on pipe bends.			
04/10/16	4	Venturimeter, Orificemeter, Pitot tube			
06/10/16	6	Numerical Problems			
07/10/16	1	**Orifice & Mouthpiece**- Classification, flow through orifice,	Chalk- Power Point		

08/10/16	2	Hydraulic coefficients, Numerical problems. .	Presentation-Discussion		
13/10/16	3	Mouthpiece, classification, Borda's Mouthpiece			
13/10/16	3	**Notches & Weirs-** Introduction. Classification,			
14/10/16	4	Discharge over Rectangular, Triangular, Trapezoidal Notches			
18/10/16	6	Cippoletti notch, Broad crested weirs.			
19/10/16	1	Numerical problems. Ventilation of weirs, submerged weirs			
20/10/16	2	**Flow through Pipes-** Darcy-Weisbach Equation	Chalk- Power Point Presentation-Discussion		
21/10/16	3	Introduction. Major & minor losses in pipe flow.			
21/10/16	3	Pipes in series, pipes in parallel, equivalent pipe-problems.			
22/10/16	4	Minor losses in pipe flow. Problems			
28/10/16	6	Numerical problems.			
02/11/16	1	Hydraulic gradient line, energy gradient line.			
03/11/16	2	Pipe Networks, Hardy Cross method, Numerical problems			
04/11/16	3	**Surge Analysis in Pipes-** Water hammer in pipes,			
04/11/16	3	Pressure rise- Gradual & sudden closure for rigid & elastic pipes.			
05/11/16	4	Numerical Problems			
08/11/16	6	Revision			
09/11/16	1	Revision			

Syllabus for Sessional:

Sessional #	Syllabus
1	Module 1
2	Module 2 & 3
3	Module 4 & 5

Literature/Reference Books:

4. P N Modi & S M Seth, "Hydraulics & Fluid Mechanics, including Hydraulic Machines", 20th edition, 2015, Standard Book House, New Delhi.
5. R.K. Bansal, "A Text book of Fluid Mechanics & Hydraulic Machines", Laxmi Publications, New Delhi.
6. S K SOM & G Biswas, "Introduction to Fluid Mechanics & Fluid Machines", Tata McGraw Hill, New Delhi.

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Session wise – Course Plan

Department of Civil Engineering

SEMESTER : III 'B'
BRANCH : CIV
SUBJECT : Basic Surveying
SUBJECT CODE : 15CV34
NO OF HRS/WK : 6

NAME OF THE FACULTY : Mr Kiran RG
DATE OF : 01.08.2016
DATE OF CLOSING : 09.11.16
CLASS STRENGTH : 49
TOTAL HRS : 56

Session No	DATE	Topics planned for the session	Teaching Aids	Assignments/ Tests planned for the chapter	Topics covered As per plan
57.	**02.08.16 Tuesday**	Module -1 **Introduction: Definition of surveying, Objectives and importance of surveying.**	Chalk-talk		
58.	**03.08.16 Wednesday**	**Classification of surveys. Principles of surveying.**	,,		
59.	**04.08.16 Thursday**	**Units of measurements, Surveying measurements and errors, types of errors, precision and accuracy.**	,,		
60.	**05.08.16 Friday**	**Classification of maps, map scale, conventional symbols, topographic maps, map layout**	Visual Aids		
61.	**06.08.16 Saturday**	**Survey of India Map numbering systems**	Chalk-talk		
62.	**09.08.16 Tuesday**	**Measurement of Horizontal Distances: Measuring tape and types. Measurement using tapes, Taping on level ground and sloping ground.**	,,		
63.	**10.08.16 Wednesday**	**Errors and corrections in tape measurements, ranging of lines, direct and indirect methods of ranging, Electronic distance measurement, basic principle**	,,		
64.	**11.08.16 Thursday**	**Numerical problems**	,,		
65.	**12.08.16 Friday**	**Booking of tape survey work, Field book entries**	Visual aids		
66.	**16.08.16 Tuesday**	**Conventional symbols with toposheets**	Chalk-talk		

67.	**18.08.16 Thursday**	**Obstacles in tape survey, Numerical problems**	,,		
68.	**19.08.16 Friday**	**Numerical problems**	,,		
69.	**20.08.16 Saturday**	**Numerical problems**	**,,**		
70.	**22.08.16 Monday**	**Numerical problems**	**,,**	Assignment 1	
71.	**23.08.16 Tuesday**	Module -2 **Measurement of Directions and Angles: Compass survey- Introduction**	**,,**		
72.	**25.08.16 Thursday**	**Basic definitions; meridians, bearings, magnetic and True bearings**	**,,**		
73.	**26.08.16 Friday**	**Prismatic and surveyor's compasses, temporary adjustments, declination**	**,,**		
74.	**27.08.16 Saturday**	**Quadrantal bearings, whole circle bearings- Numericals**	PPT		
75.	**29.08.16 Monday**	**Local attraction and related problems**	Chalk-talk		
76.	**30.08.16 Tuesday**	**Numerical problems**	,,		
77.	**01.09.16 Thursday**	**Numerical problems**	,,	Assignment 2	
78.	**02.09.16 Friday**	Module -3 **Traversing: Introduction**	,,		
79.	**09.09.16 Friday**	**Traverse Survey and Computations: Latitudes and departures, rectangular coordinates**	,,		
80.	**10.09.16 Saturday**	**Traverse adjustments, Bowditch rule and transit rule**	,,		
81.	**13.09.16 Tuesday**	**Numerical problems**	,,		
82.	**15.09.16 Thursday**	**Numerical problems**	,,	Assignment 3	
83.	**16.09.16 Friday**	Module-2 Cont**. Theodolite Survey and Instrument Adjustment: Introduction**	,,		
84.	**17.09.16 Saturday**	**Theodolite and types, Fundamental axes and parts of Transit theodolite, uses of theodolite**	,,		
85.	**19.09.16 Monday**	**Temporary adjustments of transit theodolite, measurement of horizontal and vertical angles**	,,		
86.	**20.09.16 Tuesday**	**Step by step procedure for obtaining permanent adjustment of Transit theodolite**	,,	Assignment 4	
87.	**22.09.16 Thursday**	Module -3 Cont**. Tacheometry: basic principle**	,,		
88.	**23.09.16 Friday**	**Types of tacheometry, distance equation for horizontal and inclined line of sight in fixed hair method**	,,		
89.	**24.09.16 Saturday**	**Numerical problems**	,,		
90.	**26.09.16 Monday**	**Numerical problems**	,,	Assignment 5	
91.	**27.09.16 Tuesday**	Module -4 **Leveling: Basic terms and definitions**	PPT		

92.	**29.09.16 Thursday**	**Methods of leveling, Dumpy level, auto level, digital and laser levels**	,,		
93.	**03.10.16 Monday**	**Curvature and refraction corrections. Booking and reduction of levels**	,,		
94.	**04.10.16 Tuesday**	**Differential leveling, profile leveling, fly leveling**	Chalk-talk		
95.	**05.10.16 Wednesday**	**Check leveling, reciprocal leveling**	**,,**		
96.	**06.10.16 Thursday**	**Numerical problems**	**,,**		
97.	**08.10.16 Saturday**	**Numerical problems**	**,,**		
98.	**13.10.16 Thursday**	**Trigonometric leveling (heights and distances-single plane and double plane methods)**	**,,**		
99.	**14.10.16 Friday**	**Numerical problems**	,,		
100.	**17.10.16 Monday**	**Numerical problems**	,,	Assignment 6	
101.	**18.10.16 Tuesday**	Module -5: **Areas and Volumes: Introduction**	,,		
102.	**20.10.16 Thursday**	**Measurement of area – by dividing the area into geometrical figures**	,,		
103.	**21.10.16 Friday**	**Area from offsets, mid ordinate rule, trapezoidal rule**	,,		
104.	**22.10.16 Saturday**	**Numerical problems**	,,		
105.	**27.10.16 Thursday**	**Simpson's one third rule, area from co-ordinates**	,,		
106.	**28.10.16 Friday**	**Numerical problems**	,,		
107.	**03.11.16 Thursday**	**Introduction to planimeter, digital planimeter**	,,		
108.	**04.11.16 Friday**	**Measurement of volumes-trapezoidal and prismoidal formula**	,,		
109.	**05.11.16 Saturday**	**Contouring Contours, Methods of contouring, Interpolation of contours**	,,		
110.	**07.11.16 Monday**	**Contour gradient, characteristics of contours and uses**	,,	Assignment 7	
111.	**08.11.16 Tuesday**	**Revision**	,,		

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CMR INSTITUTE

OF TECHNOLOGY

Session wise – Course Plan

Lesson Plan for the odd sem – 2016 (For B Section)

Semester – 3

Subject Code: 15CV035 **Subject Name: ENGINEERING GEOLOGY**

SEMESTER : III B **NAME OF THE FACULTY : Mr. Karthik M**

BRANCH : CIVIL **DATE OF COMMENCEMENT : 1-08-2016**

SUBJECT : ENGINEERING GEOLOGY **DATE OF CLOSING : 09-11-201**

SUBJECT CODE: 10CV54 **CLASS STRENGTH :**

NO OF HRS/ WEEK: 5 **TOTAL HRS :**

Session No	Chapter no (No of hrs planned for the chapter)	DATE	Topics planned for the session	Teaching Aids	Assignments / Tests planned for the chapter	Topics covered As per plan
1	1/1	01.08.16 Monday	Application of Earth Science in Civil Engineering	Board, chalk		
2	1/2	02.08.16 Tuesday	Internal Structure and composition of the Earth.	"		
3	1/3	04.08.16 Thursday	Internal Structure and composition of the	"		

			Earth			
4	¼	06.08.16 Saturday	Mineral properties, composition and their use	"		
5	1/5	06.08.16 Saturday	Mineral properties, composition and their use	,,		
6	1/6	08.08.16 Monday	Physical properties and uses of Quartz Group (Glass);	"		
7	1/7	09.08.16 Tuesday	Properties and uses Carbonate Group (Cement) ; Gypsum (POP, gypsum sheets, cement);	,,		
8	1/8	11.08.16 Thursday	Mica Group (Electrical industries	"		
9	1/9	16.08.16 Tuesday	Kaolin (Paper, paint and textile); Asbestos (AC sheets)	"		
10	1/10	16.08.16 Tuesday	Uses and Identification Ore minerals - Iron ores (Steel); Chromite (Alloy);	"		
11	1/11	17.08.16 Wednesday	Feldspar Group (Ceramic wares and Flooring tiles);	"		
12	1/12	18.08.16 Thursday	Bauxite (aluminum); Chalcopyrite (copper)	"		
13	2/1	20.08.16 Saturday	Formation and Classification of Rocks.	"		
14	2/2	23.08.16 Tuesday	Formation and Classification of Rocks.	,,		
15	2/3	23.08.16 Tuesday	Engineering Properties of rocks	"		
16	2/4	24.08.16 Wednesday	Rock as construction material, concrete Aggregate and railway ballast	,,		

17	2/5	25.08.16 Thursday	Rock as roofing, flooring, cladding and foundation material	,,		
18	2/6	27.08.16 Saturday	Deformation of rocks and structural features	,,		
19	2/7	30.08.16 Tuesday	Development of Joints, Folds, Faults and Unconformities.	,,		
20	2/8	30.08.16 Tuesday	Development of Joints, Folds, Faults and Unconformities.	"		
21	2/9	31.08.16 Wednesday	Development of Joints, Folds, Faults and Unconformities.	"		
22	2/10	01.09.16 Thursday	Selection of sites for Dams, Reservoirs, Tunnels, Highways and Bridges.	Board, chalk		
23	2/11	09.09.16 Friday	Selection of sites for Dams, Reservoirs, Tunnels, Highways and Bridges.	,,		
24	2/12	13.09.16 Tuesday	Determination of Rock Quality Designation (RQD) and Rock Structure Rating (RSR).	,,		
25	2/13	13.09.16 Tuesday	Properties of Igneous Rocks - Granite, Gabbro, Dolerite and Basalt	,,		
26	2/14	14.09.16 Wednesday	Properties of Sedimentary rocks - Sandstone, Shale, Limestone and Laterite	,,		
27	2/15	15.09.16 Thursday	Properties of Metamorphic rocks - Gneiss, Quartzite, Slate and Charnockite. Decorative stones - Porphyries, Marble and Quartzite	ppt and video		
28	3/1	17.09.16 Saturday	Introduction to Geomorphology and Various Landforms.	ppt and video		
29	3/2	20.09.16 Tuesday	Rock weathering, types and its effects on Civil Engineering Projects	Board, chalk		
30	3/3	20.09.16 Tuesday	Study of Geo-morphological aspects in the selection of sites for Dams and	Board,		

			Reservoirs	chalk		
31	¾	21.09.16 Wednesday	Study of Geo-morphological aspects in the selection of sites for Tunnels, Highways and Bridges.	Board, chalk		
32	3/5	22.09.16 Thursday	Watershed management. Floods and their control.	Board, chalk		
33	3/6	24.09.16 Saturday	Drainage pattern – parameters and development	Board, chalk		
34	3/7	27.09.16 Tuesday	Coastlines and their engineering considerations.	Board, chalk		
35	3/8	27.09.16 Tuesday	Seismic waves and their types	,,		
36	3/9	28.09.16 Wednesday	Earthquake - Causes and Effects.	,,		
37	3/10	29.09.16 Thursday	Problems related to Earthquakes, Earthquake intensity, Richter Scale and Seismograph.	ppt and video		
38	3/11	04.10.16 Tuesday	Seismic zones- World and India.	Board, chalk		
39	3/12	06.10.16 Thursday	Tsunami – causes and effects. Early warning system.	,,		
40	3/13	06.10.16 Thursday	Reservoir Induced Seismicity; Landslides – causes and their control.	,,		
41	4/1	07.10.16 Friday	Hydrological cycle, Occurrence of Groundwater in different terrains - Weathered, Hard and Stratified rocks.	,,		
42	4/2	08.10.16 Saturday	Hydrological cycle, Occurrence of Groundwater in different terrains - Weathered, Hard and Stratified rocks.	ppt and video		

43	4/3	14.10.16 Friday	Determination of Quality aspects - SAR, RSC and TH of Groundwater.	,,		
44	4/4	18.10.16 Tuesday	Determination of Quality aspects - SAR, RSC and TH of Groundwater.	,,		
45	4/5	19.10.16 Wednesday	Groundwater Pollution, Groundwater Exploration	,,		
46	4/6	20.10.16 Thursday	Electrical Resistivity and Seismic methods and Resistivity curves			
47	4/7	22.10.16 Saturday	Groundwater Pollution, Groundwater Exploration- Electrical Resistivity and Seismic methods and Resistivity curves	,,		
48	4/8	28.10.16 Friday	Water Bearing Formations, Aquifer types.	Board, chalk		
49	4/9	28.10.16 Friday	Porosity, Specific yield and retention, Permeability, Transmissibility and Storage Coefficient			
50	4/10	28.10.16 Friday	Methods of Artificial Recharging of Groundwater.	,,		
51	4/11	02.11.16 Wednesday	Sea water intrusion and remedies.	ppt and video		
52	5/1	03.11.16 Thursday	Study of Topographic maps and Contour maps;	Board, chalk		
53	5/2	03.11.16 Thursday	Remote Sensing – Concept, Application and its Limitations;	,,		
54	5/3	04.11.16	Geographic Information System (GIS) and Global Positioning System (GPS) – Concept and their use resource mapping.	,,		

		Friday				
55	5/4	04.11.16 Friday	Geographic Information System (GIS) and Global Positioning System (GPS)	,,		
56	5/5	8.11.16	LANDSAT Imagery – Definition and its use.	,,		
57	5/6	9.11.16	Impact of Mining, Quarrying and Reservoirs on Environment.	,,		
58	5/7	9.11.16	Impact of Mining, Quarrying and Reservoirs on Environment.	,,		
59	5/8		Natural Disasters and their mitigation.	,,		
60	5/9		Concept and their use resource mapping.	,,		

Syllabus for Internals:

Internal Test #	Syllabus
T1	Module 1 and 2
T2	Module 2, 3 and 4
Improvement Test	Module 4and 5

Literature:

Book Type	Code	Author & Title	Publication info	
			Edition & Publisher	ISBN #

Text book		"Text Book of Engineering and General Geology" by Parbin Singh	S.K. Kataria and Sons.	
Text book		"A Text Book of Geology" by P K Mukerjee	World Press Pvt., Ltd	
Reference book		"Groundwater Hydrology" by David K Todd	TATA Macgraw Hill	

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CMR INSTITUTE

OF TECHNOLOGY

Session wise – Course Plan

Department of Civil Engineering

SEMESTER : III B

BRANCH : CIV

SUBJECT : BMC

SUBJECT CODE : 10CV36

NO OF HRS/WK : 5

NAME OF THE FACULTY : Mrs. SREELAKSHMI.G

DATE OF COMMENCEMENT : 23.07.2015

DATE OF CLOSING : 20.11.2015

CLASS STRENGTH : 60

TOTAL HRS : 50

Class No	Date	Day	Chapter no (No of hrs planed for the chapter)	Topics planned for the session	Teaching Aids	Assignments/ Tests planned for the chapter
1.	28.07.16	4	**1/2**	**MODULE - 2** Masonry: Definition and terms used in masonry.	Board, chalk, duster	
2.	29.07.16	5	2/2	Brick masonry, characteristics and requirements of good brick masonry	Board, chalk, duster	
3.	30.07.16	6	3/2	Bonds in brick work, Header, Stretcher	Models	

4.	01.08.16	1	4/2	English bond	Models	
5.	02.08.16	2	5/2	Flemish Bond	,,	
6.	03.08.16	3	6/2	Stone masonry	Board, chalk, duster	
7.	04.08.16	4	7/2	Requirements of good stone Masonry. Classification of different stone masonry	,,	
8.	05.08.16	5	8/2	characteristics of different stone masonry, Joints in stone masonry		
9.	06.08.16	6	9/2	Preliminary investigation of soil, safe bearing capacity of soil	,,	
10	08.08.16	1	10/2	Function and requirements of good foundation , types of foundation , introduction to spread, combined , strap, mat and pile foundation		
11	09.08.16	2	**1/1**	**MODULE - 1** Stone as building material;	,,	
12	10.08.16	3	2/1	Requirement of good building stones	,,	Assignment- I
13	11.08.16	4	3/1	Dressing of stones,	Board, chalk, duster	
14	12.08.16	5	4/1	Deterioration of stone work, Preservation of stone work.	,,	

15	16.08.16	6	5/1	Bricks; Classification, Manufacturing of clay bricks	,,	
16	17.08.16	1	6/1	Requirement of good bricks, Field and laboratory tests on bricks; compressive strength , water absorption, efflorescence, dimension and warpage.	,,	
17	18.08.16	2	7/1	Fine aggregate: Natural and manufactured: Sieve analysis, zoning, specify gravity, bulking, moisture content, deleterious materials.	,,	
18	19.08.16	3	8/1	Coarse aggregate: Natural and manufactured: Importance of size, shape and texture. Grading of Aggregates Sieve analysis, specific gravity	Videos on tests	
19	20.08.16	4	9/1	Flakiness and elongation index, crushing, impact and abrasion tests , Cement Concrete blocks, Stabilized Mud Blocks, Sizes, requirement of good blocks.	,,	Assignment -II
20	22.08.16	5	10/1	Mortar: types and requirements. Timber as construction material	,,	
21	23.08.16	6	1/4	**MODULE 4** Doors, Windows and Ventilators: Location of doors and windows, technical terms,	,,	
22	24.08.16	1	2/4	Materials for doors and windows, Paneled door, Flush door, Collapsible door, Rolling shutter, PVC	,,	
23	25.08.16	2	3/4	Door, Paneled and glazed Window, Bay Window, French window. Ventilators.	,,	

				Sizes as per IS recommendations		
24	26.08.16	3	4/4	Stairs: Definitions, technical terms and types of stairs,	,,	
25	29.08.16	4	5/4	Requirements of good stairs	,,	
26	30.08.16	5	6/4	Geometrical Design of RCC doglegged and open-well stairs.	,,	
27	31.08.16	6	7/4	Formwork: Introduction to form work,	,,	Assignment –III
28	01.09.16	1	8/4	scaffolding	,,	
29	02.09.16	3	9/4	shoring	Board, chalk, duster	
30	02.09.16	3	10/4	under pinning	,,	
31	09.09.16	4	1/5	**MODULE -5** Plastering and Pointing : purpose	,,	
32	10.09.16	5	2/5	materials and methods of plastering and pointing,	,,	
33	14.09.16	1	3/5	defects in plastering-Stucco plastering, lathe plastering	,,	
34	15.09.16	2	4/5	Damp proofing- causes, effects and methods.	,,	
35	16.09.16	3	5/5	Paints- Purpose, types, ingredients and defects	,,	
36	16.09.16	3	6/5	Preparation and applications of paints to new and old plastered surfaces,	PPT	Assignment –IV
37	17.09.16	4	7/5	applications of paints to new plastered surfaces	,,	
38	19.09.16	5	8/5	applications of paints to old plastered surfaces	Board, chalk,	

39	21.09.16	1	9/5	Applications of paints to wooden and steel surfaces.	,,	
40	22.09.16	2	10/5	applications of paints to steel surfaces	,,	
41	23.09.16	3	1/3	**Module -3** Lintels and Arches: Definition, function and classification of lintels,	,,	
42	23.09.16	3	2/3	Balconies, chejja and canopy	,,	
43	24.09.16	4	3/3	Arches; Elements and Stability of an Arch.	,,	
44	28.09.16	1	4/3	Floors and roofs: Floors; Requirement of good floor,	,,	
45	29.09.16	2	5/3	Components of ground floor,	,,	Assignment -V
46	03.10.16	3	6/3	Selection of flooring material,	,,	
47	03.10.16	3	7/3	Laying of Concrete, Mosaic, Marble, Granite flooring	,,	
48	04.10.16	4	8/3	Tile flooring, Cladding of tiles.	,,	
49	05.10.16	5	9/3	Roof;-Requirement of good roof, Types of roof and roof materials	,,	
50	07.10.16	1	10/3	Elements of a pitched roof, Trussed roof, King and Queen post truss	,,	Assignment -VI
51	13.10.16	3		Revision on Module 1	,,	
52	13.10.16	3		Revision on Module 1	,,	
53	14.10.16	4		Revision on Module 1	,,	
54	17.10.16	5		Revision on Module 1		

55	19.10.16	1		Revision on Module 2		
56	20.10.16	2		Revision on Module 2		
57	21.10.16	3		Revision on Module 2		
58	21.10.16	3		Revision on Module 2		
59	22.10.16	4		Revision on Module 3		
60	27.10.16	5		Revision on Module 3		
61	02.11.16	6		Revision on Module 3		
62	03.11.16	1		Revision on Module 4		
63	04.11.16	2		Revision on Module 4		
64	04.11.16	3		Revision on Module 5		
65	05.11.16	4		Revision on Module 5		
66	09.11.16	5		Revision on Module 5		

Book Type	**Code**	**Author & Title**	**Publication info**	
			Edition & Publisher	**ISBN #**
Text book		**Sushil Kumar "Building Materials and construction", 20th edition, reprint 2015**	**Standard Publishers**	
Text book		**Dr. B.C.Punmia, Ashok kumar Jain, Arun Kumar Jain, "Building Construction,**	**Laxmi Publications (P) ltd., New Delhi.**	
Reference book		**S.K.Duggal, "Building Materials", (Fourth Edition)**	**New Age International (P) Limited, 2016**	