



GOKARAJU RANGARAJU INSTITUTE OF ENGINEERING AND TECHNOLOGY

Department of Civil Engineering

COURSE FILE

Course Name: Structural Analysis-II

Course Code: GR18A3001

III B.Tech – 1st Semester

Academic Year: 2021-22

Dr. V Srinivasa Reddy & SP RAJU V

(Assoc.Prof.)

(Asst.Prof.)



Gokaraju Rangaraju Institute of Engineering and Technology
Department of Civil Engineering

STRUCTURAL ANALYSIS-II

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STRUCTURAL ANALYSIS-II

Course Code: GR18A3001

L T P C

III Year. I Semester

3 0 0 3

UNIT I Analysis of building frames- Moment Distribution Methods of analysis to simple portal frames without and with sway - frames with inclined legs.

UNIT II Analysis of building frames- Kani's Method of analysis to continuous beams and Portal frames (up to single bay two storages).

UNIT III Approximate method of Analysis: Frames with vertical loads using Substitute frame method – Frames with horizontal loads using Portal and Cantilever methods

UNIT IV Matrix method of analysis: Different approaches to matrix methods- analysis using stiffness matrix methods for beams and frames (3 DOF) and flexibility matrix methods for beams and frames (2DOF)

UNIT V Plastic analysis: Concepts - Plastic hinges- mechanism- -Shape factors- upper and lower bound theorem- Plastic analysis for simple beam and simple portal frames



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Department of Civil Engineering**

STRUCTURAL ANALYSIS-II

III B.TECH (CE) –I SEMESTER Section-A TIME TABLE 2021

	1 9:00AM- 9:45AM	2 9:45AM- 10:30AM	3 10:30AM- 11:15AM	4 11:15AM- 12:00AM	5 12:00PM- 12:30PM	6 12:30PM- 1:20PM	7 1:20PM- 2:10PM	8 2:10PM- 3:00PM	
Mon					L U N C H		SA-II		
Tue									
Wed									
Thu									
Fri									
Sat							SA-II		

Signature of HOD

Signature of faculty

Date:

Date:



Gokaraju Rangaraju Institute of Engineering and Technology
Department of Civil Engineering

STRUCTURAL ANALYSIS-II

III B.TECH (CE) –I SEMESTER Section-B TIME TABLE 2021-22

	1 9:00AM- 9:45AM	2 9:45AM- 10:30AM	3 10:30AM- 11:15AM	4 11:15AM- 12:00AM	5 12:00PM- 12:30PM	6 12:30PM- 1:20PM	7 1:20PM- 2:10PM	8 2:10PM- 3:00PM
Mon					L U N C H			
Tue		SA-II						
Wed								
Thu								
Fri								
Sat	SA-II							

Signature of HOD

Date:

Signature of faculty

Date:



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Programme Educational Objectives (PEO's)

1. Graduates of the programme will be successful career in technical and professional career.
2. Graduates of the programme will have proficiency in solving real time Civil Engineering projects.
3. Graduates of the programme will continue to engage in lifelong learning with ethical and social responsibility.

Program Outcomes (PO's)

Graduates of the Civil Engineering programme will be able to

- a. apply knowledge of mathematics, science and fundamentals of Civil Engineering.
- b. analyse problem and interpret the data.
- c. design a system component, or process to meet desired needs in Civil Engineering within realistic constraints.
- d. identify, formulate, analyse and interpret data to solve Civil Engineering problems.
- e. use modern engineering tools such as CAD and GIS for the Civil Engineering practice.
- f. understand the impact of engineering solutions in a global, economic and societal context.
- g. understand the effect of Civil Engineering solutions on environment and to demonstrate the need for sustainable development.
- h. understanding of professional and ethical responsibility.
- i. work effectively as an individual or in a team and to function on multi-disciplinary context.
- j. communicate effectively with engineering community and society.
- k. demonstrate the management principles in Civil Engineering projects.
- l. recognize the need for and an ability to engage in life-long learning.

Program Specific Outcomes (PSO's)

PSO1: Recognize the need for a sustainable environment and design smart infrastructure considering the global challenges.

PSO2: Create and develop innovative designs with new era materials through research and development.

Signature of HOD

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Date:

Date:



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COURSE OBJECTIVES

Academic Year : 2021-2022

Semester : I Dept.: CIVIL ENGINEERING

Name of the Program: B.Tech CIVIL Year: III Section: A,B

Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR18A3001

Name of the Faculty: V.SRINIVASA REDDY & SP RAJU V

Designation: PROFESSOR & ASSISTANT PROFESSOR

The expected outcomes of the Course/Subject are:

S.No	OBJECTIVES
1	Analyze the building frames using Moment distribution method
2	Analyze the building frames using Kani's methods
3	Demonstrate the Approximate analysis of multi-storey frames using portal, cantilever and substitute frame methods
4	Analyze the simple beams and frames using stiffness matrix and flexibility matrix methods
5	Evaluate the collapse load and plastic moment carrying capacity of beams and frames

Signature of HOD

Signature of faculty

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COURSE OUTCOMES

Academic Year : 2021-2022

Semester : I Dept.: CIVIL ENGINEERING

Name of the Program: B.Tech CIVIL Year: III Section: A,B

Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR18A3001

Name of the Faculty: V.SRINIVASA REDDY & SP RAJU V

Designation: PROFESSOR & ASSISTANT PROFESSOR

The expected outcomes of the Course/Subject are:

S.No	Outcomes
1	Analyze various types of frames with and without sway using Moment distribution methods
2	Analyze various types of frames using Kani's methods of Analysis
3	Evaluate the shear forces, bending moments and axial forces in beams, columns and at joints of multi-storey frames using approximate methods of analysis
4	Analyze the simple beams and frames using stiffness matrix and flexibility matrix methods of analysis.
5	Apply the principles of virtual work to estimate the collapse load and plastic moment carrying capacity of simple beams and frames.

Signature of HOD

Signature of faculty

Date:

Date

Gokaraju Rangaraju Institute of Engineering & Technology
Bachupally, Nizampet Road, Kukatpally, Hyderabad-500009
B.Tech Civil Engg. III Yr-II Sem- Section A- GR18 2021 -22

S.No	Reg No	Student Name
1	18241A0151	SOHEB PATEL
2	18241A0152	SRIAM SHIVA ADITYA
3	19241A0101	RUHAIL AHMAD LONE
4	19241A0102	AITHA SAI TEJA
5	19241A0103	BARISSETTY SHIVA KARTHIK
6	19241A0104	BENDHI VARUN THEJA GOUD
7	19241A0105	BHUKYA VAMSHI
8	19241A0106	BOGE VENKAT ROHITH
9	19241A0107	BONTHA PRANEETHKUMAR
10	19241A0108	CHILUKA RAHUL
11	19241A0109	DANDI KIRAN
12	19241A0110	DAYYA RAGNESH
13	19241A0111	E MANISH GOUD
14	19241A0112	ERRAM SAI PRIYA
15	19241A0113	G DEEPIKA
16	19241A0114	GORANTALA SAI
17	19241A0115	GUGULOTHU SANTHOSH
18	19241A0116	GURIJALA SAI KUMAR
19	19241A0117	GURUJALA SRIDHAR
20	19241A0118	IRUVANTI HEMANTH KUMAR
21	19241A0119	JANGITI VYSHNAVI
22	19241A0120	JARUPLA CHERAN
23	19241A0122	JETTI SREEVANI
24	19241A0123	K SOWMYA
25	19241A0124	KADALI KRISHNASRI SAI
26	19241A0125	KAMAREDDY AKSHAY
27	19241A0126	KATTA SAI KUMAR
28	19241A0127	KOLLURI.TEJASWI
29	19241A0128	KONDAPURAM SRIJA
30	19241A0129	KOTTE VIVEK
31	19241A0130	KRUTHIKA VIJAY PALANGE
32	19241A0131	MADA AKHIL REDDY
33	19241A0132	MADARAM SHRAVAN KUMAR REDDY
34	19241A0133	MADDIGATLA AJAY SAGAR
35	19241A0134	CHANDANA MALPATEL
36	19241A0135	MANDALA CHINNI
37	19241A0136	MIREGILLA VIJAYAKUMAR

38	19241A0137	MOHD OBAID KASHIF
39	19241A0138	NARAPAKA MADHAV KUMAR
40	19241A0139	NIMMALA ARSHITHA
41	19241A0141	P SIDDARTHA
42	19241A0142	PAGIDIPALLY AJAY KUMAR
43	19241A0143	PALLAPU NAVEEN
44	19241A0144	PALLE SANATH KUMAR
45	19241A0145	PANTANGI PRANAY
46	19241A0146	PATIL SWAPNIL
47	19241A0147	POLISETTY SAAHAS
48	19241A0148	S.SAITEJA
49	19241A0149	SAI NEERAJ M
50	19241A0150	SATYA SAI PRASANNA REDDY SOLIPETA
51	19241A0151	SHAIK BILAL
52	19241A0152	SHAIK FIRDOUS AYESHA
53	19241A0153	SOORA VIKAS
54	19241A0154	TELLAM SRI SAI PAVANA ROSHINI
55	19241A0155	THALLAPALLY SWARANYA
56	19241A0156	THUMATI VENKATA VAYUNANDHAN
57	19241A0157	UDUMULA NIKHIL REDDY
58	19241A0158	VELISHALA GAYATHRI
59	19241A0159	VENKATA SIDDHARTHA RAJU VEGESNA
60	19241A0160	YASWANTH KURUVA



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B.Tech Civil Engg. III Yr-II Sem- Section B- GR18 2021 -22

S.No	Reg No	Student Name
1	19241A0161	ABDUL RAHEEM
2	19241A0162	ANEMONI MURALI MANOHAR
3	19241A0163	ASKANY HARISH SAGAR
4	19241A0164	BODLA AKSHITH
5	19241A0165	BURRA VAMSHI KRISHNA
6	19241A0166	CHERLAKOLA AKHILA
7	19241A0167	CHINTAPALLI VIKRAM
8	19241A0168	CHIRRIBOYINA DHANYA
9	19241A0169	D SREE MADHURI
10	19241A0170	GADDAM SAHITHI
11	19241A0171	GAJJALA SUKENDHAR REDDY
12	19241A0172	YASHASWI GANGAVARAM
13	19241A0173	GINDHAM ADITYA KUMAR
14	19241A0174	GUDHETI NARENDAR REDDY
15	19241A0175	GUMMADI SAI PRATEEK REDDY
16	19241A0176	HANMAPUR DHEERAJ GOUD
17	19241A0177	JAVVAJI AISHWARYA
18	19241A0178	JULAPALLY NITHIN RAO
19	19241A0179	K NAVEEN
20	19241A0180	K RAJESHWARI
21	19241A0181	KACHAVA SURENDAR
22	19241A0182	KODATHALA INDU
23	19241A0183	KOTARU SRINIVASA VARAPRASAD
24	19241A0184	MALOTH RAHUL
25	19241A0185	MATURI SATHVIK
26	19241A0186	MD ABDUL MAAJID
27	19241A0187	MEDARI DAYANA
28	19241A0188	NARSINGA SANDEEP
29	19241A0189	PALANATI ROHITH
30	19241A0190	PURALASETTY BHAVANA
31	19241A0191	RODDA MALAVIKA REDDY
32	19241A0192	SAPRAM NAGA SRILOWKYA MUKTHA
33	19241A0193	SHAIK PARVEZ ANSARI
34	19241A0194	SIDDELA THARUN KUMAR
35	19241A0195	TALARI CHANDANA SREE
36	19241A0196	VALLEPU KALYAN

37	19241A0197	VRASHAB PATEL
38	19241A0198	YELLAVULA NARENDER
39	19241A0199	BADDELA SAI THARUN
40	20245A0101	Aamanchi Bowmi
41	20245A0102	Aviraboina Sai Chaithanya
42	20245A0103	Bairy B S Anirudh
43	20245A0104	Daddu Tejasree
44	20245A0105	Dopathi Raviteja
45	20245A0106	Eruventi Niharika
46	20245A0107	Gaddamidi Aanil
47	20245A0108	Gandla Rishik Raj
48	20245A0109	Gone Naveen Kumar
49	20245A0110	Kota Vishal
50	20245A0111	Kummari Mahesh
51	20245A0112	Lakavath Anil
52	20245A0113	Madavaram Rohith
53	20245A0114	Mandala Akshitha
54	20245A0115	M Manjunath
55	20245A0116	Porandla Nagabhushanam
56	20245A0117	Pulishetty Bhavani
57	20245A0118	Racha Kranthi Ranadeer
58	20245A0119	S Manoj Kumar
59	20245A0120	Samudrala Manideep
60	20245A0121	Sangepaga Goutham
61	20245A0122	Sodadasi Rahul
62	20245A0123	Vanga Harshith
63	20245A0124	Choleti Vineetha
64	20245A0125	Gangula Grishma
65	20245A0126	Bollampalli Sai Poojith
66	20245A0127	Pamulapati Sumanth
67	20245A0128	T Sanghamithra
68	20245A0129	Ambeda Akanksha
69	20245A0130	Doppalapudi Ramvineeth Sai
70	20245A0131	Pilly Uday Kiran



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GUIDELINES TO STUDY THE COURSE/SUBJECT

Academic Year : 2021-22

Semester : I

Name of the Program: B.Tech Civil Engineering. Year: III Section: A & B

Course/Subject: SA-II Course Code: GR18A3001

Name of the Faculty: Dr. V. SRINIVASA REDDY & SP RAJU V Dept.: Civil Engineering

Designation: Professor / Assistant Professor

Guidelines to students:

Guidelines to study the course: SA-II

The course helps the students to learn and understand about the design of various structural elements of buildings by using Limit state method. The course makes the students to understand the design procedure of Beams, Slabs, Columns, Footings, Stairs and Canopy. It also makes the students to understand the design of beams and slabs for Limit state of serviceability.

The students should have the prerequisites:

- Knowledge of Concrete and Steel.
- Knowledge of various structural elements of Buildings.

Where will this subject help?

- Useful in knowing the difference between Limit State method and Working Stress method.
- Useful in determining the area of steel, spacing between the bars and size of elements such as beams, slabs, footings, stairs and canopy for the given moment/Loads.
- Useful in determining the capacity of structural elements for the given size of section and area of steel.

Course Design and Delivery System (CDD):

- The Course syllabus is written into number of learning objectives and outcomes.
- These learning objectives and outcomes will be achieved through lectures, assessments, assignments, experiments in the laboratory, projects, seminars, presentations, etc.
- Every student will be given an assessment plan, criteria for assessment, scheme of evaluation and grading method.

- The Learning Process will be carried out through assessments of Knowledge, Skills and Attitude by various methods and the students will be given guidance to refer to the text books, reference books, journals, etc.

The faculty be able to –

- Understand the principles of Learning
- Understand the psychology of students
- Develop instructional objectives for a given topic
- Prepare course, unit and lesson plans
- Understand different methods of teaching and learning
- Use appropriate teaching and learning aids
- Plan and deliver lectures effectively
- Provide feedback to students using various methods of Assessments and tools of Evaluation
- Act as a guide, advisor, counselor, facilitator, motivator and not just as a teacher alone

Signature of HOD

Signature of faculty

Date:

Date:



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COURSE SCHEDULE

Academic Year : 2021-22

Semester : I

Name of the Program: B.Tech Civil Engineering Year: III Section: A

Course/Subject: SA-II Course Code: GR18A3001

Name of the Faculty: Dr. . V. SRINIVASA REDDY & SP RAJU V Dept.: Civil Engineering

Designation: Professor / Assistant Professor

The Schedule for the whole Course / Subject is:

S. No.	Description	Duration (Date)		Total No. of Periods
		From	To	
1.	UNIT-I	16/08/21	04/09/21	8
2.	UNIT-II	07/09/21	21/09/21	13
3.	UNIT-III	05/10/21	23/10/21	13
4.	UNIT-IV	26/10/21	06/11/21	8
5.	UNIT-V	09/11/21	04/12/21	13

Total No. of Instructional periods available for the course: 55 Hours / Periods

Signature of H.O.D

Signature of faculty

Date :

Date:



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COURSE SCHEDULE

Academic Year : 2021-22

Semester : I

Name of the Program: B.Tech Civil Engineering Year: III Section: B

Course/Subject: SA-II Course Code: GR18A3001

Name of the Faculty: Dr. V. SRINIVASA REDDY & SP RAJU V Dept.: Civil Engineering

Designation: Professor / Assistant Professor

The Schedule for the whole Course / Subject is:

S. No.	Description	Duration (Date)		Total No. of Periods
		From	To	
1.	UNIT-I	16/08/21	04/09/21	8
2.	UNIT-II	07/09/21	21/09/21	13
3.	UNIT-III	05/10/21	23/10/21	13
4.	UNIT-IV	26/10/21	06/11/21	8
5.	UNIT-V	09/11/21	04/12/21	13

Total No. of Instructional periods available for the course: 55 Hours / Periods

Signature of H.O.D

Signature of faculty

Date :

Date:



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**SCHEDULE OF INSTRUCTIONS
COURSE PLAN**

Academic Year : 2021-22

Semester : I

Name of the Program: B.Tech CIVIL Year::III Section: A

Course/Subject: STRUCTURAL ANALYSIS-II Course Code:GR18A3001

Name of the Faculty: SP RAJU Dept.: CIVIL ENGINEERING

Designation: ASSISTANT PROFESSOR

Unit	Lesson No.	Date	No of Period	Topics / Sub - Topics	Objective & Outcome Nos.	References (Text Book, Journal...) Page Nos.: ____to	Bloom's Knowledge levels
1	1.	16/08/21	1	Introduction –determinate structural analysis	COB-1 CO-1	Vazirani&Ratwani (pg.1-2) vol 2	Level 2
	2.	19/08/21	1	Indeterminate structural analysis	COB-1 CO-1	Vazirani &Ratwani (pg-3 - 11) vol 2	Level 2
	3.	21/08/21	1	Indeterminate structural analysis	COB-1 CO-1	Vazirani &Ratwani (pg. 3 -11) vol 2	Level 2
	4.	23/08/21	1	Application Of Moment distribution method for symmetrical frames	COB-1 CO-1	Vazirani &Ratwani (pg. 12 -31) vol 2	Level 2
	5.	26/08/21	1	Application of Moment distribution method to frames with inclined members	COB-1 CO-1	Vazirani &Ratwani (pg. 12 -31) vol 2	Level 2
	6	28/08/21	1	Application of Moment distribution method to frames with inclined members	COB-1 CO-1	Vazirani &Ratwani (pg. 12 -31) vol 2	Level 2
	7	28/08/21	1	Application of Moment distribution method to frames with inclined members	COB-1 CO-1	Vazirani &Ratwani (pg. 12 -31) vol 2	Level 2
	8	02/09/21	1	Application of Moment distribution method to frames with inclined members	COB-1 CO-1	Vazirani &Ratwani (pg. 12 -31) vol 2	Level 2

	9	02/09/21	1	Application of Moment distribution method to frames with inclined members	COB-1 CO-1	Vazirani & Ratwani (pg. 150) vol 2	Levels 2&3
	10	04/09/21	1	Application of Moment distribution method for antisymmetrical frames	COC-1 CO-1	Vazirani & Ratwani (pg. 213-258) vol 2	Levels 2&3
	11	04/09/21	1	Application of Moment distribution method for antisymmetrical frames	COB-1 CO-1	Vazirani & Ratwani (pg. 213-258) vol 2	Levels 2&3
2	12	07/09/21	1	Kani's method of analysis for continuous beams	COB-2 CO-2	Dr.Vaidyanathan (pg.48) Vol-1	Level 2
	13	07/09/21	1	Kani's method of analysis for continuous beams	COB-2 CO-2,3	Dr.Vaidyanathan (pg.48)Vol-1	Level 2
	14	08/09/21	1	Kani's method of analysis for continuous beams	COB-2 CO-2,3,4	Vazirani & Ratwani (pg.338 -345) vol 2	Level 2
	15	08/09/21	1	Kani's method of analysis for continuous beams	COB-2 CO-2,3,4	Dr.Vaidyanathan (pg.80 -99) vol 1	Level 2
	16	09/09/21	1	Kani's method of analysis for continuous beams with support settlement	COB-2 CO-2,3,4	Vazirani & Ratwani (pg.345 -358) vol 2	Level 3
	17	09/09/21	1	Kani's method of analysis for continuous beams with support settlement	COB-2 CO-2,3,4	Dr.Vaidyanathan (pg.141 -176) vol 1	Level 3
	18	10/09/21	1	Kani's method of analysis for continuous beams with support settlement	COB-2 CO-2,3,4	Vazirani & Ratwani (pg.415-422) vol 2	Level 3
	19	14/09/21	1	Kani's method of analysis for frames without lateral translation of joints	COB-2 CO-2,3,4	Dr.Vaidyanathan (pg.176 -213) vol 1	Level 3
	20	14/09/21	1	Kani's method of analysis for frames without lateral translation of joints	COB-2 CO-2,3,4	Vazirani & Ratwani (pg.437-452) vol 2	Level 3
	21	18/09/21	1	Kani's method of analysis for frames without lateral translation of joints	COB-2 CO-2,3,4	Dr.Vaidyanathan (pg.405 -418) vol 1	Level 3
	22	18/09/21	1	Kani's method of analysis for frames with lateral translation of joints	COB-2 CO-2,3,4	Dr.Vaidyanathan (pg.419 -423) vol2	Level 3
	23	21/09/21	1	Kani's method of analysis for frames with lateral translation of joints	COB-2 CO-2,3,4	Dr.Vaidyanathan (pg.423 -430) vol2	Level 3
	24	21/09/21	1	Kani's method of analysis for frames with lateral translation of joints	COB-2 CO-2,3,4	Dr.Vaidyanathan (pg.430 -440) vol2	Level 3
	25	05/10/21	1	Introduction on approximate methods	COB-3 ,CO-5	Dr.Muthu (pg.382-385) Vol 2	Level 3
	26	05/10/21	1	Cantilever method	COB-3,CO-	Dr.Muthu (pg.385-389) Vol 2	Level 3
	27	09/10/21	1	Cantilever method	COB-3,CO-5	Dr.Muthu (pg.389-440) Vol 2	Level 3

3	28	09/10/21	1	Cantilever method	COB-3,CO-5	Dr.Muthu (pg.389-440) Vol 2	Level 3
	29	15/10/21	1	Portal method	COB-3,CO-5	Dr.Muthu (pg.440-450) Vol 2	Level 3
	30	15/10/21	1	Portal method	COB-3,CO-5	Dr.Muthu (pg.440-450) Vol 2	Level 3
	31	19/10/21	1	Portal method	COB-3,CO-5	Dr.Muthu (pg.472-517) Vol 2	Level 3
	32	19/10/21	1	Substitute frame method	COB-3,CO-5	Dr.Muthu (pg.472-517) Vol 2	Level 3
	33	23/10/21	1	Substitute frame method	COB-3,CO-5	Dr.Muthu (pg.517-527) Vol 2	Level 3
	34	23/10/21	1	Substitute frame method	COB-3,CO-5	Dr.Muthu (pg.517-527) Vol 2	Level 3
4	35	26/10/21	1	Introduction -Different approaches to Matrix methods of analysis	COB-4,CO-5	Dr.Vaidyanathan (pg.269-270)vol2	Level 3
	36	26/10/21	1	Static and Kinematic indeterminacy	COB-4,CO-5	Dr.Vaidyanathan (pg.271) vol2	Level 3
	37	30/10/21	1	Flexibility matrix methods for beams	COB-4,CO-4	Dr.Vaidyanathan (pg.271-287) vol2	Level 3
	38	30/10/21	1	Flexibility matrix methods for beams	COB-4CO4	Dr.Vaidyanathan (pg.288-289) vol2	Level 3
	39	02/11/21	1	Flexibility matrix methods for simple frames	COB-4,CO-5	Dr.Vaidyanathan (pg.290-292) vol2	Level 3
	40	02/11/21	1	Flexibility matrix methods for simple frames	COB-4,CO-4	Dr.Vaidyanathan (pg.292-304) vol2	Level 3
	41	04/11/21	1	Stiffness matrix methods for beams	COB-4,CO-4	Dr.Vaidyanathan (pg.305-314) vol2	Level 3
	42	06/11/21	1	Stiffness matrix methods for beams	COB-4,CO-5	Dr.Vaidyanathan (pg.305-314) vol2	Level 3
43	06/11/21	1	Stiffness matrix methods for simple frames	COB-4,CO4	Dr.Vaidyanathan (pg.315-321) vol2	Level 3	
5	44	09/11/21	1	Introduction for plastic analysis	COB-5,CO-5	B.C.Punmai (pg.no.557-563)	Level 3
	45	10/11/21	1	Ductility- Ultimate Load	COB-5,CO-4	B.C.Punmai (pg.no.563-574)	Level 3
	46	13/11/21	1	Plastic hinges and Shape factors for various sections	COB-5,CO-5	B.C.Punmai (pg.no.566-573)	Level 3
	47	16/11/21	1	moment-curvature relationships	COB-5,CO-4	B.C.Punmai. (pg.no.566-573)	Level 3
	48	20/11/21	1	Upper and Lower bound theorems	COB-5,CO-5	B.C.Punmai. (pg.no.576-578)	Level 3
	49	23/11/21	1	Plastic analysis of indeterminate beams	COB-5,CO-5	B.C.Punmai (pg.no.576-578).	Level 3

	50	27/11/21	1	Plastic analysis of propped cantilever, Fixed beam, continuous beam	COB-5,CO-4	B.C.Punmai. (pg.no.576-578).	Level 3
	51	30/11/21	1	is of propped cantilever, Fixed beam beam	COB-5,CO-4	B.C.Punmai. (pg.no.575-576).	Level 3
	52	2/12/21	1	Portal survey mechanics	COB-5,CO-4	B.C.Punmai. (pg.no.578-581).	Level 3
	53	4/12/21	1	Portal survey mechanics	COB-5,CO-5	B.C.Punmai. (pg.no.578-581).	Level 3

Signature of HOD
Date:

Signature of faculty
Date:



**Gokaraju Rangaraju Institute of Engineering and Technology
(Autonomous)**

Bachupally, Kukatpally, Hyderabad – 500 090. (040) 6686 4440

**SCHEDULE OF INSTRUCTIONS
COURSE PLAN**

Academic Year : 2021-22

Semester : I

Name of the Program: B.Tech CIVIL Year::III Section:B

Course/Subject: STRUCTURAL ANALYSIS-II Course Code:GR18A3001

Name of the Faculty: SP RAJU Dept.: CIVIL ENGINEERING

Designation: ASSISTANT PROFESSOR

Unit	Lesson No.	Date	No of Period	Topics / Sub - Topics	Objective & Outcome Nos.	References (Text Book, Journal...) Page Nos.: ____to	Bloom's Knowledge levels
1	1.	16/08/21	1	Introduction –determinate structural analysis	COB-1 CO-1	Vazirani&Ratwani (pg.1-2) vol 2	Level 2
	2.	19/08/21	1	Indeterminate structural analysis	COB-1 CO-1	Vazirani &Ratwani (pg-3 - 11) vol 2	Level 2
	3.	21/08/21	1	Indeterminate structural analysis	COB-1 CO-1	Vazirani &Ratwani (pg. 3 -11) vol 2	Level 2
	4.	23/08/21	1	Application Of Moment distribution method for symmetrical frames	COB-1 CO-1	Vazirani &Ratwani (pg. 12 -31) vol 2	Level 2
	5.	26/08/21	1	Application of Moment distribution method to frames with inclined members	COB-1 CO-1	Vazirani &Ratwani (pg. 12 -31) vol 2	Level 2
	6	28/08/21	1	Application of Moment distribution method to frames with inclined members	COB-1 CO-1	Vazirani &Ratwani (pg. 12 -31) vol 2	Level 2
	7	28/08/21	1	Application of Moment distribution method to frames with inclined members	COB-1 CO-1	Vazirani &Ratwani (pg. 12 -31) vol 2	Level 2
	8	02/09/21	1	Application of Moment distribution method to frames with inclined members	COB-1 CO-1	Vazirani &Ratwani (pg. 12 -31) vol 2	Level 2

	9	02/09/21	1	Application of Moment distribution method to frames with inclined members	COB-1 CO-1	Vazirani & Ratwani (pg. 150) vol 2	Levels 2&3
	10	04/09/21	1	Application of Moment distribution method for antisymmetrical frames	COC-1 CO-1	Vazirani & Ratwani (pg. 213-258) vol 2	Levels 2&3
	11	04/09/21	1	Application of Moment distribution method for antisymmetrical frames	COB-1 CO-1	Vazirani & Ratwani (pg. 213-258) vol 2	Levels 2&3
2	12	07/09/21	1	Kani's method of analysis for continuous beams	COB-2 CO-2	Dr.Vaidyanathan (pg.48) Vol-1	Level 2
	13	07/09/21	1	Kani's method of analysis for continuous beams	COB-2 CO-2,3	Dr.Vaidyanathan (pg.48)Vol-1	Level 2
	14	08/09/21	1	Kani's method of analysis for continuous beams	COB-2 CO-2,3,4	Vazirani & Ratwani (pg.338 -345) vol 2	Level 2
	15	08/09/21	1	Kani's method of analysis for continuous beams	COB-2 CO-2,3,4	Dr.Vaidyanathan (pg.80 -99) vol 1	Level 2
	16	09/09/21	1	Kani's method of analysis for continuous beams with support settlement	COB-2 CO-2,3,4	Vazirani & Ratwani (pg.345 -358) vol 2	Level 3
	17	09/09/21	1	Kani's method of analysis for continuous beams with support settlement	COB-2 CO-2,3,4	Dr.Vaidyanathan (pg.141 -176) vol 1	Level 3
	18	10/09/21	1	Kani's method of analysis for continuous beams with support settlement	COB-2 CO-2,3,4	Vazirani & Ratwani (pg.415-422) vol 2	Level 3
	19	14/09/21	1	Kani's method of analysis for frames without lateral translation of joints	COB-2 CO-2,3,4	Dr.Vaidyanathan (pg.176 -213) vol 1	Level 3
	20	14/09/21	1	Kani's method of analysis for frames without lateral translation of joints	COB-2 CO-2,3,4	Vazirani & Ratwani (pg.437-452) vol 2	Level 3
	21	18/09/21	1	Kani's method of analysis for frames without lateral translation of joints	COB-2 CO-2,3,4	Dr.Vaidyanathan (pg.405 -418) vol 1	Level 3
	22	18/09/21	1	Kani's method of analysis for frames with lateral translation of joints	COB-2 CO-2,3,4	Dr.Vaidyanathan (pg.419 -423) vol2	Level 3
	23	21/09/21	1	Kani's method of analysis for frames with lateral translation of joints	COB-2 CO-2,3,4	Dr.Vaidyanathan (pg.423 -430) vol2	Level 3
	24	21/09/21	1	Kani's method of analysis for frames with lateral translation of joints	COB-2 CO-2,3,4	Dr.Vaidyanathan (pg.430 -440) vol2	Level 3
	25	05/10/21	1	Introduction on approximate methods	COB-3 ,CO-5	Dr.Muthu (pg.382-385) Vol 2	Level 3
	26	05/10/21	1	Cantilever method	COB-3,CO-	Dr.Muthu (pg.385-389) Vol 2	Level 3
	27	09/10/21	1	Cantilever method	COB-3,CO-5	Dr.Muthu (pg.389-440) Vol 2	Level 3

3	28	09/10/21	1	Cantilever method	COB-3,CO-5	Dr.Muthu (pg.389-440) Vol 2	Level 3
	29	15/10/21	1	Portal method	COB-3,CO-5	Dr.Muthu (pg.440-450) Vol 2	Level 3
	30	15/10/21	1	Portal method	COB-3,CO-5	Dr.Muthu (pg.440-450) Vol 2	Level 3
	31	19/10/21	1	Portal method	COB-3,CO-5	Dr.Muthu (pg.472-517) Vol 2	Level 3
	32	19/10/21	1	Substitute frame method	COB-3,CO-5	Dr.Muthu (pg.472-517) Vol 2	Level 3
	33	23/10/21	1	Substitute frame method	COB-3,CO-5	Dr.Muthu (pg.517-527) Vol 2	Level 3
	34	23/10/21	1	Substitute frame method	COB-3,CO-5	Dr.Muthu (pg.517-527) Vol 2	Level 3
4	35	26/10/21	1	Introduction -Different approaches to Matrix methods of analysis	COB-4,CO-5	Dr.Vaidyanathan (pg.269-270)vol2	Level 3
	36	26/10/21	1	Static and Kinematic indeterminacy	COB-4,CO-5	Dr.Vaidyanathan (pg.271) vol2	Level 3
	37	30/10/21	1	Flexibility matrix methods for beams	COB-4,CO-4	Dr.Vaidyanathan (pg.271-287) vol2	Level 3
	38	30/10/21	1	Flexibility matrix methods for beams	COB-4CO4	Dr.Vaidyanathan (pg.288-289) vol2	Level 3
	39	02/11/21	1	Flexibility matrix methods for simple frames	COB-4,CO-5	Dr.Vaidyanathan (pg.290-292) vol2	Level 3
	40	02/11/21	1	Flexibility matrix methods for simple frames	COB-4,CO-4	Dr.Vaidyanathan (pg.292-304) vol2	Level 3
	41	04/11/21	1	Stiffness matrix methods for beams	COB-4,CO-4	Dr.Vaidyanathan (pg.305-314) vol2	Level 3
	42	06/11/21	1	Stiffness matrix methods for beams	COB-4,CO-5	Dr.Vaidyanathan (pg.305-314) vol2	Level 3
43	06/11/21	1	Stiffness matrix methods for simple frames	COB-4,CO4	Dr.Vaidyanathan (pg.315-321) vol2	Level 3	
5	44	09/11/21	1	Introduction for plastic analysis	COB-5,CO-5	B.C.Punmai (pg.no.557-563)	Level 3
	45	10/11/21	1	Ductility- Ultimate Load	COB-5,CO-4	B.C.Punmai (pg.no.563-574)	Level 3
	46	13/11/21	1	Plastic hinges and Shape factors for various sections	COB-5,CO-5	B.C.Punmai (pg.no.566-573)	Level 3
	47	16/11/21	1	moment-curvature relationships	COB-5,CO-4	B.C.Punmai. (pg.no.566-573)	Level 3
	48	20/11/21	1	Upper and Lower bound theorems	COB-5,CO-5	B.C.Punmai. (pg.no.576-578)	Level 3
	49	23/11/21	1	Plastic analysis of indeterminate beams	COB-5,CO-5	B.C.Punmai (pg.no.576-578).	Level 3

	50	27/11/21	1	Plastic analysis of propped cantilever, Fixed beam, continuous beam	COB-5,CO-4	B.C.Punmai. (pg.no.576-578).	Level 3
	51	30/11/21	1	is of propped cantilever, Fixed beam beam	COB-5,CO-4	B.C.Punmai. (pg.no.575-576).	Level 3
	52	2/12/21	1	Portal survey mechanics	COB-5,CO-4	B.C.Punmai. (pg.no.578-581).	Level 3
	53	4/12/21	1	Portal survey mechanics	COB-5,CO-5	B.C.Punmai. (pg.no.578-581).	Level 3

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**Gokaraju Rangaraju Institute of Engineering and Technology
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Bachupally, Kukatpally, Hyderabad – 500 090. (040) 6686 4440

**SCHEDULE OF INSTRUCTIONS
COURSE PLAN**

Academic Year : 2021-22

Semester : I

Name of the Program: B.Tech CIVIL Year::III Section: A

Course/Subject: STRUCTURAL ANALYSIS-II Course Code:GR18A3001

Name of the Faculty: SP RAJU Dept.: CIVIL ENGINEERING
Designation: ASSISTANT PROFESSOR

Unit	Lesson No.	Date	No of Period	Topics / Sub - Topics	Objective & Outcome Nos.	References (Text Book, Journal...) Page Nos.: ____to ____	Bloom's Knowledge levels
1	1.	16/08/21	1	Introduction –determinate structural analysis	COB-1 CO-1	Vazirani&Ratwani (pg.1-2) vol 2	Level 2
	2.	19/08/21	1	Indeterminate structural analysis	COB-1 CO-1	Vazirani &Ratwani (pg-3 -11) vol 2	Level 2
	3.	21/08/21	1	Indeterminate structural analysis	COB-1 CO-1	Vazirani &Ratwani (pg. 3 -11) vol 2	Level 2
	4.	23/08/21	1	Application Of Moment distribution method for symmetrical frames	COB-1 CO-1	Vazirani &Ratwani (pg. 12 -31) vol 2	Level 2
	5.	26/08/21	1	Application of Moment distribution method to frames with inclined members	COB-1 CO-1	Vazirani &Ratwani (pg. 12 -31) vol 2	Level 2
	6	28/08/21	1	Application of Moment distribution method to frames with inclined members	COB-1 CO-1	Vazirani &Ratwani (pg. 12 -31) vol 2	Level 2
	7	28/08/21	1	Application of Moment distribution method to frames with inclined members	COB-1 CO-1	Vazirani &Ratwani (pg. 12 -31) vol 2	Level 2
	8	02/09/21	1	Application of Moment distribution method to frames with inclined members	COB-1 CO-1	Vazirani &Ratwani (pg. 12 -31) vol 2	Level 2
	9	02/09/21	1	Application of Moment distribution method	COB-1 CO-1	Vazirani &Ratwani (pg. 150) vol 2	Levels 2&3

				to frames with inclined members			
	10	04/09/21	1	Application of Moment distribution method for antisymmetrical frames	COC-1 CO-1	Vazirani & Ratwani (pg. 213-258) vol 2	Levels 2&3
	11	04/09/21	1	Application of Moment distribution method for antisymmetrical frames	COB-1 CO-1	Vazirani & Ratwani (pg. 213-258) vol 2	Levels 2&3
2	12	07/09/21	1	Kani's method of analysis for continuous beams	COB-2 CO-2	Dr. Vaidyanathan (pg.48) Vol-1	Level 2
	13	07/09/21	1	Kani's method of analysis for continuous beams	COB-2 CO-2,3	Dr. Vaidyanathan (pg.48) Vol-1	Level 2
	14	08/09/21	1	Kani's method of analysis for continuous beams	COB-2 CO-2,3,4	Vazirani & Ratwani (pg.338 -345) vol 2	Level 2
	15	08/09/21	1	Kani's method of analysis for continuous beams	COB-2 CO-2,3,4	Dr. Vaidyanathan (pg.80 -99) vol 1	Level 2
	16	09/09/21	1	Kani's method of analysis for continuous beams with support settlement	COB-2 CO-2,3,4	Vazirani & Ratwani (pg.345 -358) vol 2	Level 3
	17	09/09/21	1	Kani's method of analysis for continuous beams with support settlement	COB-2 CO-2,3,4	Dr. Vaidyanathan (pg.141 -176) vol 1	Level 3
	18	10/09/21	1	Kani's method of analysis for continuous beams with support settlement	COB-2 CO-2,3,4	Vazirani & Ratwani (pg.415-422) vol 2	Level 3
	19	14/09/21	1	Kani's method of analysis for frames without lateral translation of joints	COB-2 CO-2,3,4	Dr. Vaidyanathan (pg.176 -213) vol 1	Level 3
	20	14/09/21	1	Kani's method of analysis for frames without lateral translation of joints	COB-2 CO-2,3,4	Vazirani & Ratwani (pg.437-452) vol 2	Level 3
	21	18/09/21	1	Kani's method of analysis for frames without lateral translation of joints	COB-2 CO-2,3,4	Dr. Vaidyanathan (pg.405 -418) vol 1	Level 3
	22	18/09/21	1	Kani's method of analysis for frames with lateral translation of joints	COB-2 CO-2,3,4	Dr. Vaidyanathan (pg.419 -423) vol2	Level 3
	23	21/09/21	1	Kani's method of analysis for frames with lateral translation of joints	COB-2 CO-2,3,4	Dr. Vaidyanathan (pg.423 -430) vol2	Level 3
24	21/09/21	1	Kani's method of analysis for frames with lateral translation of joints	COB-2 CO-2,3,4	Dr. Vaidyanathan (pg.430 -440) vol2	Level 3	
3	25	05/10/21	1	Introduction on approximate method	OB-3 ,CO-	Dr. Muthu (pg.382-385) Vol 2	Level 3
	26	05/10/21	1	Cantilever method	COB-3,C	Dr. Muthu (pg.385-389) Vol 2	Level 3
	27	09/10/21	1	Cantilever method	COB-3,CO-	Dr. Muthu (pg.389-440) Vol 2	Level 3
	28	09/10/21	1	Cantilever method	COB-3,CO-	Dr. Muthu (pg.389-440) Vol 2	Level 3

	29	15/10/2 1	1	Portal method	COB-3,CO-	Dr.Muthu (pg.440-450) Vol 2	Level 3
	30	15/10/2 1	1	Portal method	COB-3,CO-	Dr.Muthu (pg.440-450) Vol 2	Level 3
	31	19/10/2 1	1	Portal method	COB-3,CO-	Dr.Muthu (pg.472-517) Vol 2	Level 3
	32	19/10/2 1	1	Substitute frame method	COB-3,CO-	Dr.Muthu (pg.472-517) Vol 2	Level 3
	33	23/10/21	1	Substitute frame method	COB-3,CO-	Dr.Muthu (pg.517-527) Vol 2	Level 3
	34	23/10/21	1	Substitute frame method	COB-3,CO-	Dr.Muthu (pg.517-527) Vol 2	Level 3
4	35	26/10/2 1	1	Introduction -Different approaches to Matrix methods of analysis	COB-4,CO	Dr. Vaidyanathan (pg.269-270)vol2	Level 3
	36	26/10/2 1	1	Static and Kinematic indeterminacy	COB-4,CO	Dr. Vaidyanathan (pg.271) vol2	Level 3
	37	30/10/2 1	1	Flexibility matrix methods for beams	COB-4,CO-	Dr. Vaidyanathan (pg.271-287) vol2	Level 3
	38	30/10/2 1	1	Flexibility matrix methods for beams	COB-4CO	Dr. Vaidyanathan (pg.288-289) vol2	Level 3
	39	02/11/2 1	1	Flexibility matrix methods for simple frames	COB-4,CO	Dr. Vaidyanathan (pg.290-292) vol2	Level 3
	40	02/11/2 1	1	Flexibility matrix methods for simple frames	COB-4,CO-	Dr. Vaidyanathan (pg.292-304) vol2	Level 3
	41	04/11/2 1	1	Stiffness matrix methods for beams	COB-4,CO-	Dr. Vaidyanathan (pg.305-314) vol2	Level 3
	42	06/11/2 1	1	Stiffness matrix methods for beams	COB-4,CO-	Dr. Vaidyanathan (pg.305-314) vol2	Level 3
	43	06/11/2 1	1	Stiffness matrix methods for simple frames	COB-4,CO-	Dr. Vaidyanathan (pg.315-321) vol2	Level 3
5	44	09/11/2 1	1	Introduction for plastic analysis	COB-5,CO	B.C.Punmai (pg.no.557-563)	Level 3
	45	10/11/2 1	1	Ductility- Ultimate Load	COB-5,CO	B.C.Punmai (pg.no.563-574)	Level 3
	46	13/11/2 1	1	Plastic hinges and Shape factors for various sections	COB-5,CO-	B.C.Punmai (pg.no.566-573)	Level 3
	47	16/11/2 1	1	moment-curvature relationships	COB-5,CO-	B.C.Punmai. (pg.no.566-573)	Level 3
	48	20/11/2 1	1	Upper and Lower bound theorems	COB-5,CO-	B.C.Punmai. (pg.no.576-578)	Level 3

	49	23/11/21	1	Plastic analysis of indeterminate beams	COB-5,CO-	B.C.Punmai (pg.no.576-578).	Level 3
	50	27/11/21	1	Plastic analysis of propped cantilever, Fixed beam, continuous beam	COB-5,CO-	B.C.Punmai. (pg.no.576-578).	Level 3
	51	30/11/21	1	Analysis of propped cantilever, Fixed beam	COB-5,CO-	B.C.Punmai. (pg.no.575-576).	Level 3
	52	2/12/21	1	Portal survey mechanics	COB-5,CO-	B.C.Punmai. (pg.no.578-581).	Level 3
	53	4/12/21	1	Portal survey mechanics	COB-5,CO-	B.C.Punmai. (pg.no.578-581).	Level 3

Signature of HOD
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Signature of faculty
Date:



**Gokaraju Rangaraju Institute of Engineering and Technology
(Autonomous)
Bachupally, Kukatpally, Hyderabad – 500 090. (040) 6686 4440**

SCHEDULE OF INSTRUCTIONS

UNIT PLAN

Academic Year : 2021-22

Semester : I

Name of the Program: B.Tech CIVIL Year::III

Course/Subject: STRUCTURAL ANALYSIS

Name of the Faculty: V SRINIVASA REDDY

Designation: PROFESSOR

UNIT NO.:1

Section: A

Course Code: GR18A3001

Dept.: CIVIL ENGINEERING

Lesson No.	Date	No. of Periods	Topics / Sub - Topics	Objective & Outcome Nos.	References (Text Book, Journal...) Page Nos.: ____to	Bloom's Knowledge Levels
1.	16/08/21	1	Introduction –determinate structural analysis	COB-2 CO-2	Dr.Vaidyanathan (pg.48) Vol-1	Level 2
2.	19/08/21	1	Indeterminate structural analysis	COB-2 CO-2,3	Dr.Vaidyanathan (pg.48)Vol-1	Level 2
3.	21/08/21	1	Indeterminate structural analysis	COB-2 CO-2,3,4	Vazirani &Ratwani (pg.338 -345) vol 2	Level 2
4.	23/08/21	1	Application Of Moment distribution method for symmetrical frames	COB-2 CO-2,3,4	Dr.Vaidyanathan (pg.80 -99) vol 1	Level 2
5.	26/08/21	1	Application of Moment distribution method to frames with inclined members	COB-2 CO-2,3,4	Vazirani & Ratwani (pg.345 -358) vol 2	Level 3
6.	28/08/21	1	Application of Moment distribution method to frames with inclined members	COB-2 CO-2,3,4	Dr.Vaidyanathan (pg.141 -176) vol 1	Level 3
7	28/08/21	1	Application of Moment distribution method to frames with inclined members	COB-2 CO-2,3,4	Vazirani & Ratwani (pg.415-422) vol 2	Level 3
8	02/09/21	1	Application of Moment distribution method to frames with inclined members	COB-2 CO-2,3,4	Dr.Vaidyanathan (pg.176 -213) vol 1	Level 3
9	02/09/21	1	Application of Moment distribution method to frames with inclined members	COB-2 CO-2,3,4	Vazirani & Ratwani (pg.437-452) vol 2	Level 3
10	04/09/21	1	Application of Moment distribution method for antisymmetrical frames	COB-2 CO-2,3,4	Dr.Vaidyanathan (pg.405 -418) vol 1	Level 3
11	04/09/21	1	Application of Moment distribution method for antisymmetrical frames	COB-2 CO-2,3,4	Dr.Vaidyanathan (pg.419 -423) vol2	Level 3

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**Gokaraju Rangaraju Institute of Engineering and Technology
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Bachupally, Kukatpally, Hyderabad – 500 090. (040) 6686 4440**

SCHEDULE OF INSTRUCTIONS

UNIT PLAN

Academic Year : 2021-22

Semester : I

Name of the Program: B.Tech CIVIL Year::III

Course/Subject: STRUCTURAL ANALYSIS-II

Name of the Faculty: V SRINIVASA REDDY

Designation: PROFESSOR

UNIT NO.:1

Section: B

Course Code: GR18A3001

Dept.: CIVIL ENGINEERING

Lesson No.	Date	No. of Periods	Topics / Sub - Topics	Objective & Outcome Nos.	References (Text Book, Journal...) Page Nos.:_____to	Bloom's Knowledge Levels
1.	16/08/21	1	Introduction –determinate structural analysis	COB-2 CO-2	Dr.Vaidyanathan (pg.48) Vol-1	Level 2
2.	19/08/21	1	Indeterminate structural analysis	COB-2 CO-2,3	Dr.Vaidyanathan (pg.48)Vol-1	Level 2
3.	21/08/21	1	Indeterminate structural analysis	COB-2 CO-2,3,4	Vazirani &Ratwani (pg.338 -345) vol 2	Level 2
4.	23/08/21	1	Application Of Moment distribution method for symmetrical frames	COB-2 CO-2,3,4	Dr.Vaidyanathan (pg.80 -99) vol 1	Level 2
5.	26/08/21	1	Application of Moment distribution method to frames with inclined members	COB-2 CO-2,3,4	Vazirani & Ratwani (pg.345 -358) vol 2	Level 3
6.	28/08/21	1	Application of Moment distribution method to frames with inclined members	COB-2 CO-2,3,4	Dr.Vaidyanathan (pg.141 -176) vol 1	Level 3
7	28/08/21	1	Application of Moment distribution method to frames with inclined members	COB-2 CO-2,3,4	Vazirani & Ratwani (pg.415-422) vol 2	Level 3
8	02/09/21	1	Application of Moment distribution method to frames with inclined members	COB-2 CO-2,3,4	Dr.Vaidyanathan (pg.176 -213) vol 1	Level 3
9	02/09/21	1	Application of Moment distribution method to frames with inclined members	COB-2 CO-2,3,4	Vazirani & Ratwani (pg.437-452) vol 2	Level 3
10	04/09/21	1	Application of Moment distribution method for antisymmetrical frames	COB-2 CO-2,3,4	Dr.Vaidyanathan (pg.405 -418) vol 1	Level 3
11	04/09/21	1	Application of Moment distribution method for antisymmetrical frames	COB-2 CO-2,3,4	Dr.Vaidyanathan (pg.419 -423) vol2	Level 3

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**Gokaraju Rangaraju Institute of Engineering and Technology
(Autonomous)
Bachupally, Kukatpally, Hyderabad – 500 090. (040) 6686 4440**

SCHEDULE OF INSTRUCTIONS

UNIT PLAN

Academic Year : 2021-22

Semester : I

Name of the Program: B.Tech CIVIL Year::III

Course/Subject: STRUCTURAL ANALYSIS-II

Name of the Faculty: V SRINIVASA REDDY

Designation: PROFESSOR

UNIT NO.:2

Section: A

Course Code: GR18A3001

Dept.: CIVIL ENGINEERING

Lesson No.	Date	No. of Periods	Topics / Sub - Topics	Objective & Outcome Nos.	References (Text Book, Journal...) Page Nos.: ____ to	Bloom's Knowledge Levels
12	07/09/21	1	Kani's method of analysis for continuous beams	COB-2 CO-2	Dr. Vaidyanathan (pg.48) Vol-1	Level 2
13	07/09/21	1	Kani's method of analysis for continuous beams	COB-2 CO-2,3	Dr. Vaidyanathan (pg.48) Vol-1	Level 2
14	08/09/21	1	Kani's method of analysis for continuous beams	COB-2 CO-2,3,4	Vazirani & Ratwani (pg.338 -345) vol 2	Level 2
15	08/09/21	1	Kani's method of analysis for continuous beams	COB-2 CO-2,3,4	Dr. Vaidyanathan (pg.80 -99) vol 1	Level 2
16	09/09/21	1	Kani's method of analysis for continuous beams with support settlement	COB-2 CO-2,3,4	Vazirani & Ratwani (pg.345 -358) vol 2	Level 3
17	09/09/21	1	Kani's method of analysis for continuous beams with support settlement	COB-2 CO-2,3,4	Dr. Vaidyanathan (pg.141 -176) vol 1	Level 3
18	10/09/21	1	Kani's method of analysis for continuous beams with support settlement	COB-2 CO-2,3,4	Vazirani & Ratwani (pg.415-422) vol 2	Level 3
19	14/09/21	1	Kani's method of analysis for frames without lateral translation of joints	COB-2 CO-2,3,4	Dr. Vaidyanathan (pg.176 -213) vol 1	Level 3
20	14/09/21	1	Kani's method of analysis for frames without lateral translation of joints	COB-2 CO-2,3,4	Vazirani & Ratwani (pg.437-452) vol 2	Level 3
21	18/09/21	1	Kani's method of analysis for frames without lateral translation of joints	COB-2 CO-2,3,4	Dr. Vaidyanathan (pg.405 -418) vol 1	Level 3
22	18/09/21	1	Kani's method of analysis for frames with lateral translation of joints	COB-2 CO-2,3,4	Dr. Vaidyanathan (pg.419 -423) vol2	Level 3

23	21/09/21	1	Kani's method of analysis for frames with lateral translation of joints	COB-2 CO-2,3,4	Dr.Vaidyanathan (pg.423 -430) vol2	Level 3
24	21/09/21	1	Kani's method of analysis for frames with lateral translation of joints	COB-2 CO-2,3,4	Dr.Vaidyanathan (pg.430 -440) vol2	Level 3

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SCHEDULE OF INSTRUCTIONS

UNIT PLAN

Academic Year : 2021-22

Semester : I

UNIT NO.:2

Name of the Program: B.Tech CIVIL Year::III

Section: B

Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR18A3001

Name of the Faculty: V SRINIVASA REDDY

Dept.: CIVIL ENGINEERING

Designation: PROFESSOR

Lesson No.	Date	No. of Periods	Topics / Sub - Topics	Objective & Outcome Nos.	References (Text Book, Journal...) Page Nos.: ____to	Bloom's Knowledge Levels
12	07/09/21	1	Kani's method of analysis for continuous beams	COB-2 CO-2	Dr.Vaidyanathan (pg.48) Vol-1	Level 2
13	07/09/21	1	Kani's method of analysis for continuous beams	COB-2 CO-2,3	Dr.Vaidyanathan (pg.48)Vol-1	Level 2
14	08/09/21	1	Kani's method of analysis for continuous beams	COB-2 CO-2,3,4	Vazirani &Ratwani (pg.338 -345) vol 2	Level 2
15	08/09/21	1	Kani's method of analysis for continuous beams	COB-2 CO-2,3,4	Dr.Vaidyanathan (pg.80 -99) vol 1	Level 2
16	09/09/21	1	Kani's method of analysis for continuous beams with support settlement	COB-2 CO-2,3,4	Vazirani & Ratwani (pg.345 -358) vol 2	Level 3
17	09/09/21	1	Kani's method of analysis for continuous beams with support settlement	COB-2 CO-2,3,4	Dr.Vaidyanathan (pg.141 -176) vol 1	Level 3
18	10/09/21	1	Kani's method of analysis for continuous beams with support settlement	COB-2 CO-2,3,4	Vazirani & Ratwani (pg.415-422) vol 2	Level 3
19	14/09/21	1	Kani's method of analysis for frames without lateral translation of joints	COB-2 CO-2,3,4	Dr.Vaidyanathan (pg.176 -213) vol 1	Level 3
20	14/09/21	1	Kani's method of analysis for frames without lateral translation of joints	COB-2 CO-2,3,4	Vazirani & Ratwani (pg.437-452) vol 2	Level 3
21	18/09/21	1	Kani's method of analysis for frames without lateral translation of joints	COB-2 CO-2,3,4	Dr.Vaidyanathan (pg.405 -418) vol 1	Level 3
22	18/09/21	1	Kani's method of analysis for frames with lateral translation of joints	COB-2 CO-2,3,4	Dr.Vaidyanathan (pg.419 -423) vol2	Level 3

23	21/09/21	1	Kani's method of analysis for frames with lateral translation of joints	COB-2 CO-2,3,4	Dr.Vaidyanathan (pg.423 -430) vol2	Level 3
24	21/09/21	1	Kani's method of analysis for frames with lateral translation of joints	COB-2 CO-2,3,4	Dr.Vaidyanathan (pg.430 -440) vol2	Level 3

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**SCHEDULE OF INSTRUCTIONS
UNIT PLAN**

Academic Year : 2021-22

Semester : I

Name of the Program: B.Tech CIVIL Year::III

UNIT NO.:3

Section: A

Course/Subject: STRUCTURAL ANALYSIS-II

Name of the Faculty: V.SRINIVASA REDDY

Designation: PROFESSOR

Course Code:GR18A3001

Dept.: CIVIL ENGINEERING

Lesson	Date	No.of periods	TOPICS	Objectives & Outcomes Nos.	Books/ References	Bloom's Knowledge levels
1.	05/10/21	1	Introduction on approximate methods	COB-3 ,CO-5	Dr.Muthu (pg.382-385) Vol 2	Level 3
2.	05/10/21	1	Cantilever method	COB-3,CO-5	Dr.Muthu (pg.385-389) Vol 2	Level 3
3.	09/10/21	1	Cantilever method	COB-3,CO-5	Dr.Muthu (pg.389-440) Vol 2	Level 3
4.	09/10/21	1	Cantilever method	COB-3,CO-5	Dr.Muthu (pg.389-440) Vol 2	Level 3
5.	15/10/21	1	Portal method	COB-3,CO-5	Dr.Muthu (pg.440-450) Vol 2	Level 3
6.	15/10/21	1	Portal method	COB-3,CO-5	Dr.Muthu (pg.440-450) Vol 2	Level 3
7.	19/10/21	1	Portal method	COB-3,CO-5	Dr.Muthu (pg.472-517) Vol 2	Level 3
8.	19/10/21	1	Substitute frame method	COB-3,CO-5	Dr.Muthu (pg.472-517) Vol 2	Level 3
9.	23/10/21	1	Substitute frame method	COB-3,CO-5	Dr.Muthu (pg.517-527) Vol 2	Level 3
10.	23/10/21	1	Substitute frame method	COB-3,CO-5	Dr.Muthu (pg.517-527) Vol 2	Level 3

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SCHEDULE OF INSTRUCTIONS
UNIT PLAN

Academic Year : 2021-22

Semester : I UNIT NO.:3
Name of the Program: B.Tech CIVIL Year::III Section: B

Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR18A3001
Name of the Faculty: SP RAJU Dept.: CIVIL ENGINEERING
Designation: ASSISTANT PROFESSOR

Lesson	Date	No.of periods	TOPICS	Objectives & Outcomes Nos.	Books/ references	Bloom's Knowledge levels
1.	05/10/21	1	Introduction on approximate methods	COB-3 ,CO-5	Dr.Muthu (pg.382-385) Vol 2	Level 3
2.	05/10/21	1	Cantilever method	COB-3,CO-5	Dr.Muthu (pg.385-389) Vol 2	Level 3
3.	09/10/21	1	Cantilever method	COB-3,CO-5	Dr.Muthu (pg.389-440) Vol 2	Level 3
4.	09/10/21	1	Cantilever method	COB-3,CO-5	Dr.Muthu (pg.389-440) Vol 2	Level 3
5.	15/10/21	1	Portal method	COB-3,CO-5	Dr.Muthu (pg.440-450) Vol 2	Level 3
6.	15/10/21	1	Portal method	COB-3,CO-5	Dr.Muthu (pg.440-450) Vol 2	Level 3
7.	19/10/21	1	Portal method	COB-3,CO-5	Dr.Muthu (pg.472-517) Vol 2	Level 3
8.	19/10/21	1	Substitute frame method	COB-3,CO-5	Dr.Muthu (pg.472-517) Vol 2	Level 3
9.	23/10/21	1	Substitute frame method	COB-3,CO-5	Dr.Muthu (pg.517-527) Vol 2	Level 3
10.	23/10/21	1	Substitute frame method	COB-3,CO-5	Dr.Muthu (pg.517-527) Vol 2	Level 3

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SCHEDULE OF INSTRUCTIONS

UNIT PLAN

Academic Year : 2021-22

Semester : I

UNIT NO.:4

Name of the Program: B.Tech CIVIL Year::III

Section: A

Course/Subject: STRUCTURAL ANALYSIS-II

Course Code:GR18A3001

Name of the Faculty: V.SRINIVASA REDDY

Dept.: CIVIL ENGINEERING

Designation: PROFESSOR

Lesson	Date	No.of periods	TOPICS	Objectives & Outcomes Nos.	Books/ references	Bloom's Knowledge levels
1.	26/10/21	1	Introduction -Different approaches to Matrix methods of analysis	COB-4,CO-4	Dr.Vaidyanathan (pg.269-270)vol2	Level 2
2.	26/10/21	1	Static and Kinematic indeterminacy	COB-4,CO-4	Dr.Vaidyanathan (pg.271) vol2	Level 2
3.	30/10/21	1	Flexibility matrix methods for beams	COB-4,CO-4	Dr.Vaidyanathan (pg.271-287) vol2	Level 2,3
4.	30/10/21	1	Flexibility matrix methods for beams	COB-4,CO-4	Dr.Vaidyanathan (pg.288-289) vol2	Level 3
5.	02/11/21	1	Flexibility matrix methods for simple frame	COB-4,CO-4	Dr.Vaidyanathan (pg.290-292) vol2	Level 3
6.	02/11/21	1	Flexibility matrix methods for simple frame	COB-4,CO-4	Dr.Vaidyanathan (pg.292-304) vol2	Level 3
7.	04/11/21	1	Stiffness matrix methods for beams	COB-4,CO-4	Dr.Vaidyanathan (pg.305-314) vol2	Level 3
8.	06/11/21	1	Stiffness matrix methods for beams	COB-4,CO-4	Dr.Vaidyanathan (pg.305-314) vol2	Level 3
9.	06/11/21	1	Stiffness matrix methods for simple frames	COB-4,CO-4	Dr.Vaidyanathan (pg.315-321) vol2	Level 3

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SCHEDULE OF INSTRUCTIONS
UNIT PLAN

Academic Year : 2021-22

Semester : I UNIT NO.:4

Name of the Program: B.Tech CIVIL Year::III Section: B

Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR18A3001

Name of the Faculty: J.SP RAJU Dept.: CIVIL ENGINEERING

Designation: ASSISTANT PROFESSOR

Lesson	Date	No.of periods	TOPICS	Objectives & Outcomes Nos.	Books/ references	Bloom's Knowledge levels
1.	26/10/21	1	Introduction -Different approaches to Matrix methods of analysis	COB-4,CO-4	Dr.Vaidyanathan (pg.269-270)vol2	Level 2
2.	26/10/21	1	Static and Kinematic indeterminacy	COB-4,CO-4	Dr.Vaidyanathan (pg.271) vol2	Level 2
3.	30/10/21	1	Flexibility matrix methods for beams	COB-4,CO-4	Dr.Vaidyanathan (pg.271-287) vol2	Level 2,3
4.	30/10/21	1	Flexibility matrix methods for beams	COB-4,CO-4	Dr.Vaidyanathan (pg.288-289) vol2	Level 3
5.	02/11/21	1	Flexibility matrix methods for simple frames	COB-4,CO-4	Dr.Vaidyanathan (pg.290-292) vol2	Level 3
6.	02/11/21	1	Flexibility matrix methods for simple frames	COB-4,CO-4	Dr.Vaidyanathan (pg.292-304) vol2	Level 3
7.	04/11/21	1	Stiffness matrix methods for beams	COB-4,CO-4	Dr.Vaidyanathan (pg.305-314) vol2	Level 3
8.	06/11/21	1	Stiffness matrix methods for beams	COB-4,CO-4	Dr.Vaidyanathan (pg.305-314) vol2	Level 3
9.	06/11/21	1	Stiffness matrix methods for simple frames	COB-4,CO-4	Dr.Vaidyanathan (pg.315-321) vol2	Level 3

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SCHEDULE OF INSTRUCTIONS

UNIT PLAN

Academic Year : 2021-22

Semester : I UNIT NO.:5

Name of the Program: B.Tech CIVIL Year::III Section: A

Course/Subject: STRUCTURAL ANALYSIS-II Course Code:GR18A3001

Name of the Faculty: V.SRINIVASA REDDY

Dept.: CIVIL ENGINEERING

Designation: PROFESSOR

Lesson	Date	No.of periods	TOPICS	Objectives & Outcomes Nos.	Books/ References Page nos	Bloom's Knowledge levels
1.	09/11/21	1	Introduction for plastic analysis	COB-5,CO-5	B.C.Punmai (pg.no.557-563)	Level 3
2.	10/11/21	1	Ductility- Ultimate Load	COB-5,CO-5	B.C.Punmai (pg.no.563-574)	Level 3
3.	13/11/21	1	Plastic hinges and Shape factors for various sections	COB-5,CO-5	B.C.Punmai (pg.no.566-573)	Level 3
4.	16/11/21	1	moment-curvature relationships	COB-5,CO-5	B.C.Punmai. (pg.no.566-573)	Level 3
5.	20/11/21	1	Upper and Lower bound theorems	COB-5,CO-5	B.C.Punmai. (pg.no.576-578)	Level 3
6.	23/11/21	1	Plastic analysis of indeterminate beams	COB-5,CO-5	B.C.Punmai (pg.no.576-578).	Level 3
7.	27/11/21	1	Plastic analysis of propped cantilever, Fixed beam, continuous beam	COB-5,CO-5	B.C.Punmai. (pg.no.576-578).	Level 3
8.	30/11/21	1	Plastic analysis of propped cantilever, Fixed beam, conti	COB-5,CO-5	B.C.Punmai. (pg.no.575-576).	Level 3
9.	2/12/21	1	Portal survey mechanics	COB-5,CO-5	B.C.Punmai. (pg.no.578-581).	Level 3
10.	4/12/21	1	Portal survey mechanics	COB-5,CO-5	B.C.Punmai. (pg.no.578-581).	Level 3

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**SCHEDULE OF INSTRUCTIONS
UNIT PLAN**

Academic Year : 2021-22

Semester : I UNIT NO.:5

Name of the Program: B.Tech CIVIL Year::III Section: B

Course/Subject: ADVANCED STRUCTURAL ANALYSIS Course Code: GR18A3001

Name of the Faculty: SP RAJU Dept.: CIVIL ENGINEERING

Designation: ASSISTANT PROFESSOR

Lesson	Date	No.of periods	TOPICS	Objectives & Outcomes Nos.	Books/ references	Blossom's Knowledge levels
1.	09/11/21	1	Introduction for plastic analysis	COB-5,CO-5	B.C.Punmai (pg.no.557-563)	Level 3
2.	10/11/21	1	Ductility- Ultimate Load	COB-5,CO-5	B.C.Punmai (pg.no.563-574)	Level 3
3.	13/11/21	1	Plastic hinges and Shape factors for various sections	COB-5,CO-5	B.C.Punmai (pg.no.566-573)	Level 3
4.	16/11/21	1	moment-curvature relationships	COB-5,CO-5	B.C.Punmai. (pg.no.566-573)	Level 3
5.	20/11/21	1	Upper and Lower bound theorems	COB-5,CO-5	B.C.Punmai. (pg.no.576-578)	Level 3
6.	23/11/21	1	Plastic analysis of indeterminate beams	COB-5,CO-5	B.C.Punmai (pg.no.576-578).	Level 3
7.	27/11/21	1	Plastic analysis of propped cantilever, Fixed beam, continuous beam	COB-5,CO-5	B.C.Punmai. (pg.no.576-578).	Level 3
8.	30/11/21	1	Plastic analysis of propped cantilever, Fixed beam, continuous beam	COB-5,CO-5	B.C.Punmai. (pg.no.575-576).	Level 3
9.	2/12/21	1	Portal frame mechanics	COB-5,CO-5	B.C.Punmai. (pg.no.578-581).	Level 3
10.	4/12/21	1	Portal frame mechanics	COB-5,CO-5	B.C.Punmai. (pg.no.578-581).	Level 3

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**Gokaraju Rangaraju Institute of Engineering and Technology
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LESSON PLAN

Academic Year : 2021-22 Date: 16-08-2021

Semester : I Dept.: CIVIL ENGINEERING

Name of the Program: B.Tech CIVIL Year: III Section: A,B

Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR18A3001

Name of the Faculty: V.SRINIVASA REDDY & SP RAJU V

Designation: PROFESSOR & ASSISTANT PROFESSOR

Lesson No: 1 Duration of Lesson: 45 mins

Lesson Title: Introduction –MDM

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Analysis of frames by MDM
2. Analysis of Inclined legframes by MDM

TEACHING AIDS : books (Vazirani and Ratwani),googleimages.com, white board &marker
TEACHING POINTS

- | |
|--|
| <ol style="list-style-type: none">i) Types of Rigid joint,pin jointed,Hybrid structures-in 1D ,2D& 3D.ii)Practical examples on Rigid joint,pin jointed,Hybrid structures. |
|--|

Assignment / Questions: Explain the types of structures in detail.

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LESSON PLAN

Academic Year : 2021-22 Date: 19-08-2021
Semester : I Dept.: CIVIL ENGINEERING
Name of the Program: B.Tech CIVIL Year: III Section: A,B
Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR18A3001
Name of the Faculty: V.SRINIVASA REDDY & SP RAJU
Designation: PROFESSOR & ASSISTANT PROFESSOR
Lesson No: 2 Duration of Lesson: 45mins
Lesson Title: Indeterminate structural analysis

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Identify the methods of structural analysis and its practical applications.

TEACHING AIDS : books (Vazirani and Ratwani), googleimages.com, white board & marker
TEACHING POINTS

- i) Methods of analysis.
- ii) Practical examples.

Assignment /Questions: Explain in detail the indeterminate methods of structural analysis.

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LESSON PLAN

Academic Year : 2021-22 Date: 21-08-2021

Semester : I Dept.: CIVIL ENGINEERING

Name of the Program: B.Tech CIVIL Year: III Section: A,B

Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR18A3001

Name of the Faculty: V.SRINIVASA REDDY & SP RAJU V
Designation: PROFESSOR & ASSISTANT PROFESSOR

Lesson No: 3 Duration of Lesson: 45mins

Lesson Title: ANALYSIS OF CONTINUOUS BEAMS BY MDM

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Identify the methods of structural analysis and its practical applications

TEACHING AIDS : books(Vazirani and Ratwani),googleimages.com,white board &marker

TEACHING POINTS

i)Methods of analysis.

ii)Practical Applications.

Assignment/Questions:

Explain the types of Indeterminate structural analysis

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LESSON PLAN

Academic Year : 2021-22 Date: 23-08-2021

Semester : I Dept.: CIVIL ENGINEERING

Name of the Program: B.Tech CIVIL Year:III Section: A,B,C

Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001

Name of the Faculty: V.SRINIVASA REDDY & SP RAJU
Designation: PROFESSOR & ASSISTANT PROFESSOR

Lesson No: 4 Duration of Lesson: 45 mins

Lesson Title: Application Of Moment distribution method for symmetrical frames

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Apply the moment distribution method for the symmetrical frames.
2. Develop and derive the shear equations.

TEACHING AIDS : books(Vazirani and Ratwani), white board & marker

TEACHING POINTS

Symmetrical frames-Slope deflection method-shear equations-fixed end moments-
Slope deflection equations-Final moments-BMD-SFD

ii) Practical Applications

Assignment / Questions:

1. . Solve the single bay single storey frame with Udl of 12 KN/m on the beam by moment distribution method and draw the BMD

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LESSON PLAN

Academic Year : 2021-22 Date: 23-08-2021

Semester : I Dept.: CIVIL ENGINEERING

Name of the Program: B.Tech CIVIL Year:III Section: A,B

Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001

Name of the Faculty: V.SRINIVASA REDDY & SP RAJU
Designation: PROFESSOR & ASSISTANT PROFESSOR

Lesson No: 4 Duration of Lesson: 45 mins

Lesson Title: Application Of Moment distribution method for symmetrical frames

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Apply the moment distribution method for the symmetrical frames.
2. Develop and derive the shear equations.

TEACHING AIDS : books(Vazirani and Ratwani), white board & marker

TEACHING POINTS

Symmetrical frames-Slope deflection method-shear equations-fixed end moments-
Slope deflection equations-Final moments-BMD-SFD

ii) Practical Applications

Assignment / Questions:

1. . Solve the single bay single storey frame with Udl of 12 KN/m on the beam by moment distribution method and draw the BMD

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LESSON PLAN

Academic Year : 2021-22 Date: 28-08-2021

Semester : I Dept.: CIVIL ENGINEERING

Name of the Program: B.Tech CIVIL Year:III Section: A,B

Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR18A3001

Name of the Faculty: V.SRINIVASA REDDY & SP RAJU

Designation: PROFESSOR & ASSISTANT PROFESSOR

Lesson No: 6 Duration of Lesson: 45mins

Lesson Title: Application of Moment distribution method to frames with inclined members

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to: Find BM and SF

TEACHING AIDS : books(Vazirani and Ratwani),googleimages.com, white board &marker

TEACHING POINTS

- | |
|---|
| <ol style="list-style-type: none">1.DISTRIBUTION FACTORS2.BM FORMULAES |
|---|

Assignment / Questions:

- 1.ANALYSE THE GIVEN INCLIND FRAME
- .
2. ANALYSE THE GIVEN INCLIND FRAME

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LESSON PLAN

Academic Year : 2021-22 Date: 28-08-2021

Semester : I Dept.: CIVIL ENGINEERING

Name of the Program: B.Tech CIVIL Year:III Section: A,B

Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR18A3001

Name of the Faculty: V.SRINIVASA REDDY & SP RAJU
Designation: PROFESSOR & ASSISTANT PROFESSOR

Lesson No: 7 Duration of Lesson: 45mins

Lesson Title: Application of Moment distribution metho to frames with inclined members

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to: : Find BM and SF

TEACHING AIDS : books(Vazirani and Ratwani),googleimages.com, white board &marker

TEACHING POINTS

- | |
|---|
| <ol style="list-style-type: none">1.DISTRIBUTION FACTORS2.BM FORMULAES |
|---|

Assignment / Questions:

- 1.ANALYSE THE GIVEN INCLIND FRAME
2. ANALYSE THE GIVEN INCLIND FRAME

SIGNATURE



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Bachupally, Kukatpally, Hyderabad – 500 090. (040) 6686 4440

LESSON PLAN

Academic Year : 2021-22 Date: 2-09-2021

Semester : I Dept.: CIVIL ENGINEERING

Name of the Program: B.Tech CIVIL Year:III Section: A,B

Course/Subject: STRUCTURAL ANALYSIS Course Code: GR18A3001

Name of the Faculty: V.SRINIVASA REDDY & SP RAJU
Designation: PROFESSOR& ASSISTANT PROFESSOR

Lesson No: 8 Duration of Lesson: 45mins

Lesson Title: Application of Moment distribution metho to frames with inclined members

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to: Find BM and SF

TEACHING AIDS : books(Vazirani and Ratwani),googleimages.com, white board &marker

TEACHING POINTS

- 1.DISTRIBUTION FACTORS
- 2.BM FORMULAES

Assignment / Questions:

- . 1.ANALYSE THE GIVEN INCLIND FRAME
- .
2. ANALYSE THE GIVEN INCLIND FRAME

Signature of faculty



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LESSON PLAN

Academic Year : 2021-22 Date:2/09/2021

Semester : I Dept.: CIVIL ENGINEERING

Name of the Program: B.Tech CIVIL Year:III Section: A,B

Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR18A3001

Name of the Faculty: V.SRINIVASA REDDY &SP RAJU

Designation: PROFESSOR& ASSISTANT PROFESSOR

Lesson No: 9 Duration of Lesson: 45mins

Lesson Title: Application of Moment distribution metho to frames with inclined members

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to: Find BM and SF

TEACHING AIDS : books(Vazirani and Ratwani),Bhavikatti,DR.Vaidyanathan,googleimages.com
TEACHING POINTS

- | |
|---|
| <ol style="list-style-type: none">1.DISTRIBUTION FACTORS2.BM FORMULAES |
|---|

Assignment / Questions:

- 1.ANALYSE THE GIVEN INCLIND FRAME
- 2.ANALYSE THE GIVEN INCLIND FRAME

SIGNATURE OF FACULTY



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LESSON PLAN

Academic Year : 2021-22 Date: 04-9=21

Semester : I Dept.: CIVIL ENGINEERING

Name of the Program: B.Tech CIVIL Year:III Section: A,B

Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR18A3001

Name of the Faculty: V.SRINIVASA REDDY& SP RAJU

Designation: PROFESSOR& ASSISTANT PROFESSOR

Lesson No: 10 Duration of Lesson: 45mins

Lesson Title: Application of Moment distribution method for antisymmetrical frames

INSTRUCTIONAL/LESSON OBJECTIVES

On completion of this lesson the student shall be able to:

- 1.Solve simple and typical problems and solve the sway.

TEACHING AIDS : books(Vazirani and Ratwani),googleimages.com, white board &marker

TEACHING POINTS

- 1.Differece between sway and non sway

Assignment / Questions:

- 1.Analyse the unsymmetrical frame and draw the BMD

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LESSON PLAN

Academic Year : 2221-22 Date: 4-9-21
Semester : I Dept.: CIVIL ENGINEERING
Name of the Program: B.Tech CIVIL Year:III Section: A,B
Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR81A3001
Name of the Faculty: V.SRINIVASA REDDY & SP RAJU
Designation: PROFESSOR & ASSISTANT PROFESSOR
Lesson No: 11 Duration of Lesson: 45mins

Lesson Title: Application of Moment distribution method for antisymmetrical frames

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Solve simple and typical problems and solve the sway.

TEACHING AIDS : books(Vazirani and Ratwani),googleimages.com, white board &marker
TEACHING POINTS

1.Difference between sway and non sway

Assignment / Questions:

- 1.Analyse the unsymmetrical frame and draw the SFD and BMD

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LESSON PLAN

Academic Year : 2021-22 Date: 07-9-2021

Semester : I Dept.: CIVIL ENGINEERING

Name of the Program: B.Tech CIVIL Year:III Section: A,B

Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR18A3001

Name of the Faculty: V.SRINIVASA REDDY & SP RAJU
Designation: PROFESSOR & ASSISTANT PROFESSOR

Lesson No: 12 Duration of Lesson: 45mins

Lesson Title: Kani's method of analysis for continuous beams

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Compute the final moments and draw the BMD by Kani's method for continuous beams.
2. Relate the rotation factors and rotation contributions, resultant restraint moments which is unique

TEACHING AIDS : books(Vazirani and Ratwani), googleimages.com, Dr. Vaidyanathan, white board & marker

TEACHING POINTS

- i) Fixed end moments-Distribution factors-rotation factors, resultant restraint moments-iterative process-Final moments-simply supported bending moments-Combined BMD.
- ii) Practical applications.

Assignment / Questions:

Solve and analyze the 3 span continuous beam by Kani's method. AB is 5m span with udl of 12kN/m, BC is subjected to a centre point loading of 25 KN having a span of 4m and span CD is 5m span with udl of 9kN/m. Sketch the BMD.

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LESSON PLAN

Academic Year : 2021-22 Date: 07-9-2021

Semester : I Dept.: CIVIL ENGINEERING

Name of the Program: B.Tech CIVIL Year:III Section: A,B

Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001

Name of the Faculty: V.SRINIVASA REDDY &SP RAJU

Designation: PROFESSOR& ASSISTANT PROFESSOR

Lesson No: 13

Duration of Lesson: 45mins

Lesson Title: Kani's method of analysis for continuous beams with support settlement

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Compute the final moments and to draw the BMD by Kani's method for continuous beams with support settlement based on end conditions and directions of settlement.
2. Relate the rotation factors and rotation contributions, resultant restraint moments which is unique.

TEACHING AIDS books(Vazirani and Ratwani),googleimages.com,Dr.Vaidyanathan, white board &marker

TEACHING POINTS

- . i)Fixed end moments(with addition of settlement)-Distribution factors-rotation factors,resultant restraint moments-iterative process-Final moments-simply supported bending moments-Combined BMD.
- ii)Practical Applications

Assignment Questions:

Questions: Compute the bending moment and shear forces for a 3 span continuous beam by kani's method. AB is 5m span with udl of 15kN/m, BC is subjected to a centre point loading of 25 KN having a span of 6m,span CD is 5m span with udl of 11kN/m and span The support B sinks by 10mm and support C sinks by 5 mm.Draw BMD &SFD

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LESSON PLAN

Academic Year : 2021-22 Date: 8-9-2021

Semester : I Dept.: CIVIL ENGINEERING

Name of the Program: B.Tech CIVIL Year:III Section: A,B

Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR18A3001

Name of the Faculty: V.SRINIVASA REDDY &SP RAJU

Designation: PROFESSOR& ASSISTANT PROFESSOR

Lesson No: 14 Duration of Lesson:45 mins

Lesson Title: Kani's method of analysis for frames without lateral translation of joints

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Compute the final moments and draw the BMD by Kani's method for frames without lateral translation of joints.
2. Relate the rotation factors and rotation contributions, resultant restraint moments which is unique

TEACHING AIDS : books(Vazirani and Ratwani),googleimages.com,Dr.Vaidyanathan, white board &marker

TEACHING POINTS

- 1)Fixed end moment-Distribution factors-rotation factors, resultant restrain moments-iterative process-Final moments-simply supported bending moments-Combined BMD.
- ii)Practical Applications.

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LESSON PLAN

Academic Year : 2021-22 Date: 8-09-2021

Semester : I Dept.: CIVIL ENGINEERING

Name of the Program: B.Tech CIVIL Year:III Section: A , B

Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR18A3001

Name of the Faculty: V.SRINIVASA REDDY &SP RAJU

Designation: PROFESSOR& ASSISTANT PROFESSOR

Lesson No: 15 Duration of Lesson: 45mins

Lesson Title: Kani's method of analysis for frames with lateral translation of joints

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Compute the final moments and to draw the BMD by Kani's method for frames with lateral translation of joints.
2. Relate the rotation factors and rotation contributions, resultant restraint moments which is unique.

TEACHING AIDS : books(Vazirani and Ratwani),googleimages.com,Dr.Vaidyanathan, white board &marker

TEACHING POINTS

i)Fixed end moment-Distribution factors-rotation factors, resultant restrain moments-iterative process-Final moments-simply supported bending moments-Combined BMD.

ii)Practical applications

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LESSON PLAN

Academic Year : 2021-22 Date: 9-9-2021
Semester : I Dept.: CIVIL ENGINEERING

Name of the Program: B.Tech CIVIL Year:III Section: A,B

Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001

Name of the Faculty: V.SRINIVASA REDDY & SP RAJU V

Designation: PROFESSOR & ASSISTANT PROFESSOR

Lesson No: 16 Duration of Lesson: 45 mins
Lesson Title: Kani's method of analysis for frames with lateral translation of joints

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Relate the rotation factors and rotation contributions, resultant restraint moments which is unique.

TEACHING AIDS : books(Vazirani and Ratwani), googleimages.com, Dr. Vaidyanathan, white board & marker

TEACHING POINTS

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| <ol style="list-style-type: none">i) analyze the given frame by Kani's method with sway analysisii) Practical examples. |
|--|

Questions: Describe and derive the equations for the frames by Kani's method.

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LESSON PLAN

Academic Year : 2021-22 Date: 9-9-2021
Semester : I Dept.: CIVIL ENGINEERING
Name of the Program: B.Tech CIVIL Year:III Section: A,B,C
Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001
Name of the Faculty: V.SRINIVASA REDDY & SP RAJU V
Designation: PROFESSOR & ASSISTANT PROFESSOR
Lesson No: 17 Duration of Lesson: 45mins
Lesson Title: Kani's method of analysis for continuous beams

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Compute the final moments and draw the BMD by Kani's method for continuous beams

TEACHING POINTS

i) Fixed end moments-Distribution factors-rotation factors,resultant restrain moments-iterative process-Final moments-simply supported bending moments-Combined BMD.	
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Assignment Questions:

1. Solve and analyze the 3 span continuous beam by Kani's method. AB is 5m span with udl of 12kN/m, BC is subjected to a centre point loading of 25 KN having a span of 4m and span CD is 5m span with udl of 9kN/m. Sketch the BMD

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LESSON PLAN

Academic Year : 2021-22 Date: 10-9-21
Semester : I Dept.: CIVIL ENGINEERING
Name of the Program: B.Tech CIVIL Year:III Section: A,B
Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001
Name of the Faculty: V.SRINIVASA REDDY & SP RAJU V

Designation: PROFESSOR& ASSISTANT PROFESSOR

Lesson No: 18

Duration of Lesson:45 mins

Lesson Title: Kani's method of analysis for continuous beams with support settlement

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Compute the final moments and to draw the BMD by Kani's method for continuous beams with support settlement based on end conditions and directions of settlement.

TEACHING AIDS : books(Vazirani and Ratwani),googleimages.com,Dr.Vaidyanathan, white board &marker

TEACHING POINTS

i)Fixed end moments(with addition of settlement)-Distribution factors-rotation factors,resultant restrain moments-iterative process-Final moments-simply supported bending moments-Combined BMD.

Questions: Compute the bending moment and shear forces for a 3 span continuous beam by kani's method. AB is 5m span with udl of 15kN/m, BC is subjected to a centre point loading of 25 KN having a span of 6m,span CD is 5m span with udl of 11kN/m and span The support B sinks by 10mm and support C sinks by 5 mm.Draw BMD &SFD

Signature of faculty



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LESSON PLAN

Academic Year : 2021-22 Date: 14-9-21

Semester : I Dept.: CIVIL ENGINEERING

Name of the Program: B.Tech CIVIL Year:III Section: A,B

Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001

Name of the Faculty: V.SRINIVASA REDDY & SP RAJU V

Designation: PROFESSOR & ASSISTANT PROFESSOR

Lesson No: 19 Duration of Lesson: 45mins

Lesson Title: distribution method for anti symmetrical frames

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Apply the moment distribution method for Anti-symmetrical frames
2. Describe & derive the shear equations.

TEACHING AIDS : books(Vazirani and Ratwani),googleimages.com,Dr.Vaidyanathan, white board &marker

TEACHING POINTS

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|---|
| <p>i) Anti-Symmetrical frame-moment distribution method-shear equations- --Final moments-
BMD-SFD</p> <p>ii) Practical problems</p> |
|---|

Assignment questions:

Illustrate the Moment distribution method for anti symmetrical frames with examples.

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LESSON PLAN

Academic Year : 2021-22 Date: 14-9-21
Semester : I Dept.: CIVIL ENGINEERING
Name of the Program: B.Tech CIVIL Year: III Section: A,B
Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001
Name of the Faculty: V.SRINIVASA REDDY & SP RAJU V

Designation: PROFESSOR& ASSISTANT PROFESSOR

Lesson No: 20 Duration of Lesson:45 mins

Lesson Title: Kani's method of analysis for frames without lateral translation of joints

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Relate the rotation factors and rotation contributions,resultant restraint moments which is unique

TEACHING AIDS : books(Vazirani and Ratwani),googleimages.com,Dr.Vaidyanathan, white board &marker

TEACHING POINTS

i)Fixed end moment-Distribution factors-rotation factors, resultant restrain moments-iterative process-Final moments-simply supported bending moments-Combined BMD.
ii)Practical Applications.

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LESSON PLAN

Academic Year : 2021-22 Date: 18-9-21

Semester : I Dept.: CIVIL ENGINEERING

Name of the Program: B.Tech CIVIL Year: III Section: A,B

Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001

Name of the Faculty: V.SRINIVASA REDDY & J.CICI JENNIFER RAJ

Designation: PROFESSOR & ASSISTANT PROFESSOR

Lesson No: 21 Duration of Lesson: 45 mins

Lesson Title: Kani's method of analysis for frames with lateral translation of joints

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

.Compute the final moments and to draw the BMD by Kani's method for frames with lateral translation of joints

TEACHING AIDS : books(Vazirani and Ratwani), googleimages.com, Dr.Vaidyanathan.

TEACHING POINTS

)Fixed end moment-Distribution factors-rotation factors, resultant restraint moments-iterative process-Final moments-simply supported bending moments-Combined BMD.

Signature of faculty



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LESSON PLAN

Academic Year : 2021-22 Date: 18-9-21
Semester : I Dept.: CIVIL ENGINEERING
Name of the Program: B.Tech CIVIL Year: III Section: A,B
Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001
Name of the Faculty: V.SRINIVASA REDDY & SP RAJU V
Designation: PROFESSOR&& ASSISTANT PROFESSOR
Lesson No: 22 Duration of Lesson:45 mins
Lesson Title: Kani's method of analysis for continuous beams

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:
Compute the final moments and draw the BMD by Kani's method for continuous beams

TEACHING AIDS : books(Vazirani and Ratwani),googleimages.com,Dr.Vaidyanathan, white board &marker

TEACHING POINTS

i)Fixed end moments-Distribution factors-rotation factors,resultant restrain moments-iterative process-Final moments-simply supported bending moments-Combined BMD.	
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Questions: Solve and analyze the 3 span continuous beam by kani's method. AB is 5m span with udl of 12kN/m, BC is subjected to a centre point loading of 25 KN having a span of 4m and span CD is 5m span with udl of 9kN/m.Sketch the BMD

Signature of faculty



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LESSON PLAN

Academic Year : 2021-22 Date: 21-9-21

Semester : I Dept.: CIVIL ENGINEERING

Name of the Program: B.Tech CIVIL Year: III Section: A,B

Course/Subject: STRUCTURAL ANALYSIS=II Course Code: GR18A3001

Name of the Faculty: V.SRINIVASA REDDY & SP RAJU

Designation: PROFESSOR & ASSISTANT PROFESSOR

Lesson No: 23 Duration of Lesson: 45 mins

Lesson Title: Kani's method of analysis for continuous beams

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

Compute the final moments and draw the BMD by Kani's method for continuous beams

TEACHING AIDS : books (Vazirani and Ratwani), googleimages.com, Dr. Vaidyanathan.

TEACHING POINTS

i) Fixed end moments-Distribution factors-rotation factors, resultant restraint moments-iterative process-Final moments-simply supported bending moments-Combined BMD.	
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Assignment Questions:

1. Solve and analyze the 3 span continuous beam by Kani's method. AB is 5m span with udl of 12kN/m, BC is subjected to a centre point loading of 25 KN having a span of 4m and span CD is 5m span with udl of 9kN/m. Sketch the BMD

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LESSON PLAN

Academic Year : 2021-22 Date: 21-9-21
Semester : I Dept.: CIVIL ENGINEERING
Name of the Program: B.Tech CIVIL Year: III Section: A,B
Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001
Name of the Faculty: V.SRINIVASA REDDY& SP RAJU V
Designation: PROFESSOR& ASSISTANT PROFESSOR
Lesson No: 24 Duration of Lesson:45 mins
Lesson Title: Kani's method of analysis for frames with lateral translation of joints

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:
Compute the final moments and to draw the BMD by Kani's method for frames with lateral translation of joints

TEACHING AIDS : books(Vazirani and Ratwani), googleimages.com,Dr.Vaidyanathan, white board &marker

TEACHING POINTS

. Fixed end moment-Distribution factors-rotation factors, resultant restrain moments-iterative process-Final moments-simply supported bending moments-Combined BMD.

Signature of faculty



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LESSON PLAN

Academic Year : 2021-22 Date: 26-10--21

Semester : I Dept.: CIVIL ENGINEERING

Name of the Program: B.Tech CIVIL Year: III Section: A,B

Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001

Name of the Faculty: V.SRINIVASA REDDY & J.CICI JENNIFER RAJ

Designation: PROFESSOR & ASSISTANT PROFESSOR

Lesson No: 35 Duration of Lesson: 45mins

Lesson Title: Different approaches to Matrix methods of analysis

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

- 1.Relate the conjugate beam method for the matrix methods of analysis.
- 2.Relate the formulae and relations of matrix flexibility method and matrix stiffness method.

TEACHING AIDS : books(Vazirani and Ratwani),googleimages.com,Dr.Vaidyanathan,Dr.Muthu
TEACHING POINTS

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| <ol style="list-style-type: none">i)Introduction of matrix methodsii) Relation between flexibility and stiffness matrices its inverse,relations and formulae. |
|--|

Assignment/Questions:

Derive the expression to show that flexibility and stiffness matrices are inverse of each other.

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LESSON PLAN

Academic Year : 2021-22 Date: 26-10--21
Semester : I Dept.: CIVIL ENGINEERING
Name of the Program: B.Tech CIVIL Year: III Section: A,B

Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001

Name of the Faculty: V.SRINIVASA REDDY & J.CICI JENNIFER RAJ

Designation: PROFESSOR & ASSISTANT PROFESSOR.

Lesson No: 36 Duration of Lesson: 45mins
Lesson Title: Static and Kinematic indeterminacy

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

- 1.Relate the application flexibility matrices in Matrix flexibility method.
- 2.Construction of matrices in terms of slopes and deflections.
- 3.Determination of Static & Kinematic indeterminacy.

TEACHING AIDS : books(Vazirani and Ratwani),googleimages.com,Dr.Vaidyanathan,Dr.Muthu,
white board &marker

TEACHING POINTS

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| <ol style="list-style-type: none">i) Static indeterminacy and flexibility matrices.ii) Kinematic indeterminacy and flexibility matrices. |
|---|

Assignment/Questions:
Find the SI of the continuous beam shown below.

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LESSON PLAN

Academic Year : 2021-22 Date: 30-10-21
Semester : I Dept.: CIVIL ENGINEERING

Name of the Program: B.Tech CIVIL Year: III Section: A,B

Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001

Name of the Faculty: V.SRINIVASA REDDY & J.CICI JENNIFER RAJ

Designation: PROFESSOR& ASSISTANT PROFESSOR

Lesson No: 38 Duration of Lesson: 45mins
Lesson Title: Flexibility matrix methods for beams

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Construct the flexibility matrices for indeterminate structures (simple beams)
2. Construct the flexibility matrices for indeterminate structures (typical beams)

TEACHING AIDS : books (Vazirani and Ratwani), googleimages.com, Dr. Vaidyanathan, Dr. Muthu, white board & marker

TEACHING POINTS

- i) Conjugate beam method.
- ii) Matrix-slope-deflection-flexibility matrices-indeterminate structures.

Assignment

Construct the matrix for the beam AB with one end A hinged and B fixed by matrix flexibility method.

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LESSON PLAN

Academic Year : 2021-22 Date: 2-11--21
Semester : I Dept.: CIVIL ENGINEERING
Name of the Program: B.Tech CIVIL Year: III Section: A,B
Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001
Name of the Faculty: V.SRINIVASA REDDY & CICI JENNIFER RAJ

Designation: PROFESSOR & ASSISTANT PROFESSOR

Lesson No: 39

Duration of Lesson: 45mins

Lesson Title: Flexibility matrix methods for simple frames

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Solve the critical continuous beams by Matrix flexibility method

TEACHING AIDS : books(Vazirani and Ratwani),googleimages.com,Dr.Vaidyanathan,Dr.Muthu,
white board &marker

TEACHING POINTS

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| <ol style="list-style-type: none">i) Conjugate beam methodii) Matrix-slope-deflection-flexibility matrices-continuous beams. |
|---|

Assignment:

1. Construct flexibility matrix for the single bay frame with its supports fixed

Signature of faculty



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LESSON PLAN

Academic Year : 2021-22 Date: 2-11--21
Semester : I Dept.: CIVIL ENGINEERING
Name of the Program: B.Tech CIVIL Year: III Section: A,B
Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001
Name of the Faculty: V.SRINIVASA REDDY & J.CICI JENNIFER RAJ
Designation: PROFESSOR & ASSISTANT PROFESSOR
Lesson No: 40 Duration of Lesson: 45mins
Lesson Title: Flexibility matrix methods for simple frames

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Solve problems on simple Frames by Matrix flexibility method.
2. Solve problems on critical Frames by Matrix flexibility method.

TEACHING AIDS : books(Vazirani and Ratwani),googleimages.com,Dr.Vaidyanathan,Dr.Muthu,
white board &marker

TEACHING POINTS

- | |
|--|
| <ol style="list-style-type: none">i) Conjugate beam method.ii) Matrix-slope-deflection-flexibility matrices-frames. |
|--|

Assignment:

Apply the matrix flexibility method for a single bay single storey frame with UDL of 19 KN/m on the beam.Draw BMD.

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LESSON PLAN

Academic Year : 2021-22 Date: 4-11-21
Semester : I Dept.: CIVIL ENGINEERING
Name of the Program: B.Tech CIVIL Year: III Section: A,B
Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001
Name of the Faculty: V.SRINIVASA REDDY & J.CICI JENNIFER RAJ
Designation: PROFESSOR & ASSISTANT PROFESSOR
Lesson No: 41 Duration of Lesson: 45mins

Lesson Title: Stiffness matrix methods for beams

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Apply the applications of flexibility matrices in Matrix stiffness method.
2. Construct matrices in terms of slopes and deflections.

TEACHING AIDS : books(Vazirani and Ratwani),googleimages.com,Dr.Vaidyanathan,Dr.Muthu,
white board & marker

TEACHING POINTS

- i) Conjugate beam method.
- ii) Matrix-slope-deflection-stiffness matrices.

Assignment: Construct the matrix for the cantilever beam AB with its end A fixed by Stiffness method.

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LESSON PLAN

Academic Year : 2021-22 Date: 6-11--21
Semester : I Dept.: CIVIL ENGINEERING
Name of the Program: B.Tech CIVIL Year: III Section: A,B
Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001
Name of the Faculty: V.SRINIVASA REDDY& J.CICI JENNIFER RAJ
Designation: PROFESSOR& ASSISTANT PROFESSOR

Lesson No: 42 Duration of Lesson: 45mins

Lesson Title: Stiffness matrix methods for beams

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1.Solve the critical continuous beams by Matrix stiffness method.

TEACHING AIDS : books(Vazirani and Ratwani),googleimages.com,Dr.Vaidyanathan,Dr.Muthu,
white board &marker

TEACHING POINTS

- | |
|--|
| <ul style="list-style-type: none">i) Conjugate beam method & matrix-slope-deflectionii)Stiffness matrices-continuous beams. |
|--|

Assignment:

1. Construct the matrix for the 3 span continuous beam ABCD.AB is 5m span with udl of 12kN/m, BC is subjected to a centre point loading of 25 KN having a span of 4m and span CD is 5m span with udl of 9kN/m. by Matrix stiffness method.

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LESSON PLAN

Academic Year : 2021-22 Date: 6-11-21
Semester : I Dept.: CIVIL ENGINEERING
Name of the Program: B.Tech CIVIL Year:III Section: A,B,C
Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001
Name of the Faculty: V.SRINIVASA REDDY & J.CICI JENNIFER RAJ
Designation: PROFESSOR & ASSISTANT PROFESSOR
Lesson No: 43 Duration of Lesson: 45mins

Lesson Title: Stiffness matrix methods for simple frames

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

- 1.Analyze the simple rigid jointed Frames by Matrix stiffness method.
- 2.Analyze the critical rigid jointed Frames by Matrix stiffness method.

TEACHING AIDS : books(Vazirani and Ratwani),googleimages.com,Dr.Vaidyanathan,Dr.Muthu,
white board &marker

TEACHING POINTS

i)Conjugate beam method-matrix-slope-deflection.

ii)Stiffness matrices-frame(rigid jointed)

Assignment/Questions:

Analyze the single bay single storey frame with UDL of 19 KN/m on the beam with the ends A,Band D fixed. by Matrix Stiffness method .

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LESSON PLAN

Academic Year : 2021-22 Date: 9-11-21
semester : I Dept.: CIVIL ENGINEERING

Name of the Program: B.Tech CIVIL Year: III Section: A,B

Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001

Name of the Faculty: V.SRINIVASA REDDY J.CICI JENNIFER RAJ

Designation: PROFESSOR& ASSISTANT PROFESSOR

Lesson No: 44 Duration of Lesson: 45mins

Lesson Title: Introduction about the need of plastic analysis

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Identify the comparisons between plastic hinge and mechanical hinge

TEACHING AIDS : books(Vazirani and Ratwani),googleimages.com,Dr.Vaidyanathan,Dr.Muthu,
white board &marker

TEACHING POINTS

i)Assumptions made for plastic analysis of beams-mechanical hinge-plastic hinge.

Assignment: What are the assumptions made for plastic analysis of beams

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LESSON PLAN

Academic Year : 2021-22 Date: 10-11-21
Semester : I Dept.: CIVIL ENGINEERING
Name of the Program: B.Tech CIVIL Year: III Section: A,B
Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001

Name of the Faculty: V.SRINIVASA REDDY & SP RAJU V

Designation: PROFESSOR & ASSISTANT PROFESSOR

Lesson No: 45 Duration of Lesson: 45mins

Lesson Title: Introduction about the need of plastic analysis

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Identify the plastic hinges in structures.
2. Identify the comparisons between plastic hinge and mechanical hinge.
3. Explain the plastic bending of beams.

TEACHING AIDS : books(Vazirani and Ratwani),googleimages.com,Dr.Vaidyanathan,Dr.Muthu,
white board & marker

TEACHING POINTS

- | |
|--|
| <ol style="list-style-type: none">i) Introduction-plastic bending of beams.ii) Assumptions made for plastic analysis of beams-mechanical hinge-plastic hinge. |
|--|

Assignment/Questions

1. What are the assumptions made for plastic analysis of beams.

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LESSON PLAN

Academic Year : 2021-22 Date: 13-11-21
Semester : I Dept.: CIVIL ENGINEERING
Name of the Program: B.Tech CIVIL Year: III Section: A,B
Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001
Name of the Faculty: V.SRINIVASA REDDY & J.CICI JENNIFER RAJ
Designation: PROFESSOR & ASSISTANT PROFESSOR
Lesson No: 46 Duration of Lesson: 45mins

Lesson Title: Ductility –ultimate load

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Identify the Idealised stress strain curve.
2. Identify the ductile behavior of mild steel.

TEACHING AIDS : Books(Vazirani and Ratwani),googleimages.com,Dr.Vaidyanathan,Dr.Muthu,white board,white board marker.

TEACHING POINTS

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|--|
| <ol style="list-style-type: none">i) Introduction- Ductility with illustrations-ii) ultimate load-examples(practical) |
|--|

Assignment/Questions

1. Write a short note on ductility and ultimate load of members.

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LESSON PLAN

Academic Year : 2021-22 Date: 16-11-21
Semester : I Dept.: CIVIL ENGINEERING
Name of the Program: B.Tech CIVIL Year: III Section: A,B
Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001
Name of the Faculty: V.SRINIVASA REDDY & SP RAJU V Dept.:CIVIL
Designation: PROFESSOR & ASSISTANT PROFESSOR
Lesson No: 47 Duration of Lesson: 45mins
Lesson Title: Plastic hinge and Shape factors for various sections

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Identify the plastic hinges
2. Compute the shape factors for various sections theoretically.
3. Identify the shape factors for sections like T,C,I,Circular and other critical sections

TEACHING AIDS : books(Vazirani and Ratwani), googleimages.com, Dr. Vaidyanathan, Dr. Muthu, white board, white board marker.

TEACHING POINTS

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|---|
| <ol style="list-style-type: none">i) shape factors for sections- T,C,I,Circularii) shape factors for critical sections |
|---|

Assignment:

1. Find the shape factor for circular section.

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LESSON PLAN

Academic Year : 2021-22 Date: 20-11-21
Semester : I Dept.: CIVIL ENGINEERING
Name of the Program: B.Tech CIVIL Year: III Section: A,B
Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001
Name of the Faculty: V.SRINIVASA REDDY &J.CICI JENNIFER RAJ
Designation: PROFESSOR & ASSISTANT PROFESSOR
Lesson No: 48 Duration of Lesson: 45mins

Lesson Title: moment-curvature relationship

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

- 1.Demonstrate the concept behind load factor theoretically and practically.
- 2.Apply the moment-curvature relationship in problems.

TEACHING AIDS : books(Vazirani and Ratwani),googleimages.com,Dr.Vaidyanathan,Dr.Muthu,white board,white board marker.

TEACHING POINTS

- i)Load factor.
- ii) moment -curvature relationship(practical applications)

Assignment:

- 1.What is load factor?Derive the moment-curvature relationship.

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LESSON PLAN

Academic Year : 2021-22 Date: 23-11-21
Semester : I Dept.: CIVIL ENGINEERING
Name of the Program: B.Tech CIVIL Year: III Section: A,B
Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001

Name of the Faculty: V.SRINIVASA REDDY & J.CICI JENNIFER RAJ

Designation: PROFESSOR & ASSISTANT PROFESSOR

Lesson No: 49 Duration of Lesson: 45mins

Lesson Title: Upper and Lower bound theorems

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Computation of the plastic hinges
2. Demonstrate the types of mechanisms.

TEACHING AIDS : books(Vazirani and Ratwani), googleimages.com, Dr. Vaidyanathan, Dr. Muthu, white board, white board marker.

TEACHING POINTS

- | |
|--|
| <p>i) Upper and Lower bound theorems</p> <p>ii) Practical Applications</p> |
|--|

Assignment:

1. Demonstrate the upper and lower bound theorems.

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LESSON PLAN

Academic Year : 2021-22 Date: 27-11-21
Semester : I Dept.: CIVIL ENGINEERING
Name of the Program: B.Tech CIVIL Year: III Section: A,B
Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001
Name of the Faculty: V.SRINIVASA REDDY & SP RAJU V
Designation: PROFESSOR& ASSISTANT PROFESSOR
Lesson No: 50 Duration of Lesson: 45mins

Lesson Title: Plastic analysis of indeterminate beams

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Compute plastic analysis of indeterminate beams.
2. Manipulation of load factor and collapse loads.

TEACHING AIDS : books(Vazirani and Ratwani),googleimages.com,Dr.Vaidyanathan,Dr.Muthu,white board,white board marker.

TEACHING POINTS

- i) Plastic analysis of indeterminate beams
- ii) Collapse loads.

Assignment:

1. Relate the plastic analysis of indeterminate beams with one illustrative example.

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LESSON PLAN

Academic Year : 2021-22 Date: 30-11-21
Semester : I Dept.: CIVIL ENGINEERING
Name of the Program: B.Tech CIVIL Year: III Section: A,B,C
Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001

Name of the Faculty: V.SRINIVASA REDDY & J.CICI JENNIFER RAJ

Designation: PROFESSOR & ASSISTANT PROFESSOR

Lesson No: 51 Duration of Lesson: 45mins

Lesson Title: Plastic analysis of propped cantilever, Fixed beam, continuous beam

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Compute the plastic analysis of propped cantilever.
2. Compute the load factor and collapse load for propped cantilever

TEACHING AIDS : books(Vazirani and Ratwani), googleimages.com, Dr.Vaidyanathan, Dr.Muthu, white board, white board marker.

TEACHING POINTS

- i) plastic analysis of propped cantilever
 - ii) collapse loads.

Assignment/Questions:

1. Compute the collapse load for a propped cantilever beam AB of span 10 m and UDL 15 KN/m.

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LESSON PLAN

Academic Year : 2021-22 Date:2-12-21
Semester : I Dept.: CIVIL ENGINEERING
Name of the Program: B.Tech CIVIL Year: III Section: A,B
Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001

Name of the Faculty: V.SRINIVASA REDDY & SP RAJU V

Designation: PROFESSOR & ASSISTANT PROFESSOR

Lesson No: 52 Duration of Lesson: 45mins

Lesson Title: Plastic analysis of propped cantilever, Fixed beam, continuous beam

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Demonstrate the plastic analysis on fixed beam.
2. Compute the load factor and collapse load for fixed beam.

TEACHING AIDS : books(Vazirani and Ratwani),googleimages.com,Dr.Vaidyanathan,Dr.Muthu,white board,white board marker.

TEACHING POINTS

- i) plastic analysis of fixed cantilever.
- ii) Collapse loads.

Assignment/Questions

1. Compute the collapse load for a fixed beam AB of span 12 m and UDL of 18 KN/m.

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LESSON PLAN

Academic Year : 2021-22 Date: 5-10-21
Semester : I Dept.: CIVIL ENGINEERING
Name of the Program: B.Tech CIVIL Year: III Section: A,B
Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001
Name of the Faculty: V.SRINIVASA REDDY&SP RAJU
Designation: PROFESSOR & ASSISTANT PROFESSOR
Lesson No: 25 Duration of Lesson: 45mins
Lesson Title: Portal survey mechanics

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

- 1.Compute the collapse load for portal frame.
- 2.Compute the plastic moment for portal frame.

TEACHING AIDS : books(Vazirani and Ratwani),googleimages.com,Dr.Vaidyanathan,Dr.Muthu,white board,white board marker.

TEACHING POINTS

i)plastic analysis of portal frame.

ii)collapse loads.

Assignment:

- 1.Compute the collapse load for the frame sin the figure.

Signature of faculty



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LESSON PLAN

Academic Year : 2021-22 Date: 5-10-21
Semester : I Dept.: CIVIL ENGINEERING

Name of the Program: B.Tech CIVIL Year: III Section: A,B,C

Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001

Name of the Faculty: V.SRINIVASA REDDY & SP RAJU V

Designation: PROFESSOR& ASSISTANT PROFESSOR

Lesson No: 26 Duration of Lesson: 45mins

Lesson Title: Introduction about approximate methods of analysis

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

- 1.Demonstrate the various methods of analysis
- 2.Relate the methods.
- 3.Demonstrate the practical applications of the methods.

TEACHING AIDS : books(Vazirani and Ratwani),googleimages.com,Dr.Vaidyanathan,Dr.Muthu,
white board &marker

TEACHING POINTS

- | |
|---|
| <ol style="list-style-type: none">i) Introduction- various methods of analysis-ii)Comparisons between the methods- practical applications-substitute frame method-cantiliver method-portal method. |
|---|

Assignment:

- 1.Illustrate the various approximate methods of analysis with neat sketches wherever required.

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LESSON PLAN

Academic Year : 2021-22 Date: 9-10-21
Semester : I Dept.: CIVIL ENGINEERING
Name of the Program: B.Tech CIVIL Year: III Section: A,B
Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001

Name of the Faculty: V.SRINIVASA REDDY & J.CICI JENNIFER RAJ

Designation: PROFESSOR & ASSISTANT PROFESSOR

Lesson No: 27 Duration of Lesson: 45mins

Lesson Title: Introduction on Substitute frame method

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Demonstrate the procedure for the analysis of frames by substitute frame method.

TEACHING AIDS : books(Vazirani and Ratwani), googleimages.com, Dr. Vaidyanathan, Dr. Muthu, white board & marker

TEACHING POINTS

Modeling of building frames. Comparisons between the methods-illustrations.-. substitute frame method
--

Assignment/Questions

1. Demonstrate the procedure for the analysis of frames by substitute frame method with neat sketches wherever required.

Signature of faculty



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LESSON PLAN

Academic Year : 2021-22 Date: 9-10-21
Semester : I Dept.: CIVIL ENGINEERING

Name of the Program: B.Tech CIVIL Year: III Section: A,B

Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001

Name of the Faculty: V.SRINIVASA REDDY & SP RAJU V

Designation: PROFESSOR& ASSISTANT PROFESSOR

Lesson No: 28 Duration of Lesson: 45mins

Lesson Title: example on Substitute frame method

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1.Solve problems in Substitute frame method.

TEACHING AIDS : books(Vazirani and Ratwani),googleimages.com,Dr.Vaidyanathan,Dr.Muthu,
white board &marker

TEACHING POINTS

- | |
|--|
| i)Substitute frame method
ii)Analysis,problems. |
|--|

Assignment:

1. Analyse a two bay two storey frame by Substitute frame method

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LESSON PLAN

Academic Year : 2021-22 Date: 15-10-21
Semester : I Dept.: CIVIL ENGINEERING

Name of the Program: B.Tech CIVIL Year: III Section: A,B

Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001

Name of the Faculty: Dr.V.SRINIVASA REDDY & SP RAJU V

Designation: PROFESSOR&& ASSISTANT PROFESSOR

Lesson No: 29 Duration of Lesson: 45mins

Lesson Title: example on Substitute frame method

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1.Solve critical problems in Substitute frame method

TEACHING AIDS : books(Vazirani and Ratwani),googleimages.com,Dr.Vaidyanathan,Dr.Muthu,
white board &marker

TEACHING POINTS

i) Substitute frame method-

ii)Analysis,problems

Assignment:

1. Analyze a single bay two storey frame by Substitute frame method

Signature of faculty



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LESSON PLAN

Academic Year : 2021-22 Date: 15-10-21
Semester : I Dept.: CIVIL ENGINEERING
Name of the Program: B.Tech CIVIL Year: III Section: A,B

Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001

Name of the Faculty: Dr.V.SRINIVASA REDDY& J.CICI JENNIFER RAJ

Designation: PROFESSOR& ASSISTANT PROFESSOR

Lesson No: 30 Duration of Lesson: 45mins

Lesson Title: Introduction on Portal Method

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Employ the procedure for the analysis of frames by portal frame method
2. Solve problems in this topic.

TEACHING AIDS : books(Vazirani and Ratwani),googleimages.com,Dr.Vaidyanathan,Dr.Muthu,
white board &marker

TEACHING POINTS

- | |
|--|
| <ol style="list-style-type: none">i)Modeling of building framesii)Comparisons between the methods-illustrations.-.Portal frame method |
|--|

Assignment:

- 1.Demonstrate the procedure for the modelling and analysis of multi-storey frames using Portal frame method

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LESSON PLAN

Academic Year : 2021-22
Semester : I

Date: 19-10-21
Dept.: CIVIL ENGINEERING

Name of the Program: B.Tech CIVIL

Year: III Section: A,B

Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001

Name of the Faculty: V.SRINIVASA REDDY&J.CICI JENNIFER RAJ

Designation: PROFESSOR & ASSISTANT PROFESSOR

Lesson No: 31

Duration of Lesson: 45mins

Lesson Title: Introduction on Substitute frame method

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

- 1.Illustrate the concepts behind the portal frame method.
- 2.Solve problems in this topic.

TEACHING AIDS : books(Vazirani and Ratwani),googleimages.com,Dr.Vaidyanathan,Dr.Muthu,
white board &marker

TEACHING POINTS

- i)Portal frame method & examples.
- ii)Analysis,problems.

Assignment:

4. Analyze a two bay two storey frame by portal frame method

Signature of faculty



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LESSON PLAN

Academic Year : 2021-22 Date:19-10-21
Semester : I Dept.: CIVIL ENGINEERING
Name of the Program: B.Tech CIVIL Year: III Section: A,B
Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001
Name of the Faculty: V.SRINIVASA REDDY&SP RAJU V
Designation: PROFESSOR& ASSISTANT PROFESSOR
Lesson No: 32 Duration of Lesson: 45mins
Lesson Title: example on on Portal Method

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Solve simple frames using Substitute frame method
- 2.Solve moderate frames using Substitute frame method

TEACHING AIDS : books(Vazirani and Ratwani),googleimages.com,Dr.Vaidyanathan,Dr.Muthu,
white board &marker
TEACHING POINTS

Substitute frame method-problems(simple).

Practical examples.

Assignment:

- 1.Analyse a single bay two storey frame by portal frame method

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LESSON PLAN

Academic Year : 2021-22 Date: 23-10-21
Semester : I Dept.: CIVIL ENGINEERING
Name of the Program: B.Tech CIVIL Year: III Section: A,B
Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001
Name of the Faculty: V.SRINIVASA REDDY&&SP RAJU V
Designation: PROFESSOR & ASSISTANT PROFESSOR
Lesson No: 33 Duration of Lesson: 45mins

Lesson Title: Introduction on 86antilever method

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1. Employ the procedure for the analysis of frames by 86antilever method.

TEACHING AIDS : books(Vazirani and Ratwani),googleimages.com,Dr.Vaidyanathan,Dr.Muthu,
white board &marker

TEACHING POINTS

- i) Modeling of building frames.
- ii) Comparisons between the methods-illustrations.-. 86antilever method

Assignment:

1. Explain the the procedure for the analysis of frames by 86antilever method with neat sketches wherever required.

Signature of faculty



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LESSON PLAN

Academic Year : 2021-22 Date: 23-10-21
Semester : I Dept.: CIVIL ENGINEERING
Name of the Program: B.Tech CIVIL Year: III Section: A,B
Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001
Name of the Faculty: V.SRINIVASA REDDY & SP RAJU V
Designation: PROFESSOR& ASSISTANT PROFESSOR
Lesson No: 34 Duration of Lesson: 45mins

Lesson Title: example on Cantilever method

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

1.Solve problems in Substitute frame method.

TEACHING AIDS : books(Vazirani and Ratwani),googleimages.com,Dr.Vaidyanathan,Dr.Muthu,
white board &marker

TEACHING POINTS

5. 87antilever method-analysis,problems.
ii)Practical examples.

Assignment:

6. Analyze a two bay two storey frame by Cantiliver method

Signature of faculty



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LESSON PLAN

Academic Year : 2021-22 Date: 23-10-21
Semester : I Dept.: CIVIL ENGINEERING
Name of the Program: B.Tech CIVIL Year: III Section: A,B
Course/Subject: STRUCTURAL ANALYSIS-II Course Code: GR183001
Name of the Faculty: V.SRINIVASA REDDY & SP RAJU V
Designation: PROFESSOR& ASSISTANT PROFESSOR
Lesson No: 34 Duration of Lesson: 45mins
Lesson Title: example on Substitute frame method

INSTRUCTIONAL/LESSON OBJECTIVES:

On completion of this lesson the student shall be able to:

7. Solve critical problems in 88antilever method

TEACHING AIDS : books(Vazirani and Ratwani),googleimages.com,Dr.Vaidyanathan,Dr.Muthu,
white board &marker
TEACHING POINTS

8. Cantiliver method-analysis,problems.
ii)Practical examples.

Assignment/Questions:

9. Analyse a single bay two storey frame by Cantiliver method

Signature of faculty



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TUTORIAL SHEET

Academic Year : 2021-22

Semester : I

Name of the Program: B.Tech CIVIL

Year: III

Section: A,B

Course/Subject: STRUCTURAL ANALYSIS-II

Name of the Faculty: V.SRINIREDDY & SP RAJU V

Dept.: CIVIL ENGINEERING

Designation : PROFESSOR&ASSISTANT PROFESSOR

This Tutorial corresponds to Unit No.1

Q1. .Compute BMD for the structure shown in fig.1 by MDM method

Q2. .Compute BMD for the structure shown in fig.1 by MDM method

Q3. .Compute BMD for the structure shown in fig.1 by MDM method .

Objective Nos.:COB-1

Outcome Nos.CO-1

Signature of HOD

Date:

Signature of faculty

Date:



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TUTORIAL SHEET

Academic Year : 2021-22

Semester : I

Name of the Program: B.Tech CIVIL Year: III Section:A,,B

Course/Subject: STRUCTURAL ANALYSIS-II

Name of the Faculty: SP RAJU V &V.SRINIVASA REDDY Dept.: CIVIL ENGINEERING

Designation : ASST.PROFESSOR& PROFESSOR.

This Tutorial corresponds to Unit No.2

Q1.Compute BMD for the structure shown in fig.1 by Kanis method

Q2.Compute BMD for the structure given in fig.2 by Kanis method.

Q2. Compute BMD for the structure given in fig.3 by Kani's method

Objective Nos.: COB-2

Outcome Nos.: CO-2,3,4

Signature of HOD
Date:

Signature of faculty
Date:

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TUTORIAL SHEET

Academic Year : 2021-22

Semester : I

Name of the Program: B.Tech CIVIL Year: III Section: A,B

Course/Subject: STRUCTURAL ANALYSIS-II Dept.: CIVIL ENGINEERING

Name of the Faculty: SP RAJU V & V.SRINIVASA REDDY

Designation : ASST.PROFESSOR& PROFESSOR.

This Tutorial corresponds to Unit No.3

Q1. Apply the substitute Frame method of analysis for the structure shown in fig.1

Q2. Apply the 91antilever method of analysis for the structure shown in fig.1

Q2. Apply the portal method of analysis for the structure shown in fig.1

Objective Nos.: COB-5

Outcome Nos.: CO-4

Signature of HOD
Date:

Signature of faculty
Date:

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TUTORIAL SHEET

Academic Year : 2021-22

Semester : I

Name of the Program: B.Tech CIVIL Year: III Section:A,B

Course/Subject: STRUCTURAL ANALYSIS-II

Name of the Faculty: SP RAJU V &V.SRINIVASA REDDY Dept.: CIVIL ENGINEERING

Designation : ASST.PROFESSOR/ PROFESSOR

This Tutorial corresponds to Unit No.4

Q1.Compute the Bending moment for the structure shown in fig.1 by Matrix flexibility method.

Q2. Compute the Bending moment for the frame shown in fig.2 by Matrix Stiffness method.

Objective Nos.: COB-3

Outcome Nos.:CO- 5

Signature of HOD
Date:

Signature of faculty
Date:

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TUTORIAL SHEET

Academic Year : 2021-22

Semester : I

Name of the Program: B.Tech CIVIL Year: III Section:A,B

Course/Subject: STRUCTURAL ANALYSIS-II

Name of the Faculty: SP RAJU V & V.SRINIVASA REDDY Dept.: CIVIL ENGINEERING

Designation : ASST.PROFESSOR& PROFESSOR.

This Tutorial corresponds to Unit No.5

Q1.Find the shape factor for the section shown in fig.1

Q2. Compute the collapse load for the structure given in fig.2

Q2. Compute the collapse load for the structure given in fig.3

Objective Nos.:COB- 4

Outcome Nos.:CO- 4

Signature of HOD
Date:

Signature of faculty
Date:

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ASSIGNMENT SHEET

Academic Year : 2021-22

Semester : I

Name of the Program: B.Tech CIVIL Year: III Section:A,B

Course/Subject: STRUCTURAL ANALYSIS-II Dept.: CIVIL ENGINEERING

Name of the Faculty: SP RAJU V & V.SRINIVASA REDDY

Designation : ASST.PROFESSOR&PROFESSOR

This Assignment corresponds to Unit No.1

Q1.analyse the beam by MDM

Q2. Analyse the frame by MDM

Objective Nos.: COB-1

Outcome Nos.: CO-1

Signature of HOD
Date:

Signature of faculty
Date:

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ASSIGNMENT SHEET

Academic Year : 2021-22

Semester : I

Name of the Program: B.Tech CIVIL Year: III Section: A,B

Course/Subject: STRUCTURAL ANALYSIS-II

Name of the Faculty: SP RAJU V & V.SRINIVASA REDDY Dept.: CIVIL ENGINEERING

Designation : ASSISTANT PROFESSOR & PROFESSOR

This Assignment corresponds to Unit No.2

Q1. Compute Bending moment for the structure shown in fig.1 by Kanis method

Q2. Compute Bending moment for the structure given in fig.2 by Kanis method method.

Q2. Compute Bending moment for the structure given in fig.3 by Kani's method

Objective Nos.: COB-2

Outcome Nos.: CO-2, 3, 4

Signature of HOD

Date:

Signature of faculty

Date:

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ASSIGNMENT SHEET

Academic Year : 2021-22

Semester : I

Name of the Program: B.Tech CIVIL Year: III Section: A,B

Course/Subject: STRUCTURAL ANALYSIS-II Dept.: CIVIL ENGINEERING

Name of the Faculty: SP RAJU V & V.SRINIVASA REDDY

Designation : ASST.PROFESSOR& PROFESSOR

This Assignment corresponds to Unit No.3

Q1. Apply the substitute Frame method for the structure shown in fig.1

Q2. Apply the Portal method for the structure shown in fig.1

Q2. Apply the cantilever method for the structure shown in fig.1

Objective Nos.: COB-5

Outcome Nos.: CO-4

Signature of HOD
Date:

Signature of faculty
Date:

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ASSIGNMENT SHEET

Academic Year : 2021-22

Semester : I

Name of the Program: B.Tech CIVIL Year: III Section: A,B

Course/Subject: STRUCTURAL ANALYSIS-II Dept.: CIVIL ENGINEERING

Name of the Faculty : SP RAJU V &V.SRINIVASA REDDY

Designation : ASST.PROFESSOR&PROFESSOR

This Assignment corresponds to Unit No.4

Q1.Develop matrices for the structure shown in fig.1 by Matrix flexibility method.

Q2. Develop matrices for the structure shown in fig.2 by Matrix Stiffness method.

.

Objective Nos.: COB-3

Outcome Nos.: CO-5

Signature of HOD
Date:

Signature of faculty
Date:

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ASSIGNMENT SHEET

Academic Year : 2021-22

Semester : I

Name of the Program: B.Tech CIVIL Year: III Section:A,B

Course/Subject: STRUCTURAL ANALYSIS-II Dept.: CIVIL ENGINEERING

Name of the Faculty: SP RAJU V & V.SRINIVASA REDDY

Designation : ASST.PROFESSOR& PROFESSOR.

This Assignment corresponds to Unit No.5

Q1.Find the shape factor for the I-section

Q2. Compute the collapse load for the structure given in fig.2

Q2. Compute the collapse load for the structure given in fig.3

.Objective Nos.: COB-4

Outcome Nos.: CO-3

Signature of HOD

Date:

Signature of faculty

Date:

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EVALUATION STRATEGY

Academic Year : 2021-22

Semester : I

Name of the Program: B.TECH YEAR: III Section: A & B

Course/Subject: STRUCTURAL ANALYSIS II
Course Code:

Name of the Faculty: V SRINIVASA REDDY Dept.: CIVIL ENGG.
Designation: PROFESSOR

10. TARGET:

11. Percentage for pass: 95%

b) Percentage of class:

Total number of students ENROLLED for this course	130
Total number of students APPEARED for the exam	130
Total number of students PASSED	120
Total number of students FAILED	10
Students who secured FIRST CLASS WITH DISTINCTION $\geq 70\%$	30
Students who secured FIRST CLASS 60-69%	50
Students who secured PASS CLASS 40-59%	40

TOTAL PASS PERCENTAGE: 92%

12. COURSE PLAN& CONTENT DELIVERY

The course is delivered as Lectures, Lecture with a quiz Tutorials, Assignments, Group Discussion Presentations, Site Visits, Illustrative Videos, and teacher supplied class lecture handouts. In addition to classroom lectures , tutorials are also planned to help the students understand and appreciate the challenges involved in practical implementations and also understand the engineering trade-offs to made while making practical implementations.

- Fifty (50) Class room lectures were planned for each Section (Sec A and B)

- Demonstrations are held through various illustrative Videos and Web classrooms
- Assignments and Tutorial work out classes are arranged for every unit of the syllabus

13. METHOD OF EVALUATION

Continuous Assessment Examinations (MID EXAM-I, MID EXAM-II)

The department follows continuous evaluation system through assignments, projects, Mid exams (2 Nos.) and an end semester examination. The continuous academic quality assessments carried out through a peer (external) review process once in a year. The suitable feedback from Training and Placement cell is also considered. Board of studies of the department includes two external experts (one from Reputed Academic Institute and another from Industry) which advocate areas of skills and knowledge to be improved upon by the students in the context of changing situation.

Continuous Assessment Marks (Best of MID EXAM-I, MID EXAM-II) – 30 Marks

Evaluated mid answer scripts are shown to students by respective subject teachers. Based on marks obtained by the students, remedial classes are conducted by the departments for slow learners.

Assignments/Seminars

The students' progress is continuously monitored through regular assignments and practice sessions to ensure the achievement of course outcomes. All components in any program of study will be evaluated continuously through internal evaluation and external evaluation component conducted as year-end/ semester-end examination. Internal evaluation includes two components I. Mid Examinations II. Assignments. Assignments improve the continuous learning capacity of student

Five (5) marks are earmarked for assignments out of Continuous Assessment Marks (30 Marks)

Quiz

Ten (10) marks are earmarked for Quiz or Objective type questions out of Continuous Assessment Marks (30 Marks) and Ten (10) marks for Subjective type questions

Semester/End Examination

The scheme of evaluation for every subject is for 100 marks, out of this, 30 marks are earmarked for continuous internal evaluation. End Semester Exam for 70 Marks

Others

The improvements, modifications and additions to the curriculum are governed by Board of Studies (BOS) and executed on a continuous basis based on the feedback from the stakeholders and changing societal needs. The meeting of BOS is held and the faculty member will be contributing in the curriculum development along with the experts from the IIT/Industry. The student class committee meets every semester and their views are incorporated in order to improve the curriculum.

Signature of HOD

Signature of faculty

Date:

Date:

Course Objectives – Course Outcomes Relationship Matrix

Course - outcomes Course Objectives	1	2	3	4	5
1	X				
2		X	X		
3				X	
4					X
5					

Assessments in Relation to CO's and COB's

Assessments:

1. ASSIGNMENT
2. INTERNAL EXAMINATION
3. EXTERNAL EXAMINATION
4. PRACTICAL PROJECTS
5. VIVA

Course outcomes Assessments	1	2	3	4	5
1	X	X	X	X	X
2	X	X	X	X	X
3	X	X	X	X	X
4		X	X	X	X
5	X	X	X	X	X

Assessments – Program Educational Objectives (PEOs) Relationship matrix

Assessments:

1. ASSIGNMENT
2. INTERNAL EXAMINATION
3. EXTERNAL EXAMINATION
4. PRACTICAL PROJECTS
5. VIVA

PEOs Assessments	1	2	3
1	X	X	X
2	X	X	X

3	X	X	X
4	X	X	X
5	X	X	X

GR18A3001/ STRUCTURAL ANALYSIS-II														
COs/POs	A	B	C	D	E	F	G	H	I	J	K	L	PSO's	
													1	2
1. Analyze various types of frames with and without sway using Moment distribution methods	H	M		M				M	M	M		M	M	
2. Analyze various types of frames using Kani's methods of Analysis	H	M		M		M		M	M	M		M		M
3. Evaluate the shear forces, bending moments and axial forces in beams, columns and at joints of multi-storey frames using approximate methods of analysis	H	M		M		M		M	M	M		M		
4. Analyze the simple beams and frames using stiffness matrix and flexibility matrix methods of analysis.	H	M		M	H	M		M	M	M		M	M	
5. Apply the principles of virtual work to estimate the collapse load and plastic moment carrying capacity of simple beams and frames.	H	M		M		M		M	M	M		M	M	



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RUBRIC TEMPLATE

Academic Year : 2021-22

Semester : I

Name of the Program: B.Tech Civil Engineering Year: III Section: A / B

Course/Subject: Structural Analysis-II

Course Code: **Sub Code: GR18A3001**

Name of the Faculty: _SP RAJU V & Dr.V.SRINIVASA REDDY Dept.: Civil Engineering

Designation: Asst.Professor /Professor

Objective: To learn design aspects of reinforced concrete structures.

Student Outcome: Learn design concepts, use of code, design of elements such as beams, columns, footings and slabs against strength and serviceability.

			Beginning	Developing	Reflecting Development	Accomplished	Exemplary	Score
S. No	Name of the Student	Performance Criteria	1	2	3	4	5	
1	19241 A0179	The level of knowledge on basic requirements for design	Low level of knowledge on basic requirements of design	Able to discuss the basic requirements of design	Ability to explain the basic requirements of design	Full knowledge on basic requirements of design	Analysing and implementing the knowledge of requirements of design	5

		The level of knowledge on Analysis of structural elements.	Low level of knowledge on Analysis of structural elements.	Able to discuss on Analysis of structural elements.	Ability to explain Analysis of structural elements.	Full knowledge on Analysis of structural elements.	Analysing and application of knowledge on Analysis of structural elements.	5
		The level of knowledge to draw SFD and BMD	Low level of knowledge to draw SFD and BMD	Ability to discuss and to draw SFD and BMD	Ability to explain and to draw SFD and BMD	Full knowledge on to draw SFD and BMD	Analysing and implementing the knowledge of to draw SFD and BMD	5
Average Score								5

			Beginning	Developing	Reflecting Development	Accomplished	Exemplary	Score
S. No	Name of the Student	Performance Criteria	1	2	3	4	5	
1	19241A0161	The level of knowledge on basic requirements for design	Low level of knowledge on basic requirements of design	Able to discuss the basic requirements of design	Ability to explain the basic requirements of design	Full knowledge on basic requirements of design	Analysing and implementing the knowledge of requirements of design	2
		The level of knowledge on Analysis of structural elements.	Low level of knowledge on Analysis of structural elements.	Able to discuss on Analysis of structural elements.	Ability to explain Analysis of structural elements.	Full knowledge on Analysis of structural elements.	Analysing and application of knowledge on Analysis of structural elements.	2

		The level of knowledge to draw SFD and BMD	Low level of knowledge to draw SFD and BMD	Ability to discuss and to draw SFD and BMD	Ability to explain and to draw SFD and BMD	Full knowledge on to draw SFD and BMD	Analysing and implementing the knowledge of to draw SFD and BMD	2
Average Score								2
			Beginning	Developing	Reflecting Development	Accomplished	Exemplary	Score
S. No	Name of the Student	Performance Criteria	1	2	3	4	5	
1	2024 5A01 30	The level of knowledge on basic requirements for design	Low level of knowledge on basic requirements of design	Able to discuss the basic requirements of design	Ability to explain the basic requirements of design	Full knowledge on basic requirements of design	Analysing and implementing the knowledge of requirements of design	3
		The level of knowledge on Analysis of structural elements.	Low level of knowledge on Analysis of structural elements.	Able to discuss on Analysis of structural elements.	Ability to explain Analysis of structural elements.	Full knowledge on Analysis of structural elements.	Analysing and application of knowledge on Analysis of structural elements.	4
		The level of knowledge to draw SFD and BMD	Low level of knowledge to draw SFD and BMD	Ability to discuss and to draw SFD and BMD	Ability to explain and to draw SFD and BMD	Full knowledge on to draw SFD and BMD	Analysing and implementing the knowledge of to draw SFD and BMD	2
		Average Score						

Course Objectives – Program Outcomes (POs) Relationship Matrix

Program -outcomes \ Course objectives	a	b	c	d	e	f	g	h	i	j	k	l	Pso1	Pso2
1	X	X		X	X	X				X			X	
2	X	X		X	X	X		X		X				X
3	X	X		X	X	X		X		X			X	
4	X	X		X	X	X		X		X			X	
5	X	X		X		X		X		X				X

Course Outcomes – Program Outcomes (POs) Relationship Matrix

Program - Outcomes \ Course-Outcomes	a	b	c	d	e	f	g	h	i	j	k	L	Pso1	Pso2
1	X	X		X	X	X				X				X
2	X	X		X	X	X		X		X				X
3	X	X		X	X	X		X		X			X	
4	X	X		X	X	X		X		X			X	
5	X	X		X		X		X		X			X	

Program Outcomes (POs) Relationship Matrix

Course: Structural analysis-II

Course Code: GR18A3001

Program -Outcomes \ Course	a	b	c	d	e	f	g	h	i	j	k	L
Structural Analysis-II	X	X		X	X	X		X		X		

Program Educational Objectives (PEOs) – Course Outcomes [CO] Relationship Matrix

PEOs \ Course Outcomes	1	2	3
1	X	X	
2	X	X	
3	X	X	
4	X	X	
5	X	X	X



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**Department of Civil Engineering
Descriptive Paper (2021-22)
III B.Tech. I Sem., I Mid-Term Examination, October 2021**

Structural Analysis -II

Time: 90 Minutes

Max Marks: 15

I Answer any Three Questions

Question No.		Marks	Blooms Levels*	Course Outcome
1	Analyze the frame shown in the fig1. below by Moment distribution Method and sketch the BMD	5M	BL2	CO1
2	Analyze the frame shown in the fig 2 below by Kani's Method and sketch the BMD.	5M	BL3	CO2
3	Analyze the continuous beam ABC loaded as shown in fig 3. by Kani's method, assuming EI as constant.	5M	BL2	CO3
4	Using portal method, analyze the frame shown in fig.4 for shear force, bending moment and axial force in all members. Area of each column is same, i.e. unity	5M	BL4	CO2

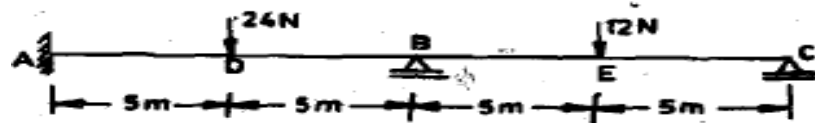
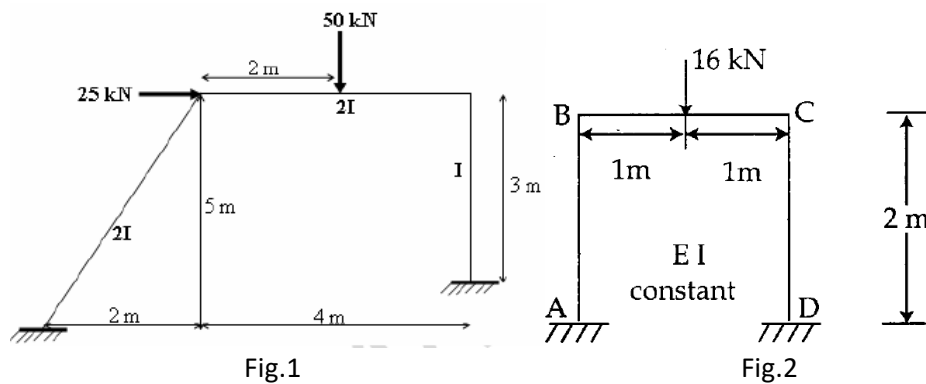


Fig.3



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Department of Civil Engineering

III B.Tech. I Sem., I Mid-Term Examination, October 2021

Structural Analysis -II

Time: 40 min

Max. Marks: 20

PART-A (Answer all questions)

(10 min)

1. Sway in portal frames may occur due to
 - a) asymmetry in geometry b) asymmetry in loading c) horizontal forces d) different support conditions
2. Total number of independent joint displacement is known as
 - a) Static indeterminacy b) degree of redundancy c) Kinematic Indeterminacy d) Degree of Freedom
3. Which of the following methods of structural analysis is a displacement method?
 - a) Slope deflection method b) Column analogy method c) Moment distribution method d) Kani's method
4. Carryover Moment is defined as _____
 - a) The moment applied at one end to cause unit slope at the support
 - b) The additional moment applied at one end to completely resist the rotation caused due to external loading
 - c) The moment developed or induced at one end due to a moment at another end
 - d) The moment applied at one end to cause unit slope at another end
5. When a structural member of the uniform section is subjected to a moment at one end only, then the moment required so as to rotate that end to produce a unit slope, is called _
 - a) Resistance of member b) Stiffness of member c) Capacity of member d) Potential of member
6. In moment distribution method, the sum of distribution factors of all the members meeting at any joint is always
 - a) Zero b) Less than 1 c) 1 d) Greater than 1
7. The basic assumption of Kani's method is to consider the deformations caused only by
 - a) bending moments b) shear forces c) axial forces d) rotations
8. The main advantage of using Kani's method for structural analysis is because it is
 - a) self-corrective b) distributes unbalanced moments c) distributes rotations d) approximate method
9. Select the correct statement
 - a) Moment distribution method is self-corrective
 - b) Kani's method distributes the total joints moment at any stage
 - c) Kani's method distributes the unbalanced moments at the joints method
 - d) Moment distribution method is simple and easy to apply for sway frames
10. Relation between Distribution Factor (DF) and Rotation Factor (RF)
 - a) $RF = -0.5 \times DF$ b) $RF = 0.5 \times DF$ c) $RF = 1.5 \times DF$ d) $RF = -2.5 \times DF$



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Department of Civil Engineering

Descriptive Paper (2021-22)

III B.Tech. I Sem., II Mid-Term Examination, December 2021

Structural Analysis -II

Time: 90 Minutes

Max Marks: 15

I Answer any Three Questions

Question No.		Marks	Blooms Levels*	Course Outcome
1	Analyze the frame shown in the fig.1 below using Stiffness matrix or Flexibility matrix method	5M	BL3	CO3
2	Calculate the shape factor for the given section in fig. 2 wrt. to the strong axis. Take $f_y=355\text{MPa}$	5M	BL4	CO3
3	Find the plastic moment carrying capacity of the continuous beam loaded as shown in fig.3 below	5M	BL4	CO4
4	Find the collapse load for the portal frame loaded as shown in fig 4 . below. Take load factor as 1.5.	5M	BL5	CO5

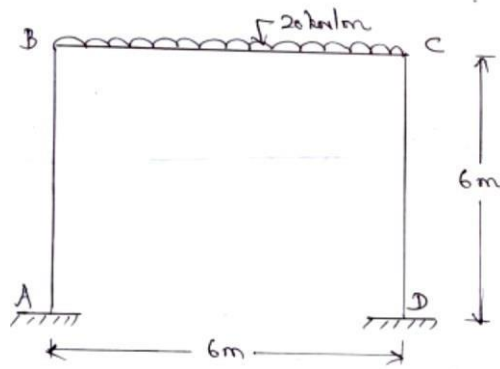


Fig.1

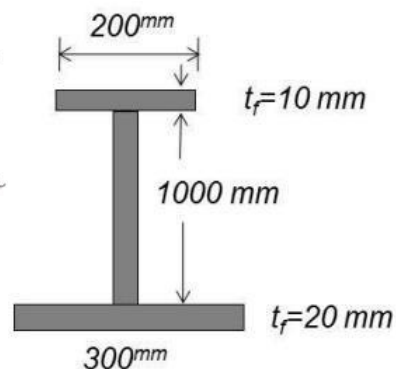


Fig.2

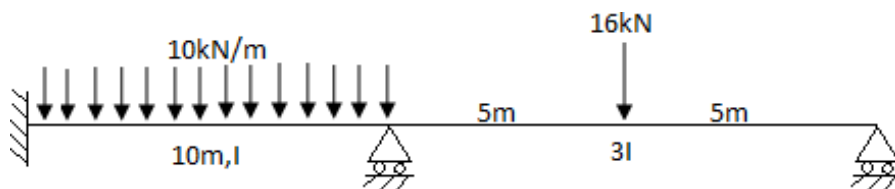


Fig.3

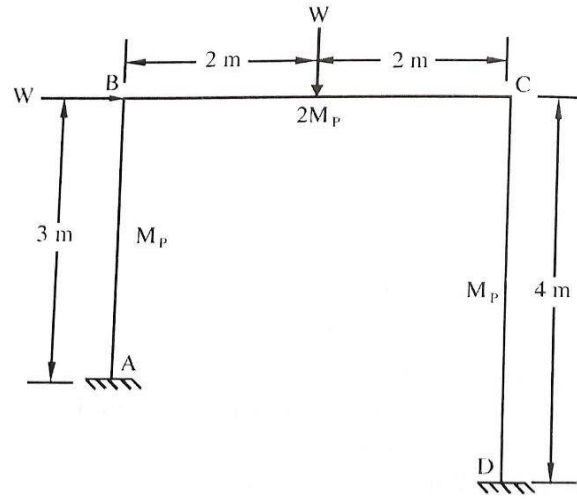


Fig.4



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Department of Civil Engineering
Descriptive Paper (2021-22)
III B.Tech. I Sem., II Mid-Term Examination, December 2021

Structural Analysis -II

- The stiffness matrix method considers -----as unknowns.
 - Displacements
 - Forces
 - Moments
 - Torques
- The neutral axis of the completely plastic section is also known as,
 - Complete area axis
 - Neutral axis
 - Equal area axis
 - Centroidal axis
- Shape factor is the ratio of
 - Plastic moment to the elastic moment
 - Elastic moment to the plastic moment
 - Elastic modulus to the plastic modulus
 - Plastic modulus to the elastic modulus
- The maximum bending moment is equal to M_p is the principle behind
 - Static theorem
 - Kinematic theorem
 - Uniqueness theorem
 - Clapeyron's theorem
- The work done by plastic hinges is equal to external work done by loads is the principle behind
 - Static theorem
 - Kinematic theorem
 - Uniqueness theorem
 - Clapeyron's theorem
- Both elastic and plastic methods neglect _____
 - live load on structure
 - dead load on structure
 - deformations due to load
 - influence of stability
- Which of the following relation about plastic moment is correct?
 - $M_p = Z_p / f_y$
 - $M_p = Z_p + f_y$
 - $M_p = Z_p f_y$
 - $M_p = Z_p - f_y$
- Match the pairs with correct shape factor

Cross section	Shape factor (average or maximum)
A) Circular	(i) 1.8
B) Rectangular	(ii) 1.14
C) Wide flange I-section (about major axis)	(iii) 1.7
D) Channels (about minor axis)	(iv) 1.5

 - A-i, B-ii, C-iii, D-iv
 - A-iv, B-iii, C-ii, D-i
 - A-iii, B-iv, C-ii, D-i
 - A-iii, B-ii, C-iv, D-i
- What is the important feature of stiffness method over flexibility method of analysis?
 - Not essential to select the redundant
 - Have to determine the degree of static indeterminacy
 - Remove the selective redundant for the purpose of primary determinate stable structure
 - Difficult for large and complex structures
- To generate the jth column of the flexibility matrix
 - A unit force is applied at coordinate j and the displacements are calculated at all coordinates
 - A unit displacement is applied at coordinate j and the forces are calculated at all coordinates
 - A unit force is applied at coordinate j and the forces are calculated at all coordinates
 - All the above



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Department of Civil Engineering

Descriptive Paper (2021-22)

III B.Tech. I Sem., I Mid-Term Examination, October 2021

Mid-I Examination Marks Sheet

S. No	Roll No	Student Name	Subjective Marks (15)	Objective Marks (5)	Total Marks (20)
1	19241A0161	ABDUL RAHEEM	7	5	12
2	19241A0162	ANEMONI MURALI MANOHAR	10	3	13
3	19241A0163	ASKANY HARISH SAGAR	9	4	13
4	19241A0164	BODLA AKSHITH	11	3	14
5	19241A0165	BURRA VAMSHI KRISHNA	15	4	19
6	19241A0166	CHERLAKOLA AKHILA	13	4	17
7	19241A0167	CHINTAPALLI VIKRAM	9	4	13
8	19241A0168	CHIRRIBOYINA DHANYA	9	4	13
9	19241A0169	D SREE MADHURI	12	4	16
10	19241A0170	GADDAM SAHITHI	12	3	15
11	19241A0171	GAJJALA SUKENDHAR REDDY	3	5	8
12	19241A0172	YASHASWI GANGAVARAM	4	3	7
13	19241A0173	GINDHAM ADITYA KUMAR	11	3	14
14	19241A0174	GUDHETI NARENDAR REDDY	10	3	13
15	19241A0175	GUMMADI SAI PRATEEK REDDY	AB	AB	AB
16	19241A0176	HANMAPUR DHEERAJ GOUD	1	4	5
17	19241A0177	JAVVAJI AISHWARYA	11	4	15
18	19241A0178	JULAPALLY NITHIN RAO	0	4	4
19	19241A0179	K NAVEEN	3	4	7
20	19241A0180	K RAJESHWARI	15	4	19
21	19241A0181	KACHAVA SURENDAR	9	5	14
22	19241A0182	KODATHALA INDU	15	3	18
23	19241A0183	KOTARU SRINIVASA VARAPRASAD	10	4	14
24	19241A0184	MALOTH RAHUL	3	4	7
25	19241A0185	MATURI SATHVIK	15	3	18
26	19241A0186	MD ABDUL MAAJID	3	3	6
27	19241A0187	MEDARI DAYANA	AB	AB	AB
28	19241A0188	NARSINGA SANDEEP	2	4	6
29	19241A0189	PALANATI ROHITH	3	3	6
30	19241A0190	PURALASETTY BHAVANA	13	3	16
31	19241A0191	RODDA MALAVIKA REDDY	13	3	16
32	19241A0192	SAPRAM NAGA SRILOWKYA MUKTHA	AB	AB	AB
33	19241A0193	SHAIK PARVEZ ANSARI	AB	AB	AB

34	19241A0194	SIDDELA THARUN KUMAR	7	3	10
35	19241A0195	TALARI CHANDANA SREE	3	3	6
36	19241A0196	VALLEPU KALYAN	10	4	14
37	19241A0197	VRASHAB PATEL	15	5	20
38	19241A0198	YELLAVULA NARENDER	7	4	11
39	19241A0199	BADDELA SAI THARUN	8	4	12
40	20245A0101	Aamanchi Bowmi	15	5	20
41	20245A0102	Aviraboina Sai Chaithanya	15	4	19
42	20245A0103	Bairy B S Anirudh	12	3	15
43	20245A0104	Daddu Tejasree	14	4	18
44	20245A0105	Dopathi Raviteja	15	4	19
45	20245A0106	Eruventi Niharika	15	4	19
46	20245A0107	Gaddamidi Aanil	9	3	12
47	20245A0108	Gandla Rishik Raj	7	3	10
48	20245A0109	Gone Naveen Kumar	10	5	15
49	20245A0110	Kota Vishal	13	5	18
50	20245A0111	Kummari Mahesh	6	4	10
51	20245A0112	Lakavath Anil	5	4	9
52	20245A0113	Madavaram Rohith	10	4	14
53	20245A0114	Mandala Akshitha	13	4	17
54	20245A0115	M Manjunath	9	4	13
55	20245A0116	Porandla Nababhushanam	14	4	18
56	20245A0117	Pulishetty Bhavani	7	4	11
57	20245A0118	Racha Kranthi Ranadeer	8	3	11
58	20245A0119	S Manoj Kumar	15	4	19
59	20245A0120	Samudrala Manideep	14	4	18
60	20245A0121	Sangepaga Goutham	4	5	9
61	20245A0122	Sodadasi Rahul	13	4	17
62	20245A0123	Vanga Harshith	2	4	6
63	20245A0124	Choleti Vineetha	13	4	17
64	20245A0125	Gangula Grishma	13	4	17
65	20245A0126	Bollampalli Sai Poojith	8	5	13
66	20245A0127	Pamulapati Sumanth	5	4	9
67	20245A0128	T Sanghamithra	15	5	20
68	20245A0129	Abeda Akanksha	13	3	16
69	20245A0130	Doppalapudi Ramvineeth Sai	7	4	11
70	20245A0131	Pilly Uday Kiran	7	4	11

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III B.Tech. I Sem., II Mid-Term Examination, December 2021

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12	19241A0172	YASHASWI GANGAVARAM	0	4	4
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34	19241A0194	SIDDELA THARUN KUMAR	4	3	7
35	19241A0195	TALARI CHANDANA SREE	2	1	3
36	19241A0196	VALLEPU KALYAN	11	3	14
37	19241A0197	VRASHAB PATEL	15	5	20
38	19241A0198	YELLAVULA NARENDER	13	3	16
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