

Accredited by NAAC with '8+' Grade, 2(f) & 128 Stotus Institution by UGC

IG Valley, Madurai Main Road, Manikandam, Tiruchirappalli - 620012

NAAC DOCUMENTS

QUALITY INDICATOR FRAME WORK

CRITERION - 1

CURRICULAR ASPECTS

SUBMITTED BY

IQAC

INTERNAL QUALITY ASSURANCE CELL INDRA GANESAN COLLEGE OF ENGINEERING





DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2021-2022 / EVEN SEMESTER

1.2 Academic Flexibility (30)

1.2.1 Number of Certificate/Value added courses offered and online courses of MOOCs, SWAYAM, NPTEL etc. (where the students of the institution have enrolled and successfully completed during the last five years)

AND

1.2.2 Percentage of students enrolled in Certificate/ Value added courses and also completed online courses of MOOCs, SWAYAM, NPTEL etc. as against the total number of students during the last five years

VAC Titl	e: ST	ADD Pr	Is.R.Sheela, Ms.Swetha rainer, D Architects & Constructions richy 07.03.2021 To: 11.03.2021 Duration: 30 Hours tt: DEPARTMENT OF CIVIL ENGINEERING							
Resource	Person	Train 5D A	ner, Architects &			ns				
Date of c	onduct i	from:	07.03.2021	id H	To:	11.03.20	21	Duration:	30 Hours	
Organize	d Depai	tment:	DEPART	MENT	OF C	IVIL ENG	INEER	RING		
Participa Year:			Registered:	17						
Venue:	Civil	Seminar	Hall							

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COLLEGE OF ENGINEERING
Madurai Main Road (NH-45B), Manikandam, Tiruchirappalii - 620 012
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Ref: IGCE/CIVIL/2021-22 VAC/01

03.03.2021

Department Of Civil Engineering

Academic Year 2021-2022 Even Semester

DEPARTMENT CIRCULAR

Department of Civil Engineering and IQAC of IGCE in association with 5D Architects & Constructions. Is going to organize Value Added Course for all second, third and final year students on "STAAD.Pro" from 07.03.2021 to 11.03.2021. Certificates will be issued to the eligible Participants at the end of the course. This training is to be provided in our campus.

Resource Person Details:	Ms.R.Sheela, Ms.Swetha
	Trainers
	5D Architects & Constructions
	Trichy
Session Taken from:	Civil Seminar Hall

Cc:

PRINCIPAL OFFICE

HOD/CIVIL & Faculty Members

All II,III and IV Year B.E CIVIL Classes

IQAC Coordinator

Notice Board

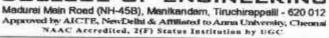
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Pr. G. Balakrishnan, M.E., Ph.D.,
Principal
Indra Ganesan College of Engine 19
IG Valley, Macural Iviain Road
Manikandam, Trichy-620 012.



COLLEGE OF ENGINEERING





Value Added Course on "STAAD.PRO"

SYLLABUS

S.NO	TOPIC COVERED	DURATI ON (in hours)	DATE
1	Introduction to staad pro modeling of 2d rc frames,	3	07.03.202
2	Node creation adding beams, member property and loading analysis & view results	3	07.03.2021
3	Introduction to 3d structures, node creation(theory & practical) types of loading, load cases for rc building	3	08.03.202
4	types of loading, load cases for rc building	3	08.03.202
5	Calculation for wind and seismic analysis and view output files.	3	09.03,202
6	results normal design for rc building interactive design RC	3	09.03.2021
7	Modeling of 2d steel structures analysis	3	10.03.2021
8	view results introduction to structure wizard model type steel 3d	3	10.03.2021
9	Normal design for steel structures interactive design	3	11.03.2021
10	steel modeling of plates load cases for plates water tank design, analysis and view output files results	3	11.03.2021
11	Exam	_1_	11.03.2021
	Total Hours	30 (Excluding Test)	-

Accoordinator

Dr. G. Balakrishnan, M.E., Ph.D.,

Principal
Indra Ganesan College of Engineering
IG Valley, Wadurai Main Read
Manikandam, Trichy-\$28 912.

Sivarant Hob/CIVIL



COLLEGE OF ENGINEERING





STUDENTS PARTICIPATION LIST

VAC PROGRAM-STAAD.PRO

S.No.	Reg.No	Student's Name	Year/ Branch
1.	811218103001	Akash J	IV/CIVIL
2.	811218103002	Mahendran M	IV/CIVIL
3.	811218103003	Musarf Ali S	IV/CIVIL
4.	811218103004	Prabu JJ	IV/CIVIL
5.	811219103002	Vignesh R	III/CIVIL
6.	811220103011	Dharun Kumar R	II/CIVIL
7.	811220103020	Gunaseelan G	II/CIVIL
8.	811220103024	Iyyapan Mani A	II/CIVIL
9.	811220103025	KalanchiyaMuniyaraj B	II/CIVIL
10.	811220103029	ManiKandan M	II/CIVIL
11.	811220103030	Mohanapriya S	II/CIVIL
12.	811220103032	MuthuSelvam A	II/CIVIL
13.	811220103041	Sudhakar R	II/CIVIL
14.	811220103046	Vishwa S	II/CIVIL
15.	811220103303	EvanjalineJoycy S	II/CIVIL
16.	811220103306	Vishva P	II/CIVIL
17.	811220103307	Thulasimani S	II/CIVIL

Coordinator

Dr. G. Balakrishnan, M.E., Ph.B.,

Principal

Indre Ganesan Cullege of Engineering IG Valley Medical Main Road Manikandam, Trichy-620 012.





Madurai Main Road (NH-45B), Manikandam, Tiruchirappatti - 620 012 Appareed by AICTE, New Delhi & Affilianci to Arms University, Chemia NAAC Accredited, 2(F) Status Institution by UGC

Name of the Student:

Year/Sem:

AU Register Number:

Value Added Course on "STAAD.PRO"

MULTIPLE CHOICE QUESTIONS (25X1=25 MARKS)

- 1. Which of the following structural loads are not applied commonly to a building?
 - a) Environmental load
 - b) Live load
 - c) Dead load
 - d) Rain load
- 2. Which of the following is statically determinate structure?
 - a) Two hinged arch
 - b) Fixed beam
 - c) Double overhanging
 - d) Continuous beam

Br. G. Balakrishnan, M.E., Ph.D.,

Principal

Indra Ganesan College of Engineering 3. Which of the following material is not used in making trusses. Ned Discourse Main **ead a) Metal home Manikandam, Trichy-620 012.

- a) Metal bars
- b) Concrete
- c) Wooden struts
- d) Channel
- 4. Why base plate is provided in short roof trusses?
 - a) For rigidity
 - b) As provision for temperature related expansion/contraction
 - c) To transmit load effectively
 - d) For stability
- 5. Which of the following is false for deflection of a point nearby a fixed support?
 - a) Displacement and slope is zero
 - b) Displacement as well as slope is non-zero
 - c) Displacement is zero
 - d) Slope is zero
- 6. Which structure will perform better during earthquake?
 - a) Statically determinate and indeterminate
 - b) Depends upon magnitude of earthquake
 - c) Statically indeterminate
 - d) Statically determinate



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7. Which type of structure would cost less in terms of materials?

- a) Statically indeterminate
- b) Both will cost equally
- c) Depends upon loading
- d) Statically determinate

ð.	Which of the following	is carried by	truss members?	
				m m 1 1 -talaman MT

- a) flexural load
- b) bending load
- c) axial load
- d) shear load

3.	100			CONTRACTOR OF		DL D
Pr. G.	Bal	akri	sh	nan,	M.E.,	Ph.D.

Principal

Indra Ganesan College of Engineering IG Valley, Madurai Main Road Manikandam, Trichy-628 012.

9.	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) Stiffness of member
- b) Capacity of member
- c) Potential of member
- d) Resistance of member

10. If in an interior beam, adjacent structures are exactly similar then the tributary area is:-

- a) Obtuse triangle
- b) Right angled triangle
- c) Acute triangle
- d) Trapezium

11. Which of the following methods for solving indeterminate structures are easiest for computational purposes?

- a) Displacement method
- b) Method of consistent deformation
- c) Moment area method
- d) Force method

12. Which of the following methods of structural analysis is a force method?

- a) three moment equation
- b) slope deflection method
- c) column analogy method
- d) moment distribution method

13. Force-displacement requirement of statically indeterminate structures depend upon which factor?

- a) supports
- b) material's response
- c) position of load applied
- d) magnitude of load applied



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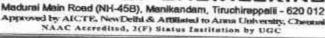


- 14. To draw qualitative ILD of indeterminate structure, which of the following concept is used.
 - a) MullersBreslou's Principle
 - b) Kani's Method
 - c) Unit Load Method
 - d) Castigilano's First energy theorem
- 15. Which of the following material will have the highest value of response modification factor?
 - a) Structural steel frames
 - b) Reinforced concrete shear walls
 - c) Wood
 - d) Reinforced concrete frames with flexible joints
- 16. Live loads, with time can vary in:
 - a) Magnitude
 - b) Position
 - c) Neither position nor magnitude
 - d) Position as well as magnitude
- Dr. G. Balakrishnan, M.E., Ph.D., Principal Indra Ganesan College of Engineering

IG Valley, Madura: Main Road Manikandam, Trichy-628 012.

- 17. Most of the loads applied to a building are environmental load. State whether this statement is true or false.
 - a) True
 - b) False
- 18. Building codes require the partition load to be considered even without partition if live load is less than
 - a) 60 psf
 - b) 70 psf
 - c) 80 psf
 - d) 90 psf
- 19. In the method used to establish the magnitude of live load, what is the reference time period?
 - a) 30 years
 - b) 35 years
 - c) 50 years
 - d) 60 years
- 20. Impact load results from which type of effects of loads applied?
 - a) Static
 - b) Dynamic
 - c) Static and dynamic
 - d) Neither static nor dynamic







- 21. How an increase in the pitch of the roof does affects the amount of load that can be placed on it?
 - a) It increases
 - b) It decreases
 - c) Remains constant
 - d) Depends upon case
- 22. Which type of drainage system will collect the rainwater?
 - a) Primary
 - b) Secondary
 - c) Tertiary
 - d) Primary and tertiary
- 23. In which of the following cases is ASCE procedure not applied?
 - a) Enclosed structure
 - b) Regular shape grid
 - c) High rise structure
 - d) Roof with 60 ft. height
- 24. For the validity of principle of superposition, materials should behave in whichmanner?
 - a) linear-elastic
 - b) non-linear-elastic
 - c) Non-linear- inelastic
 - d) Linear- inelastic
- 25. If in a planar system, only 2 reaction forces are acting, then the system is:
 - a) Essentially unstable
 - b) Essentially stable
 - c) Can't say
 - d) None of the mentioned

Dr. G. Balakrishnan, M.E., Ph.D., Principal India Ganesan College of Engineering IG Valley, Madurai Main Road Manikandam, Trichy-528 912.



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Value Added Course on "STAAD.PRO"

ANSWER KEY

1	21	d	16	a	11	c	6	d	1
8	22	ь	17	С	12	а	7	d	2
	23	с	18	b	13	с	8	ь	3
c	24	с	19	a	14	a	9	ь	4
a	25	ь	20	a	15	b	10	b	5

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Cardinator

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal
Indra Ganesan College of Engineering
IG Valley, Madural Main Road
Manikandam, Trichy-620 012.



	REPORT ON VALUE ADDED COURSE STAAD.PRO							
Title:			S	TAAD.PRO				
Resource Pe	P.	Ms.R.SHEELA, Ms. D ARCHITECTS &			СНУ			
Date of cond	duct from	: 07. 03 .202	To:	11.19.2021	Duration:	30 Hours		
Organized D	Departmen	t: Civil Enginee	ering					
articipant Y	Year: 2,	3, 4		No. of S	tudents Registe	ered: 17		
/enue: O	nline Goo	gle meet						
Stude Deve	ents are ex lop a foun	pected to learn and adational understand	ing of civi	l software's.	need in the wo	orkplace.		
		As	sessment	Process				
attenuance	e = (0.5)	securing more that e to receive the certi Attendance in VAC	ficate for	the VAC course	conducted			

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Dr. G. Balakrishnan, M.E., Ph.D., Principal Indra Ganesan College of Engineering

IG Valley, Madurai Main Road Manikandam, Trichy-620 812.



REPORT ON VALUE ADDED COURSE

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Dr. G. Balakrishnan, M.E., Ph.D.,

Indra Ganesan College of Engineering IG Valley, Madural Main Road Manikandam, Trichy-620 012.

VAC Coordinator

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PRINCIPAL



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Academic Year 2021 -2022 EVEN Semester

STUDENTS PARTICIPATION LIST

MARK SHEET VALUE ADDED COURSE PROGRAM - STAAD.PRO

Dr. G. Balakrishnan, M.E., Ph.D.,
Principal
Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-620 012

S.No.	Reg.No	Studentle Name	Year/	Attenda	nce Details	VAC-M	CQ TEST	OVERALL
		- State of S	Branch	No. of Session Attended	Attendance Mark(100) (A)	No of Correct	MCQ Mark(100)	MARK(100) (50% of A + 50% of B)
1.	811218103001	Akash J	IV/CIVIL	27	90	Answers	(B)	
2.	911219102002		200.000	7.5	50	18	72	81
2.	811218103002	Mahendran M	IV/CIVIL	30	100			
3.	911219102002				100	20	80	90
Э.	811218103003	Musarf Ali S	IV/CIVIL	30	30 100	0		20
4.	811218103004				100	18	72	86
-71	011210103004	Prabu JJ	IV/CIVIL	30	100		0.000	00
5.	811219103002	10				20	80	90
7.	011219103002	Vignesh R	III/CIVIL	27	90	18	70	24860
6.	811220103011	The second		0.00	8.8	10	72	81
	011220103011	Dharun Kumar R	II/CIVIL	30	100	72		
7.	811220103020	C				17	68	84
1320	011220103020	Gunaseelan G	II/CIVIL	30	100			01
8.	811220103024	Transport III			57,000	18	72	86
N/7890	011220103024	Iyyapan Mani A	II/CIVIL	27	90	18	72	0.4
9.	811220103025	Volenchia M.			3,511-04		12	81
	0.1220103023	KalanchiyaMuniyaraj B	II/CIVIL	27	90	18	72	0.1
10.	811220103029	Monikanda				3.30	12	81
		ManiKandan M	II/CIVIL	30	100	ASSP		
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Academic Year 2021 -2022 EVEN Semester

STUDENTS PARTICIPATION LIST

MARK SHEET VALUE ADDED COURSE PROGRAM - STAAD.PRO

11.	811220103030	Mohanapriya S	II/CIVIL	30	100			
					100	17	68	84
12.	811220103032	MuthuSelvam A	II/CIVIL	30	100	10		2514
13	811220103041	Sudhala D	TY COUNTY			18	72	86
		Sudhakar R	II/CIVIL	30	100	22	88	94
14.	811220103046	Vishwa S	II/CIVIL	30	100			- 77
-			100000	50	100	20	80	90
15.	811220103303	EvanjalineJoycy S	II/CIVIL	27	90	18	72	81
16	811220103306	Wieles P	111000			Capaisa	7.55	01
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17.	811220103307	Thulasimani S	II/CIVIL					
		Thurashiralli S	IDCIVIL	30	100	20	80	90

Dr. G. Balakrishnan, M.E., Ph.D., principal India Canesan College of Engineering 15 valley, Mindural Main Road Mankandam, Irichy-620 032



COLLEGE OF ENGINEERING
Madurai Main Road (NH-45B), Manikandam, Tiruchirappelli - 620 012
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Department of CIVIL ENGINEERING

Academic Year 2021-2022 EVEN Semester

STUDENTS PARTICIPATION LIST

VAC PROGRAM-STAAD.PRO

5.No.	Reg.No	Student's Name	Year! Branch	DATE: 07.03.21		DATE: 08.03.21		DATE: 09.03.21			3.21	III 273	ATE: .03.21	NO OF SENSION	SIGNATURE
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Dr. G. Balakrishnan, M.E., Ph.D.,

Indra Gamesan Contract Confineering IG Valley, William Road Manikandam, Trichy-620 012.



COLLEGE OF ENGINEERING
Medural Mein Roed (NH-45B), Menikandem, Tiruchirappelli - 620 012
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10.	811220103029	ManiKandan M	H-CIVII.		-	-	10	1	-	V	V		-	09	1 wasy
11.	811220103030	Mehanapriya S	INCIVIL	V		~	-	1	~	1	V	~	~	lo	ומישניםייות
12	811220103032		INCINIT	~	1	1	1	~	V	-	V	V	V	to	8-20
13.	811220103041	MuthuSclvam A	INCIVIL	V	V	1 4	v	1	~	V	V	~	~	10	D. cecific
14		Sudhakar R		V	V	4	1	1	V	V	V	-	v	10	R. Sex
15	811220103046	Vishwa S	INCIVIL	V		1	~	V	V	V	V	V	V	10	
	811220103303	EvanjalineJoyey S	INCINIT	V	0	V	1	~	J	V	~	./	V	da	SVI
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Dr. G. Balakrishnan, M.E., Ph.D., Principal Indra Ganesan Curring of Engineering

IG Valley, when wain Read Manikandam, Tradiy-520 012.



Madural Mein Road (NH-45B), Manikandam, Tiruchirappelli - 620 012 Approved by AICTE, NovtDelhi & Affiliated to Amus University, Cheomal NAAC Accredited, 2(F) Status Institution by UGC



Name of the Student : Sanata R

AU Register Number: \$11220103041

Year/Sem: 1 Latin

Value Added Course on "STAAD.PRO"

MULTIPLE CHOICE QUESTIONS (25X1=25 MARKS)

1. Which of the following structural loads are not applied commonly to a building?

- a) Environmental load
- b) Live load
- c) Dead load
- **DRain** load

2. Which of the following is statically determinate structure?

- a) Two hinged arch
- b) Fixed beam
- c) Double overhanging
- (d) Continuous beam

Dr. G. Balakrishnan, M.E., Ph.B., Principal

Indra Ganesan Collision of Engineering IG Valley, Medural Main Road

Which of the following material is not used in making trusses and and Trichy-620 012.

- a) Metal bars
- b) Concrete
- (c) Wooden struts
 - d) Channel

4. Why base plate is provided in short roof trusses?

- a) For rigidity
- (b) As provision for temperature related expansion/contraction
- (c) To transmit load effectively
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5. Which of the following is false for deflection of a point nearby a fixed support?

- a) Displacement and slope is zero
- (b) Displacement as well as slope is non-zero
- c) Displacement is zero
- d) Slope is zero

6. Which structure will perform better during earthquake?

- a) Statically determinate and indeterminate
- .b) Depends upon magnitude of earthquake
- Statically indeterminate d) Statically determinate



c) position of load applied d) magnitude of load applied

COLLEGE OF ENGINEERING
Medurei Mein Road (NH-45B), Manikandem, Tiruchirappelli - 620 012
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7 Which type of structure would o	cost less in terms of materials?
Statically indeterminate	
b) Both will cost equally	0
c) Depends upon loading	(6)
d) Statically determinate	C.
8. Which of the following is carried	by truss members? Dr. G. Balakrishnan, M.E., Ph
a) flexural load	Dr. G. Balakrishitati, M.L., C.
b), bending load	Index Ganesan Cosh do of Engineer
(c) axial load	IG Valley, Miles is Main Road
d) shear load	Manikandon, Furthy-620 012.
9. When a structural member of the	uniform section is subjected to a moment at
	quired so as to rotate that end to produce a unit
slope, is called	 Mile wall 6.0 Page All in Self-interned between the determination of the Total Control of Page 17 and the Total of T
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c) Potential of member	
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b) slope deflection method	
column analogy method	
d) moment distribution method	
13. Force-displacement requirement of	of statically indeterminate structures depend
upon which factor?	er de la desenta Talendo de Calabra (Calabra) de la Calabra (Calabra) de Calabra (Calabra) (Cal
a) supports	
b) material's response	



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Dr. G. Balakrishnan, M.E., Ph.D.,

14. To draw qualitative ILD of indeterminate structure, which of the following

- a) MullersBreslou's Principle
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- a) Magnitude
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Indra Ganesan College of Engineering IG Veiley, Acadinal Wain Road Manikandam, Trichy-620 012. 17. Most of the loads applied to a building are environmental load. State whether this statement is true or false. a) True

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18. Building codes require the partition load to be considered even without partition a) 60 psf

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- a) 30 years
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COLLEGE OF ENGINEERING

Madurai Main Road (NH-45B), Manikandam, Tiruchirappalii - 620 012 Appared by AICTE, NewDelbi & Affiliated to Asini University, Chemial NAAC Accredited, 3(F) Status Institution by UCC



- 21. How an increase in the pitch of the roof does affects the amount of load that can be placed on it?
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Dr. G. Balakrishnan, M.E., Ph.D.

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Name of the Student:

Year/Sem: Il /civil

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principal Indra General Comma of Engineering

IG Valley Main Read

Manikandani, Frichy-620 912.

AU Register Number:

Value Added Course on "STAAD.PRO"

MULTIPLE CHOICE QUESTIONS (25X1=25 MARKS)

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- 5. Which of the following is false for deflection of a point nearby a fixed support?
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- 6. Which structure will perform better during earthquake?
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- Both will cost equally
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- 8. Which of the following is carried by truss members?
 - a) flexural load
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(D:

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Principal

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IG Valley, Madurai Main Read

Manikandam, Trichy-\$28 012.

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Principal

Indra Ganesan College of Engineering

IG Valley, Madurai Main Read Manikandam, Trichy-628 012.

Name of the Student: Mahenowan. M

Year/Sem: TV-CEVEL

AU Register Number: 8112181 03002

Value Added Course on "STAAD.PRO"

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er. G. Balakrishnan, M.F. Ap. D.

Princip.

IG Valley, Madurain Road

Manikandam, chy-628 912.



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Manikandam, Trichy-628 812.



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This is to certify that Mr. AKASH J of IV Year has successfully completed the Value Added Course "STAAD pro" organized by Department of CIVIL Engineering in Association with "5D Architect and Construction" from 7.03.2021 to 11.03.2021 (5 days) during the Academic year 2021-2022.

5D Architect and Construction

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Principal

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Principal
Indra Ganesan College of Engineering
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Engineering in Association with "5D Architect and Construction" from 7.03.2021 to

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Managing Director

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Principal

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Principal
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Dr. G. Balakrishnan, M.E., Ph.D.,

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Indra Ganesan College of Engineering
IG Valley, Madurai Main Road
Manikandam, Trichy-520 012.



CERTIFICATE OF PARTICIPATION

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This is to certify that Mr. VIGNESH R of III Year has successfully completed the Value Added Course "STAAD pro" organized by Department of CIVIL

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Indra Ganesan College of Engineering IG Valley, Madurai Main Road Manikandam, Trichy-620 012 Principal



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This is to certify that Mr. GUNASEELAN G of II Year has successfully completed the Value Added Course "STAAD pro" organized by Department of CIVIL Engineering in Association with "5D Architect and Construction" from 7.03.2021 to 11.03.2021 (5 days) during the Academic year 2021-2022.

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5D Architect and Construction

Principal

Indra Ganesan College of Engineering

Dr. G. Balakrishnan, M.E., Ph.D.,
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Indra Ganesan College of Engineering
IG Valley, Madural Main Road

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Indra Ganesan College of Engineering IG Valley, Madurai Main Road Manikandam, Trichy-620 012. Principal



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This is to certify that Mr. KALANCHIYAMUNIYARAJ B of II Year has successfully completed the Value Added Course "STAAD pro" organized by Department of CIVIL Engineering in Association with "5D Architect and Construction" from 7.03.2021 to

11.03.2021 (5 days) during the Academic year 2021-2022.

Managing Director,

5D Architect and Construction

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Dr. G. Balakrishnan, M.E., Ph.D.,

Principal
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IG Valley, Madural Main Road
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