

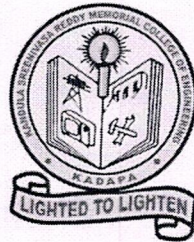
Kandula Srinivasa Reddy Memorial College of Engineering (Autonomous)

Kadapa-516003. AP

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(An ISO 9001-2008 Certified Institution)

Department of Civil Engineering



Certification Course

on

Requirements and estimation of framed building structures

Course Instructor:

Prof. V. Giridhar,

Professor, Civil Engg. Dept., KSRMCE

Course Coordinator:

Dr. I. Srinivasula Reddy,

Assistant Professor, Civil Engg. Dept.,
KSRMCE

Date: 01/10/21 to 18/10/21



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Kadapa, Andhra Pradesh, India- 516 003

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Lr./KSRMCE/CE/2021-22/

Date: 21-09-2021

From

Dr. I. Srinivasula Reddy,
Asst. Professor,
Course Coordinator,
Dept. of Civil Engineering,
KSRMCE,
Kadapa.

To

The Principal,
KSRMCE,
Kadapa.

Sub: Permission to Conduct Certificate Course – Reg.

Respected Sir,

The Department of Civil Engineering is planning to offer a certification course on “Requirements and estimation of framed building structures” for B. Tech. students of KSRMCE. The course will start on 01st Oct. 2021 and the course will run for two weeks. In this regard, I am requesting you to accept the proposal to conduct certificate course.

Thanking you

Forwarded to principal sir
[Signature]

Yours faithfully

[Signature]
(Dr. I. Srinivasula Reddy)

Permitted
U. S. S. mm/5



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Cr./KSRMCE/CE/2021-22/

Date: 29/09/2021

Circular

The Department of Civil Engineering is offering a certification course on Requirements and Estimation of Framed Building Structures. The course will start on 01-10-2021 in CADD Lab., Department of Civil Engineering. In this regard, interested students of KSRMCE are required to register for the Certification Course. The registration link is given below.

<https://docs.google.com/forms/d/f1d3WGbKEACcmxhiQYP1JJtygsq1I1TGkkYGsGb3n6GzMN3A/edit>

For any information regarding the course contact,

The Course Coordinator
Dr. I. Srinivasula Reddy,
Assistant Professor,
Dept. of Civil Engg.-KSRMCE.


HOD-CE

Cc to:

IQAC-KSRMCE



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Registration form for "Certification course on Requirements and estimation of framed building structures"

Course**Instructor:**

Prof. V. Giridhar,

Professor, Civil Engg. Dept.,
KSRMCE

Course**Coordinator:**

Dr. I. Srinivasula Reddy,

Assistant Professor, Civil Engg.
Dept., KSRMCE

Date:

01/10/21
to 18/10/21

reddysrinu@ksrmce.ac.in Switch account



Your email will be recorded when you submit this form

* Required

Name of the Student *

Your answer

Student mail ID *

Your answer



Reg. Number *

Your answer

WhatsApp number *

Your answer

Submit

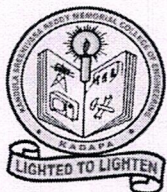
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Department of Civil Engineering

Registration list of Certification course

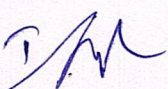
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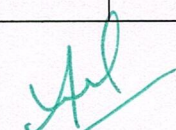
Requirements and estimation of framed building structures

Sl. No.	Name of the Student	Student mail ID	Reg. Number	WhatsApp number
1	Thati Sukumar	thatisukumar@gmail.com	189Y1A01B1	9390428161
2	Vennapusa Ganga Swetha	189y1a01c3@ksrmce.ac.in	189Y1A01C3	8688588683
3	Pagati Raga Sravani	sravaniraga08@gmail.com	189Y1A0177	9553402632
4	Poojithnagallapati	189Y1a0171@ksrmce.ac.in	189Y1A0171	6304246520
5	Mitta Siva Prasad Reddy	189y1a0166@gmail.com	189Y1A0166	7569423748
6	G Y Venkata Sainath Reddy	189y1a0128@ksrmce.ac.in	189Y1A0128	7799093132
7	P.Vamsi Kumar	Vamsipydikaluva9@gmail.com	199Y5A0148	6281603850
8	G. Ramu	gosettyramu2001@gmail.com	199Y5A0123	9640811696
9	Gani Hyder Ali Khan	179y1a0128@ksrmce.ac.in	179Y1A0128	8919277885
10	Chilamakuru Venkata Mohan	189y1a0117@ksrmce.ac.in	189Y1A0117	07093144003
11	K.Hari Jaswanth	189Y1A0152@KSRMCE.AC.IN	189Y1A0152	9133252482
12	K.Bhanu Manikanta Reddy	189y1a044@gmail.com	189Y1A0144	9160641919
13	B . Vijay Kumar Reddy	199Y5A0107@ksrmce.ac.in	199Y5A0107	9392151260
14	Nandyala Vinod Kumar	Vinodkumarnandyala275@gmail.com	199Y5A0140	8919603679
15	Rama Mohan Derangula	189y1a0123@ksrmce.ac.in	189Y1A0123	7893938303
16	Jonnagiri Aravind	189y1a0139@ksrmce.ac.in	189Y1A0139	9666607086
17	D.Sai Kanth	189Y1A0121@gmail.com	189Y1A0121	7993053702
18	Jamalla Gangaraju	189y1a0137@ksrmce.ac.in	189Y1A0137	7660848360

19	A.Naveen Kumar	189y1a0102@Ksrmce.ac.in	189Y1A0102	8179742439
20	T. Gayathri	189Y1A01B4@ksrmce.ac.in	189Y1A01B4	8247568320
21	Patil Praveenkumar	189Y1A0185@ksrmce.ac.in	189Y1A0185	7842753302
22	Penubla Rakesh Prasanna	189y1a0187@ksrmce.ac.in	189Y1A0187	7093696815
23	Y. Sivanatha Reddy	189y1a01c8@ksrmce.ac.in	189Y1A01C8	6302912493
24	S.Neeraj	189y1a0194@ksrmce.ac.in	189Y1A0194	9949455868
25	J. Jahnavi	189y1a0140@ksrmce.ac.in	189Y1A0140	6309547207
26	L Venkataiah	189y1a0153@ksrmce.ac.in	189Y1A0153	9381375852
27	K.Sireesha	189y1a0143@ksrmce.ac.in	189Y1A0143	7675833489
28	M. Purushotham Reddy	189y1a0165@ksrmce.ac.in	189Y1A0165	7702615827
29	G Ajay Kumar	189Y1A0133@ksrmce.ac.in	189Y1A0133	7288070620
30	Pgangakishoreyadav	189y1a0180@ksrmce.ac.in	189Y1A0180	9346290662
31	Vusuvandla Rajesh	189y1a01Ac4@ksrmce.ac.in	189Y1A01C4	9959668687
32	G.Lakshmi Prasad Reddy	189y1a0132@ksrmce.ac.in	189Y1A0132	6301346187
33	Sirigiri Sravani	sravanisirigiri2001@gmail.com	199Y5A0155	9490340421
34	Rachamallu Bindhu	bindurachamallu@gmail.com	189Y1A0193	6304374302
35	Chinthakunta Mahesh Babu	maheshchinthakunta999@gmail.com	199Y5A0112	9701792636
36	Nagulugari Reddaiah	nagulugarireddaiah123@gmail.com	199Y5A0138	7036066487
37	J.Venkateshwarlu	judamvenkatesh@gmail.com	199Y5A0125	9573841391
38	A.Rajesh	199y5a0103@ksrmce.ac.in	199Y5A0103	9182694022
39	S.Chandra Mouli	s.c mouli888@gmail.com	199Y5A0149	8886226558
40	Kashetty Venkateswarlu	kashettyvenkateswarlu605@gmail.com	199Y5A0127	7013122356
41	U. Basith	abdulbasith7984@gmail.com	189Y1A01B6	6309717181
42	S.Abhishek Kumar Reddy	199y5a0156@ksrmce.ac.in	199Y5A0156	7671968118
43	Kunukuntla Viswanath	199y5a0128@ksrmce.ac.in	199Y5A0128	8790510789
44	U.Manjunatha	manjunathudumula@gmail.com	199Y5A0161	8121959173
45	Gani Hyder Ali Khan	179y1a0128@ksrmce.ac.in	179Y1A0128	8919277885

46	Vamsi B	189Y1A0111@KSRMCE.AC.IN	189Y1A0111	9703747339
47	Shaik Mohammad Saleem	smsaleem2610@gmail.com	199Y5A0153	9100475100
48	Dasari Sreenivasulu	199Y5A0115@ksrmce.ac.in	199Y5A0115	6300641369
49	Pagati Raga Sravani	sravaniraga08@gmail.com	189Y1A0177	9553402632
50	K. Uday Kumar	189y1a0141@ksrmce.ac.in	189Y1A0141	9502769638
51	U.Manjunatha	manjunathudumula@gmail.com	199Y5A0161	8121959173
52	Guduru Ajay Kumar	189Y1A0133@KSRMCE.AC.IN	189Y1A0133	7288070620
53	Lingamdinne Veera Venkata Varaprasad Reddy	189Y1A0155@ksrmce.ac.in	189Y1A0155	9052098379
54	Gaddam Prem Kumar	189Y1A0130@ksrmce.ac.in	189Y1A0130	6305475559
55	Yelikanti Naga Hema Pranitha Sree	pranithayelikanti@gmail.com	189Y1A01C6	6309763058
56	Pandeeti Kasanna	199y5a0143@ksrmce.ac.in	199Y5A0143	9848715197
57	K.Bhanu Manikanta Reddy	Kannapubhanureddy@gmail.com	189Y1A0144	9160641919
58	Lingamdinne Veera Venkata Varaprasad Reddy	189Y1A0155@ksrmce.ac.in	189Y1A0155	9052098379
59	L V Venkata Varaprasad Reddy	189y1a0155@ksrmce.ac.in	189Y1A0155	9052098379
60	Naga Sai	189y1a0189@ksrmce.ac.in	189Y1A0189	9676562723
61	K.Bhanu Manikanta Reddy	189y1a0144@gmail.com	189Y1A0144	9160641919


Coordinator


HoD-Civil Engg.

Head
Department of Civil Engineering
K.S.R.M. College of Engineering
(Autonomous)
KADAPA 516 003. (A.P.)

Syllabus of Certification Course

Course Name: Requirements and estimation of framed building structures

Module I:

Specification of different items of works for framed structures: Earth work for foundations, mortars, foundation concrete, Reinforced concrete, Brick work, Stone masonry, Mosaic Flooring, Terrazo Flooring, RCC roof and AC roof and GI sheets, plastering, Painting, pointing and wood works.

Module II:

Vastu and its importance, planning of building according to vastu shastra. Different item of works- units of item of works, Types of Estimates-Methods of estimates.

Module III:

Rate Analysis (Using Excel): Earthwork Excavation – Mortars of various proportions (cement and lime) – Concrete with various proportions (lime and Cement) – Brick Masonry – Stone Masonry – Pointing – Painting – Plastering – aluminum partitions – Wooden partitions – cement concrete flooring with 1:2:4 mix

Module IV

Quantities Estimation of Buildings and Bar Bending Schedule (Using Excel) – Estimation of concrete in beams, columns, footings, Estimation of Bar Bending Schedule: Beams - Slabs – Staircases – Sun shade – Lintels – Portico

Text Books:

1. B. N. Dutta, Estimating and Costing in Civil Engineering: Theory and Practice Including Specifications and Valuation, UBS Publishers' Distributors Ltd, 25th edition,
2. Hodgson Fred T, Estimating Frame and Brick Houses, BiblioLife.



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Certification course on "Requirements and estimation of framed building structures"

Date	Timing	Course Instructor	Topic to be covered
01/10/21	4 PM to 6 PM	Prof. V. Giridhar	Specification of different items of works for framed structures
03/10/21	10 AM to 12 PM	Prof. V. Giridhar	Specification of different items of works for framed structures
04/10/21	4 PM to 6 PM	Prof. V. Giridhar	Vastu and its importance
05/10/21	4 PM to 6 PM	Prof. V. Giridhar	planning of building according to vastu shastra
06/10/21	4 PM to 6 PM	Prof. V. Giridhar	Types of Estimates
07/10/21	4 PM to 6 PM	Prof. V. Giridhar	Methods of estimates
08/10/21	4 PM to 6 PM	Prof. V. Giridhar	Rate Analysis
09/10/21	4 PM to 6 PM	Prof. V. Giridhar	Rate Analysis
11/10/21	4 PM to 6 PM	Prof. V. Giridhar	Rate Analysis
12/10/21	4 PM to 6 PM	Prof. V. Giridhar	Quantities Estimation beams (Using Excel)
13/10/21	4 PM to 6 PM	Prof. V. Giridhar	Quantities Estimation Columns (Using Excel)
14/10/21	4 PM to 6 PM	Prof. V. Giridhar	Quantities Estimation Footings (Using Excel)
15/10/21	4 PM to 6 PM	Prof. V. Giridhar	Bar Bending Schedule (Using Excel)
16/10/21	4 PM to 6 PM	Prof. V. Giridhar	Bar Bending Schedule (Using Excel)
18/10/21	4 PM to 6 PM	Prof. V. Giridhar	Bar Bending Schedule (Using Excel)

Instructor:

Coordinator:



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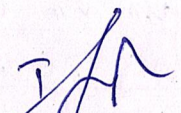
Department of Civil Engineering

Attendance sheet of Certification course on Requirements and estimation of framed building structures

[illegible]

17	189Y1A0121	D.Sai Kanth	DK	A	A	DK	DK	DK	DK	DK	DK	A	DK	DK	DK	DK
18	189Y1A0137	Jamalla Gangaraju	Gm	A	Gm	Gm	Gm	Gm	Gm	Gm	Gm	Gm	Gm	Gm	Gm	Gm
19	189Y1A0102	A.Naveen Kumar	NK	NK	NK	NK	NK	A	NK	NK	NK	NK	A	NK	NK	NK
20	189Y1A01B4	T. Gayathri	TG	TG	TG	TG	TG	TG	TG	TG	TG	TG	TG	TG	TG	TG
21	189Y1A0185	Patil Praveenkumar	Pd	Pd	Pd	A	Pd	Pd	Pd	Pd	Pd	Pd	A	Pd	Pd	Pd
22	189Y1A0187	Penubla Rakesh Prasanna	P	P	P	P	A	A	P	P	P	P	P	P	P	P
23	189Y1A01C8	Y. Sivanatha Reddy	ySR	ySR	A	ySR	ySR	ySR	ySR	ySR	ySR	A	ySR	ySR	ySR	ySR
24	189Y1A0194	S.Neeraj	sNJ	sNJ	sNJ	A	sNJ	sNJ	A	sNJ	sNJ	sNJ	sNJ	sNJ	sNJ	sNJ
25	189Y1A0140	J. Jahnavi	J.J	J.J	J.J	A	J.J	J.J	J.J	J.J	J.J	J.J	J.J	J.J	J.J	J.J
26	189Y1A0153	L Venkataiah	Lvk	Lvk	Lvk	Lvk	Lvk	Lvk	Lvk	Lvk	Lvk	Lvk	Lvk	Lvk	Lvk	Lvk
27	189Y1A0143	K.Sireesha	KS	KS	KS	A	A	KS	KS	KS	KS	KS	KS	KS	KS	KS
28	189Y1A0165	M. Purushotham Reddy	MP	MP	MP	MP	MP	A	MP	MP	MP	MP	MP	MP	MP	MP
29	189Y1A0133	G Ajay Kumar	GAj	GAj	GAj	GAj	GAj	A	GAj	GAj	GAj	GAj	GAj	GAj	GAj	GAj
30	189Y1A0180	Pgangakishoreyadav	P	P	P	P	P	A	A	P	P	P	P	P	P	P
31	189Y1A01C4	Vusuvandla Rajesh	VR	A	VR	VR	VR	VR	VR	VR	VR	VR	A	VR	VR	VR
32	189Y1A0132	G.Lakshmi Prasad Reddy	G	A	G	G	G	G	G	G	G	G	G	A	G	G
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37	199Y5A0125	J.Venkateswarlu	JVS	JVS	JVS	JVS	JVS	JVS	A	JVS	JVS	JVS	JVS	JVS	JVS	JVS

58	189Y1A0155	Lingamdinne Veera Venkata Varaprasad Reddy	A	venkat	venkat	venkat	A	venkat	A	venkat	A	venkat	venkat	venkat	venkat	venkat	venkat
59	189Y1A0155	L V Venkata Varaprasad Reddy	A	venkat	venkat	venkat	venkat	venkat	venkat	venkat	A	venkat	venkat	venkat	venkat	venkat	venkat
60	189Y1A0189	Naga Sai	Sai	A	Sai	Sai	Sai	Sai	Sai	Sai	Sai	A	Sai	Sai	Sai	Sai	Sai
61	189Y1A0144	K.Bhanu Manikanta Reddy	K.Bhanu	A	K.Bhanu	K.Bhanu	K.Bhanu	K.Bhanu	K.Bhanu	K.Bhanu	K.Bhanu	K.Bhanu	A	K.Bhanu	K.Bhanu	K.Bhanu	K.Bhanu


Coordinator


HoD-Civil Engg.
Head
Department of Civil Engineering
K.S.R.M. College of Engineering
(Autonomous)
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38	199Y5A0103	A.Rajesh	A	P	P	R	R	R	R	R	R	A	A	R	R	R	R
39	199Y5A0149	S.Chandra Mouli	S	S	S	S	S	A	S	S	S	A	S	S	S	S	S
40	199Y5A0127	Kashetty Venkateswarlu	KV	KV	KV	KV	KV	KV	A	A	KV	A	KV	KV	KV	KV	KV
41	189Y1A01B6	U. Basith	U	A	U	U	U	U	U	U	U	U	U	U	U	U	U
42	199Y5A0156	S.Abhishek Kumar Reddy	Abhi	Abhi	A	Abhi	A	Abhi	Abhi	Abhi	Abhi	Abhi	Abhi	Abhi	Abhi	Abhi	Abhi
43	199Y5A0128	Kunukuntla Viswanath	V	V	V	A	V	V	V	V	A	V	V	V	V	V	V
44	199Y5A0161	U.Manjunatha	V.M	V.M	V.M	V.M	V.M	A	V.M	V.M	V.M	V.M	V.M	V.M	V.M	V.M	V.M
45	179Y1A0128	Gani Hyder Ali Khan	Ali	Ali	Ali	Ali	Ali	A	Ali	Ali	Ali	Ali	Ali	Ali	Ali	Ali	Ali
46	189Y1A0111	Vamsi B	Vam	Vam	Vam	A	Vam	Vam	Vam	Vam	Vam	Vam	Vam	Vam	Vam	Vam	Vam
47	199Y5A0153	Shaik Mohammad Saleem	Saleem	Saleem	Saleem	Saleem	Saleem	A	Saleem	Saleem	Saleem	Saleem	Saleem	Saleem	A	Saleem	Saleem
48	199Y5A0115	Dasari Sreenivasulu	Sreeni	Sreeni	Sreeni	Sreeni	Sreeni	Sreeni	Sreeni	Sreeni	A	A	Sreeni	Sreeni	Sreeni	Sreeni	Sreeni
49	189Y1A0177	Pagati Raga Sravani	Sravani	Sravani	Sravani	A	Sravani	Sravani	Sravani	Sravani	Sravani	Sravani	Sravani	Sravani	Sravani	Sravani	Sravani
50	189Y1A0141	K. Uday Kumar	Kud	Kud	Kud	Kud	A	Kud	Kud	Kud	Kud	Kud	Kud	Kud	Kud	Kud	Kud
51	199Y5A0161	U.Manjunatha	V.M	V.M	V.M	A	V.M	V.M	V.M	V.M	A	V.M	V.M	V.M	V.M	V.M	V.M
52	189Y1A0133	Guduru Ajay Kumar	Guba	Guba	Guba	Guba	A	Guba	Guba	Guba	Guba	Guba	Guba	Guba	Guba	Guba	Guba
53	189Y1A0155	Lingamdinne Veera Venkata Varaprasad Reddy	Reddy	Reddy	Reddy	Reddy	Reddy	A	Reddy	Reddy	Reddy	Reddy	Reddy	Reddy	Reddy	Reddy	Reddy
54	189Y1A0130	Gaddam Prem Kumar	Pou	Pou	Pou	Pou	A	Pou	Pou	Pou	Pou	Pou	Pou	Pou	Pou	Pou	Pou
55	189Y1A01C6	Yelikanti Naga Hema Pranitha Sree	Y	Y	Y	Y	A	Y	Y	Y	Y	Y	Y	Y	Y	Y	Y
56	199Y5A0143	Pandeeti Kasanna	Kau	Kau	Kau	Kau	Kau	Kau	Kau	Kau	A	Kau	A	Kau	Kau	Kau	Kau
57	189Y1A0144	K.Bhanu Manikanta Reddy	Reddy	Reddy	Reddy	Reddy	Reddy	Reddy	Reddy	Reddy	Reddy	Reddy	A	Reddy	Reddy	Reddy	Reddy



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Department of Civil Engineering in association with Industry Institute Interaction Cell



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CERTIFICATE COURSE ON "REQUIREMENTS AND ESTIMATION OF FRAMED BUILDING STRUCTURES"

Date of Event

1-10-2021

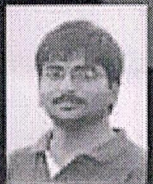
Venue

CADD Lab, Dept., of Civil Engineering

Course Instructors

Prof. V. Giridhar, Professor

Dr. I. Srinivasula Reddy, Assistant Professor



DR. N. AMARANATH REDDY
(HOD)

PROF. V. GIRIDHAR
(Dean)

DR. V.S.S. MURTHY
(Principal)

PROF. A. MOHAN
(Director)

DR. KANDULA CHANDRA OBUL REDDY
(Managing Director)

SMT. K. RAJESWARI
(Correspondent Secretary, Treasurer)

SRI K. MADAN MOHAN REDDY
(Vice-chairman)

SRI. K. RAJA MOHAN REDDY
(Chairman)



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K.S.R.M. COLLEGE OF ENGINEERING

(UGC-AUTONOMOUS)

Kadapa, Andhra Pradesh, India- 516 003

Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.

An ISO 14001:2004 & 9001: 2015 Certified Institution

Report

of

Certification Course on Requirements and estimation of framed building structures

From 01-10-2021 to 18-10-2021

Target Group	:	Students
Details of Participants	:	61 Students
Co-coordinator(s)	:	Dr. I. Srinivasula Reddy
Organizing Department	:	Civil Engineering
Venue	:	Computer Lab, Civil Engg.

Description:

The Department of Civil Engineering offered the certification course on "Requirements and estimation of framed building structures" from 01-10-2021 to 18-10-2021 and the course was organized for a total number of 30 hours. The course was instructed by Prof. V. Giridhar (Professor, Dept. Civil Engg.) and coordinated by Dr. I. Srinivasula Reddy (Assistant Professor, Dept. of Civil Engg.).

Estimating is extremely important in the world of construction as the project scope or goals need to be transparent despite project complexity, project size, new design, or timelines. Accomplishing set goals and project visions is essential to make projects a reality. As the regular curriculum of KSRMCE covers mostly about the estimation of load bearing structures, the present certification course concentrated on Estimation of Framed Structures and requirements of Framed Building Structures. The course also deals about the usage of MS office (Excel) to automate the estimation problems and make the readymade spreadsheets for particular type of works.



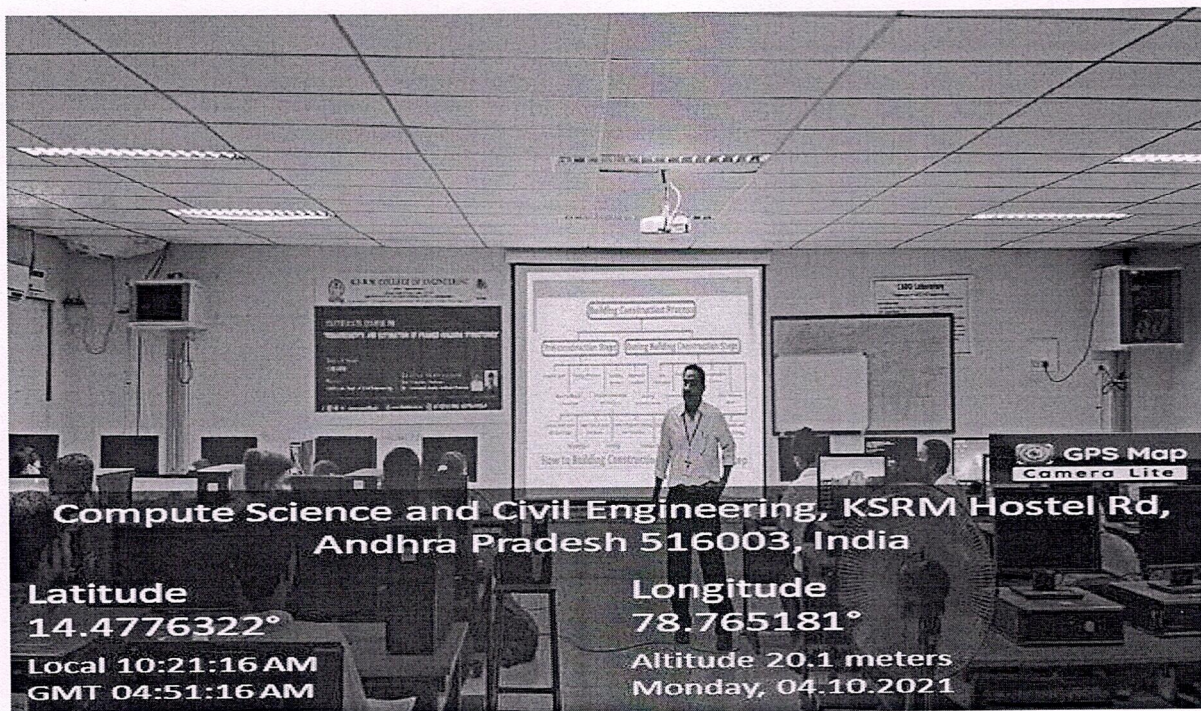
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The picture taken during the course are given below:



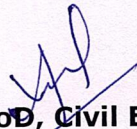
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GMT 04:51:16 AM

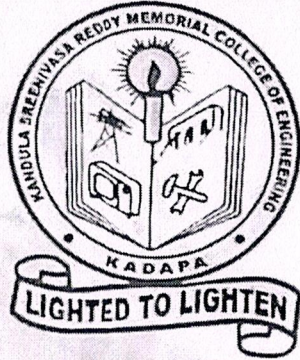
Longitude
78.765181°

Altitude 20.1 meters
Monday, 04.10.2021


(Course Coordinator)


(HOD, Civil Engg.)

Head
Department of Civil Engineering
K.S.R.M. College of Engineering
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KADAPA 516 003. (A.P.)



K.S.R.M College of Engineering

(AUTONOMOUS)

KADAPA, ANDHRA PRADESH, INDIA-516003

DEPARTMENT OF CIVIL ENGINEERING

CERTIFICATE OF COURSE COMPLETION

This certificate is presented to

K.Bhanu Manikanta Reddy (Reg. No. 189y1a0144), Student of KSRM College of Engineering (Autonomous) for successful completion of certification course on "Requirements and estimation of framed building structures" offered by Department of civil Engineering, KSEMCE-Kadapa.

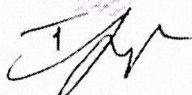
Course Duration:


From 01/10/21 to 18/10/21

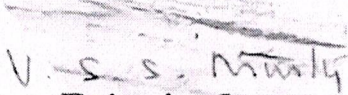
Course Instructor:

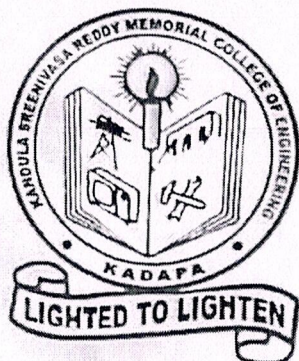
Prof. V. Giridhar,

Professor, CE, KSRMCE-Kadapa


Coordinator


Head of the Department


Principal



K.S.R.M College of Engineering

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KADAPA, ANDHRA PRADESH, INDIA-516003

DEPARTMENT OF CIVIL ENGINEERING

CERTIFICATE OF COURSE COMPLETION

This certificate is presented to

D.Sai Kanth (Reg. No. 189Y1A0121), Student of KSRM College of Engineering (Autonomous) for successful completion of certification course on "Requirements and estimation of framed building structures" offered by Department of civil Engineering, KSEMCE-Kadapa.

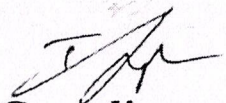
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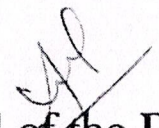
From 01/10/21 to 18/10/21

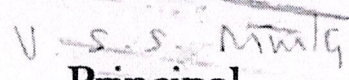
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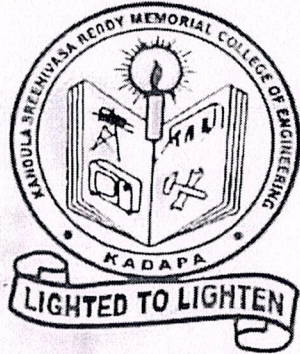
Prof. V. Giridhar,

Professor, CE, KSRMCE-Kadapa


Coordinator


Head of the Department


Principal



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KADAPA, ANDHRA PRADESH, INDIA-516003

DEPARTMENT OF CIVIL ENGINEERING

CERTIFICATE OF COURSE COMPLETION

This certificate is presented to

L Venkataiah (Reg. No. 189Y1A0153), Student of KSRM College of Engineering (Autonomous) for successful completion of certification course on "Requirements and estimation of framed building structures" offered by Department of civil Engineering, KSEMCE-Kadapa.

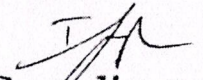
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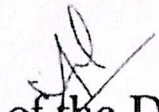
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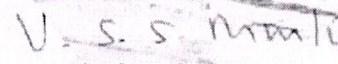
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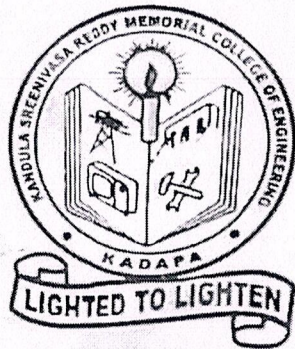
Prof. V. Giridhar,

Professor, CE, KSRMCE-Kadapa


Coordinator


Head of the Department


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DEPARTMENT OF CIVIL ENGINEERING

CERTIFICATE OF COURSE COMPLETION

This certificate is presented to

L V V Varaprasad Reddy (Reg. No. 189Y1A0155), Student of KSRM College of Engineering (Autonomous) for successful completion of certification course on "Requirements and estimation of framed building structures" offered by Department of civil Engineering, KSEMCE-Kadapa.

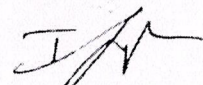
Course Duration:


From 01/10/21 to 18/10/21

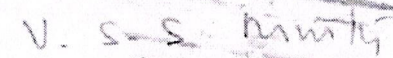
Course Instructor:

Prof. V. Giridhar,

Professor, CE, KSRMCE-Kadapa


Coordinator


Head of the Department


Principal

Feedback form for "Certification course on Requirements and estimation of framed building structures)"

reddysrinu@ksrmce.ac.in [Switch account](#)



Your email will be recorded when you submit this form

* Required

Name of The Student *

Your answer

Reg. No. *

Your answer

Is the course content met your expectations? *

☐ Yes

☐ No

Are the lecture hours sufficient to cover the topics? *

☐ Yes

☐ No



Rate the course instructor *

- ☐ Excellent
- ☐ Good
- ☐ Fair
- ☐ Poor

Is this course useful for your Carrier? *

- ☐ Yes
- ☐ No
- ☐ May be

Rate the entire course? *

1-Low, 5-High

- 1 ☐
- 2 ☐
- 3 ☐
- 4 ☐
- 5 ☐

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Department of Civil Engineering

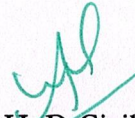
Feedback of students on Certification Course on “Requirements and estimation of framed building structures”

Sl. No.	Name of The Student	Reg. No.	Is the course content met your expectations?	Are the lecture hours sufficient to cover the topics?	Rate the course instructor	Is this course useful for your Carrier?	Rate the entire course?
1	Thati Sukumar	189Y1A01B1	Yes	Yes	Good	Yes	5
2	Vennapusa Ganga Swetha	189Y1A01C3	Yes	Yes	Excellent	Yes	5
3	Pagati Raga Sravani	189Y1A0177	Yes	Yes	Excellent	Yes	5
4	Poojithnagallapati	189Y1A0171	Yes	Yes	Excellent	Yes	5
5	Mitta Siva Prasad Reddy	189Y1A0166	Yes	Yes	Excellent	Yes	5
6	G Y Venkata Sainath Reddy	189Y1A0128	Yes	Yes	Excellent	Yes	5
7	P.Vamsi Kumar	199Y5A0148	Yes	Yes	Good	May be	4
8	G. Ramu	199Y5A0123	Yes	Yes	Good	Yes	5
9	Gani Hyder Ali Khan	179Y1A0128	Yes	Yes	Excellent	Yes	5
10	Chilamakuru Venkata Mohan	189Y1A0117	Yes	Yes	Excellent	Yes	5
11	K.Hari Jaswanth	189Y1A0152	Yes	Yes	Excellent	Yes	5
12	K.Bhanu Manikanta Reddy	189Y1A0144	Yes	Yes	Excellent	Yes	5
13	B . Vijay Kumar Reddy	199Y5A0107	Yes	Yes	Excellent	Yes	5
14	Nandyala Vinod Kumar	199Y5A0140	Yes	Yes	Excellent	Yes	5
15	Rama Mohan Derangula	189Y1A0123	Yes	Yes	Excellent	Yes	5
16	Jonnagiri Aravind	189Y1A0139	Yes	Yes	Excellent	Yes	5
17	D.Sai Kanth	189Y1A0121	Yes	Yes	Excellent	Yes	5
18	Jamalla Gangaraju	189Y1A0137	Yes	Yes	Excellent	Yes	5
19	A.Naveen Kumar	189Y1A0102	Yes	Yes	Excellent	May be	5
20	T. Gayathri	189Y1A01B4	Yes	Yes	Excellent	Yes	5
21	Patil Praveenkumar	189Y1A0185	Yes	Yes	Excellent	Yes	4
22	Penubla Rakesh Prasanna	189Y1A0187	Yes	Yes	Excellent	Yes	5
23	Y. Sivanatha Reddy	189Y1A01C8	Yes	Yes	Good	Yes	5
24	S.Neeraj	189Y1A0194	Yes	Yes	Good	Yes	5

25	J. Jahnavi	189Y1A0140	Yes	Yes	Excellent	Yes	5
26	L Venkataiah	189Y1A0153	Yes	Yes	Excellent	Yes	5
27	K.Sireesha	189Y1A0143	Yes	Yes	Excellent	Yes	5
28	M. Purushotham Reddy	189Y1A0165	Yes	Yes	Excellent	Yes	5
29	G Ajay Kumar	189Y1A0133	Yes	Yes	Excellent	Yes	5
30	Pgangakishoreyadav	189Y1A0180	Yes	Yes	Good	May be	4
31	Vusuvandla Rajesh	189Y1A01C4	Yes	Yes	Excellent	Yes	3
32	G.Lakshmi Prasad Reddy	189Y1A0132	Yes	Yes	Excellent	Yes	5
33	Sirigiri Sravani	199Y5A0155	Yes	Yes	Excellent	May be	5
34	Rachamallu Bindhu	189Y1A0193	Yes	Yes	Excellent	Yes	5
35	Chinthakunta Mahesh Babu	199Y5A0112	Yes	Yes	Excellent	Yes	4
36	Nagulugari Reddaiah	199Y5A0138	Yes	Yes	Excellent	Yes	5
37	J.Venkateshwarlu	199Y5A0125	Yes	Yes	Excellent	Yes	5
38	A.Rajesh	199Y5A0103	Yes	Yes	Excellent	Yes	5
39	S.Chandra Mouli	199Y5A0149	Yes	Yes	Excellent	Yes	5
40	Kashetty Venkateswarlu	199Y5A0127	Yes	Yes	Excellent	May be	5
41	U. Basith	189Y1A01B6	Yes	Yes	Good	Yes	5
42	S.Abhishek Kumar Reddy	199Y5A0156	Yes	Yes	Excellent	Yes	5
43	Kunukuntla Viswanath	199Y5A0128	Yes	Yes	Excellent	Yes	5
44	U.Manjunatha	199Y5A0161	Yes	Yes	Excellent	Yes	5
45	Gani Hyder Ali Khan	179Y1A0128	Yes	Yes	Excellent	Yes	5
46	Vamsi B	189Y1A0111	Yes	Yes	Excellent	Yes	5
47	Shaik Mohammad Saleem	199Y5A0153	Yes	Yes	Excellent	Yes	5
48	Dasari Sreenivasulu	199Y5A0115	Yes	Yes	Excellent	Yes	5
49	Pagati Raga Sravani	189Y1A0177	Yes	Yes	Excellent	Yes	5
50	K. Uday Kumar	189Y1A0141	Yes	Yes	Excellent	Yes	5
51	U.Manjunatha	199Y5A0161	Yes	Yes	Excellent	Yes	5
52	Guduru Ajay Kumar	189Y1A0133	Yes	Yes	Excellent	Yes	5
53	Lingamdinne Veera Venakata Varaprasad Reddy	189Y1A0155	Yes	Yes	Excellent	Yes	5
54	Gaddam Prem Kumar	189Y1A0130	Yes	Yes	Excellent	Yes	5

55	Yelikanti Naga Hema Pranitha Sree	189Y1A01C6	Yes	Yes	Excellent	Yes	5
56	Pandeeti Kasanna	199Y5A0143	Yes	Yes	Excellent	Yes	5
57	K.Bhanu Manikanta Reddy	189Y1A0144	Yes	Yes	Excellent	Yes	5
58	Lingarminne Veera Venkata Varaprasad Reddy	189Y1A0155	Yes	No	Excellent	Yes	4
59	L V Venkata Varaprasad Reddy	189Y1A0155	Yes	Yes	Excellent	Yes	5
60	Naga Sai	189Y1A0189	Yes	Yes	Excellent	Yes	5
61	K.Bhanu Manikanta Reddy	189Y1A0144	Yes	Yes	Excellent	Yes	5


Coordinator


HoD-Civil Engg.

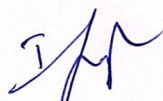
Head
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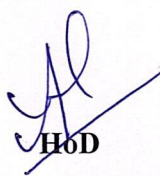
K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA-516003
DEPARTMENT OF CIVIL ENGINEERING
CERTIFICATE COURSE ON
REQUIREMENTS AND ESTIMATION OF FRAMED BUILDING STRUCTURES
MARKS AWARD LIST

S.No	Roll Number	Name of the Student	Marks Obtained
1	189Y1A01B1	Thati Sukumar	11
2	189Y1A01C3	Vennapusa Ganga Swetha	17
3	189Y1A0177	Pagati Raga Sravani	7
4	189Y1A0171	Poojithnagallapati	13
5	189Y1A0166	Mitta Siva Prasad Reddy	16
6	189Y1A0128	G Y Venkata Sainath Reddy	18
7	199Y5A0148	P.Vamsi Kumar	13
8	199Y5A0123	G. Ramu	18
9	179Y1A0128	Gani Hyder Ali Khan	18
10	189Y1A0117	Chilamakuru Venkata Mohan	18
11	189Y1A0152	K.Hari Jaswanth	10
12	189Y1A0144	K.Bhanu Manikanta Reddy	15
13	199Y5A0107	B . Vijay Kumar Reddy	14
14	199Y5A0140	Nandyala Vinod Kumar	7
15	189Y1A0123	Rama Mohan Derangula	16
16	189Y1A0139	Jonnagiri Aravind	11
17	189Y1A0121	D.Sai Kanth	11
18	189Y1A0137	Jamalla Gangaraju	18
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20	189Y1A01B4	T. Gayathri	11
21	189Y1A0185	Patil Praveenkumar	7
22	189Y1A0187	Penubla Rakesh Prasanna	19
23	189Y1A01C8	Y. Sivanatha Reddy	14
24	189Y1A0194	S.Neeraj	13
25	189Y1A0140	J. Jahnavi	19
26	189Y1A0153	L Venkataiah	14
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28	189Y1A0165	M. Purushotham Reddy	19
29	189Y1A0133	G Ajay Kumar	15
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31	189Y1A01C4	Vusuvandla Rajesh	12
32	189Y1A0132	G.Lakshmi Prasad Reddy	19
33	199Y5A0155	Sirigiri Sravani	19
34	189Y1A0193	Rachamallu Bindhu	5
35	199Y5A0112	Chinthakunta Mahesh Babu	12
36	199Y5A0138	Nagulugari Reddaiah	18
37	199Y5A0125	J.Venkateswarlu	6
38	199Y5A0103	A.Rajesh	19
39	199Y5A0149	S.Chandra Mouli	14
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42	199Y5A0156	S.Abhishek Kumar Reddy	10
43	199Y5A0128	Kunukuntla Viswanath	17
44	199Y5A0161	U.Manjunatha	13
45	179Y1A0128	Gani Hyder Ali Khan	19
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49	189Y1A0177	Pagati Raga Sravani	19
50	189Y1A0141	K. Uday Kumar	8
51	199Y5A0161	U.Manjunatha	18
52	189Y1A0133	Guduru Ajay Kumar	18
53	189Y1A0155	Lingamdinne Veera Venakata Varaprasad Reddy	16
54	189Y1A0130	Gaddam Prem Kumar	17
55	189Y1A01C6	Yelikanti Naga Hema Pranitha Sree	12
56	199Y5A0143	Pandeeti Kasanna	15
57	189Y1A0144	K.Bhanu Manikanta Reddy	13
58	189Y1A0155	Lingamdinne Veera Venkata Varaprasad Reddy	4

59	189Y1A0155	L V Venkata Varaprasad Reddy	17
60	189Y1A0189	Naga Sai	11
61	189Y1A0144	K.Bhanu Manikanta Reddy	15


Coordinator


Head
Department of Civil Engineering
K.S.R.M. College of Engineering
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11/20

K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA-516003
DEPARTMENT OF CIVIL ENGINEERING
CERTIFICATE COURSE ON
REQUIREMENTS AND ESTIMATION OF FRAMED BUILDING STRUCTURES
ASSESSMENT TEST

Name of the Student: P. Subram Reg. Number: 18941A01B1

Time: 20 Min **(Objective Questions)** **Max. Marks: 20**

Note: Answer the following Questions and each question carries **one** mark.

1	What is the primary purpose of structural requirements in building design?				[A]	X
	A) Aesthetic appeal	B) Safety and stability	C) Energy efficiency	D) Cost reduction		
2	Which type of load refers to the force exerted by the weight of the building itself?				[B]	X
	A) Dead load	B) Live load	C) Wind load	D) Snow load		
3	What does the term "framed building" typically refer to in structural engineering?				[A]	X
	A) Buildings with sloped roofs	B) Buildings with steel frames	C) Buildings with a skeletal structural system	D) Buildings with brick walls		
4	Which material is commonly used for framing in residential buildings?				[C]	/
	A) Steel	B) Concrete	C) Wood	D) Glass		
5	What is the primary purpose of a foundation in building construction?				[B]	/
	A) To provide shelter	B) To support the building's weight and transfer loads to the ground	C) To enhance aesthetics	D) To insulate against temperature changes		
6	Which of the following is NOT a structural requirement for framed buildings?				[C]	/
	A) Resistance to earthquake forces	B) Resistance to moisture	C) Adequate ventilation	D) Fire resistance		
7	In the context of building codes and standards, what does "IBC" stand for?				[A]	/
	A) International Building Code	B) Indian Building Council	C) International Building Committee	D) Integrated Building Construction		
8	What does the term "estimation" refer to in the context of building structures?				[D]	/
	A) The process of determining structural requirements	B) The process of calculating the weight of building materials	C) The process of assessing building code compliance	D) The process of predicting construction costs		
9	Which of the following factors is NOT typically considered when estimating construction costs for a framed building?				[C]	/
	A) Labor costs	B) Material costs	C) Structural analysis	D) Overhead expenses		
10	What is the primary purpose of a cost estimate in construction?				[C]	/
	A) To determine the structural requirements	B) To assess the project's timeline	C) To calculate the project's budget	D) To design architectural elements		

11	Which phase of a construction project is most suitable for preparing a preliminary cost estimate?				A
	A) Planning and design phase	B) Bidding and procurement phase	C) Construction phase	D) Post-construction phase	
12	What is the "bill of quantities" (BOQ) in the context of construction estimation?				
	A) A document outlining the architectural design	B) A detailed list of all project materials and their quantities	C) The final construction contract	D) A summary of labor costs	A
13	In construction estimation, what is meant by the term "contingency"?				
	A) The architectural design of a building	B) Unforeseen events or costs that may arise during construction	C) The final construction cost	D) A summary of material costs	D
14	What is the primary purpose of a "takeoff" in construction estimation?				
	A) To measure the structural requirements	B) To calculate the cost of labor	C) To determine the quantity of materials needed	D) To inspect the site for safety hazards	C
15	Which of the following is NOT a common method for estimating construction costs?				
	A) Quantity surveying	B) Cost per square foot	C) Time-lapse photography	D) Parametric estimating	B
16	What is a "unit rate" in construction estimation?				
	A) The hourly wage of construction workers	B) The cost per unit of a specific material or work item	C) The total project cost	D) The number of labor hours required	A
17	What does the term "value engineering" refer to in construction estimation?				
	A) Increasing construction costs	B) Decreasing construction costs while maintaining quality and function	C) Ignoring safety requirements	D) Overestimating material quantities	B
18	In construction estimation, what is the role of a "quantity surveyor"?				
	A) To perform structural analysis	B) To manage construction projects	C) To measure and calculate material quantities	D) To design architectural elements	A
19	Which of the following factors can impact the accuracy of a construction cost estimate?				
	A) The experience of the quantity surveyor	B) The quality of the architectural design	C) Fluctuations in material prices	D) All of the above	A
20	What is the primary goal of accurate cost estimation in framed building structures?				
	A) To ensure compliance with building codes	B) To increase the project's timeline	C) To minimize construction costs while maintaining quality	D) To create aesthetically pleasing designs	C

13/20

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DEPARTMENT OF CIVIL ENGINEERING
CERTIFICATE COURSE ON
REQUIREMENTS AND ESTIMATION OF FRAMED BUILDING STRUCTURES
ASSESSMENT TEST

Name of the Student: Poojitha. J Reg. Number: 18941A0171

Time: 20 Min **(Objective Questions)** **Max. Marks: 20**

Note: Answer the following Questions and each question carries **one** mark.

1	What is the primary purpose of structural requirements in building design?				[B] ✓
	A) Aesthetic appeal	B) Safety and stability	C) Energy efficiency	D) Cost reduction	
2	Which type of load refers to the force exerted by the weight of the building itself?				[A] ✓
	A) Dead load	B) Live load	C) Wind load	D) Snow load	
3	What does the term "framed building" typically refer to in structural engineering?				[C] ✓
	A) Buildings with sloped roofs	B) Buildings with steel frames	C) Buildings with a skeletal structural system	D) Buildings with brick walls	
4	Which material is commonly used for framing in residential buildings?				[C] ✓
	A) Steel	B) Concrete	C) Wood	D) Glass	
5	What is the primary purpose of a foundation in building construction?				[D] ✗
	A) To provide shelter	B) To support the building's weight and transfer loads to the ground	C) To enhance aesthetics	D) To insulate against temperature changes	
6	Which of the following is NOT a structural requirement for framed buildings?				[C] ✓
	A) Resistance to earthquake forces	B) Resistance to moisture	C) Adequate ventilation	D) Fire resistance	
7	In the context of building codes and standards, what does "IBC" stand for?				[A] ✓
	A) International Building Code	B) Indian Building Council	C) International Building Committee	D) Integrated Building Construction	
8	What does the term "estimation" refer to in the context of building structures?				[B] ✗
	A) The process of determining structural requirements	B) The process of calculating the weight of building materials	C) The process of assessing building code compliance	D) The process of predicting construction costs	
9	Which of the following factors is NOT typically considered when estimating construction costs for a framed building?				[A] ✗
	A) Labor costs	B) Material costs	C) Structural analysis	D) Overhead expenses	
10	What is the primary purpose of a cost estimate in construction?				[A] ✗
	A) To determine the structural requirements	B) To assess the project's timeline	C) To calculate the project's budget	D) To design architectural elements	

11	Which phase of a construction project is most suitable for preparing a preliminary cost estimate?				A
	A) Planning and design phase	B) Bidding and procurement phase	C) Construction phase	D) Post-construction phase	
12	What is the "bill of quantities" (BOQ) in the context of construction estimation?				B
	A) A document outlining the architectural design	B) A detailed list of all project materials and their quantities	C) The final construction contract	D) A summary of labor costs	
13	In construction estimation, what is meant by the term "contingency"?				B
	A) The architectural design of a building	B) Unforeseen events or costs that may arise during construction	C) The final construction cost	D) A summary of material costs	
14	What is the primary purpose of a "takeoff" in construction estimation?				C
	A) To measure the structural requirements	B) To calculate the cost of labor	C) To determine the quantity of materials needed	D) To inspect the site for safety hazards	
15	Which of the following is NOT a common method for estimating construction costs?				C
	A) Quantity surveying	B) Cost per square foot	C) Time-lapse photography	D) Parametric estimating	
16	What is a "unit rate" in construction estimation?				A
	A) The hourly wage of construction workers	B) The cost per unit of a specific material or work item	C) The total project cost	D) The number of labor hours required	
17	What does the term "value engineering" refer to in construction estimation?				A
	A) Increasing construction costs	B) Decreasing construction costs while maintaining quality and function	C) Ignoring safety requirements	D) Overestimating material quantities	
18	In construction estimation, what is the role of a "quantity surveyor"?				A
	A) To perform structural analysis	B) To manage construction projects	C) To measure and calculate material quantities	D) To design architectural elements	
19	Which of the following factors can impact the accuracy of a construction cost estimate?				B
	A) The experience of the quantity surveyor	B) The quality of the architectural design	C) Fluctuations in material prices	D) All of the above	
20	What is the primary goal of accurate cost estimation in framed building structures?				C
	A) To ensure compliance with building codes	B) To increase the project's timeline	C) To minimize construction costs while maintaining quality	D) To create aesthetically pleasing designs	

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K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA-516003
DEPARTMENT OF CIVIL ENGINEERING
CERTIFICATE COURSE ON
REQUIREMENTS AND ESTIMATION OF FRAMED BUILDING STRUCTURES
ASSESSMENT TEST

Name of the Student: M. Siva Prasad Reddy Reg. Number: 18942A0166

Time: 20 Min

(Objective Questions)

Max. Marks: 20

Note: Answer the following Questions and each question carries **one** mark.

1	What is the primary purpose of structural requirements in building design?				[B] ✓
	A) Aesthetic appeal	B) Safety and stability	C) Energy efficiency	D) Cost reduction	
2	Which type of load refers to the force exerted by the weight of the building itself?				[A] ✓
	A) Dead load	B) Live load	C) Wind load	D) Snow load	
3	What does the term "framed building" typically refer to in structural engineering?				[C] ✓
	A) Buildings with sloped roofs	B) Buildings with steel frames	C) Buildings with a skeletal structural system	D) Buildings with brick walls	
4	Which material is commonly used for framing in residential buildings?				[C] ✓
	A) Steel	B) Concrete	C) Wood	D) Glass	
5	What is the primary purpose of a foundation in building construction?				[C] ✗
	A) To provide shelter	B) To support the building's weight and transfer loads to the ground	C) To enhance aesthetics	D) To insulate against temperature changes	
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	A) Resistance to earthquake forces	B) Resistance to moisture	C) Adequate ventilation	D) Fire resistance	
7	In the context of building codes and standards, what does "IBC" stand for?				[A] ✓
	A) International Building Code	B) Indian Building Council	C) International Building Building Committee	D) Integrated Building Construction	
8	What does the term "estimation" refer to in the context of building structures?				[C] ✗
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10	What is the primary purpose of a cost estimate in construction?				[C] ✓
	A) To determine the structural requirements	B) To assess the project's timeline	C) To calculate the project's budget	D) To design architectural elements	

11	Which phase of a construction project is most suitable for preparing a preliminary cost estimate?				[A] ✓
	A) Planning and design phase	B) Bidding and procurement phase	C) Construction phase	D) Post-construction phase	
12	What is the "bill of quantities" (BOQ) in the context of construction estimation?				[B] ✓
	A) A document outlining the architectural design	B) A detailed list of all project materials and their quantities	C) The final construction contract	D) A summary of labor costs	
13	In construction estimation, what is meant by the term "contingency"?				[B] ✓
	A) The architectural design of a building	B) Unforeseen events or costs that may arise during construction	C) The final construction cost	D) A summary of material costs	
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	A) Quantity surveying	B) Cost per square foot	C) Time-lapse photography	D) Parametric estimating	
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	A) The hourly wage of construction workers	B) The cost per unit of a specific material or work item	C) The total project cost	D) The number of labor hours required	
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	A) To perform structural analysis	B) To manage construction projects	C) To measure and calculate material quantities	D) To design architectural elements	
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	A) The experience of the quantity surveyor	B) The quality of the architectural design	C) Fluctuations in material prices	D) All of the above	
20	What is the primary goal of accurate cost estimation in framed building structures?				[C] ✓
	A) To ensure compliance with building codes	B) To increase the project's timeline	C) To minimize construction costs while maintaining quality	D) To create aesthetically pleasing designs	

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20

K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA-516003
DEPARTMENT OF CIVIL ENGINEERING
CERTIFICATE COURSE ON
REQUIREMENTS AND ESTIMATION OF FRAMED BUILDING STRUCTURES
ASSESSMENT TEST

Name of the Student: P - Raga Savani **Reg. Number:** 18981A0177

Time: 20 Min **(Objective Questions)** **Max. Marks: 20**

Note: Answer the following Questions and each question carries **one** mark.

1	What is the primary purpose of structural requirements in building design?				[B]
	A) Aesthetic appeal	B) Safety and stability	C) Energy efficiency	D) Cost reduction	
2	Which type of load refers to the force exerted by the weight of the building itself?				[A]
	A) Dead load	B) Live load	C) Wind load	D) Snow load	
3	What does the term "framed building" typically refer to in structural engineering?				[C]
	A) Buildings with sloped roofs	B) Buildings with steel frames	C) Buildings with a skeletal structural system	D) Buildings with brick walls	
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	A) To provide shelter	B) To support the building's weight and transfer loads to the ground	C) To enhance aesthetics	D) To insulate against temperature changes	
6	Which of the following is NOT a structural requirement for framed buildings?				[C]
	A) Resistance to earthquake forces	B) Resistance to moisture	C) Adequate ventilation	D) Fire resistance	
7	In the context of building codes and standards, what does "IBC" stand for?				[A]
	A) International Building Code	B) Indian Building Council	C) International Building Committee	D) Integrated Building Construction	
8	What does the term "estimation" refer to in the context of building structures?				[D]
	A) The process of determining structural requirements	B) The process of calculating the weight of building materials	C) The process of assessing building code compliance	D) The process of predicting construction costs	
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11	Which phase of a construction project is most suitable for preparing a preliminary cost estimate?				[B] ✓
	A) Planning and design phase	B) Bidding and procurement phase	C) Construction phase	D) Post-construction phase	
12	What is the "bill of quantities" (BOQ) in the context of construction estimation?				[A] ✓
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20

K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA-516003
DEPARTMENT OF CIVIL ENGINEERING
CERTIFICATE COURSE ON
REQUIREMENTS AND ESTIMATION OF FRAMED BUILDING STRUCTURES
ASSESSMENT TEST

Name of the Student: ✓ S. Swetha Reg. Number: 189Y1A01C3

Time: 20 Min

(Objective Questions)

Max. Marks: 20

Note: Answer the following Questions and each question carries **one** mark.

1	What is the primary purpose of structural requirements in building design?				[B]
	A) Aesthetic appeal	B) Safety and stability	C) Energy efficiency	D) Cost reduction	
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	A) International Building Code	B) Indian Building Council	C) International Building Committee	D) Integrated Building Construction	
8	What does the term "estimation" refer to in the context of building structures?				[D]
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	A) To determine the structural requirements	B) To assess the project's timeline	C) To calculate the project's budget	D) To design architectural elements	

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	A) Planning and design phase	B) Bidding and procurement phase	C) Construction phase	D) Post-construction phase	
12	What is the "bill of quantities" (BOQ) in the context of construction estimation?				B
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	A) To ensure compliance with building codes	B) To increase the project's timeline	C) To minimize construction costs while maintaining quality	D) To create aesthetically pleasing designs	

Certificate Course on Requirements and Estimation of a Framed Building structure

Prof V.Giridhar
M.Tech, Ph.D
Professor,
Dept. of Civil Engineering,

Vision

Vision The Department will be the recognized leader for excellence in Civil Engineering education that serve as vital source of leaders who are prepared to meet Nation's current and future requirements for safe, efficient and sustainable infrastructure.

Mission

The mission of the department is to promote the disciplines of planning, design, construction, operation, maintenance and research in support of sustainable development. By providing a multidisciplinary focus for education, professional communication, and collaboration, the Department will enhance the professional knowledge and skills of its students so that they will improve the quality of life. The Department will bring together teachers, planners, industry representatives, citizen groups, developers, public officials and others dedicated to improving quality of life and fostering appropriate development programs at the local, regional, state and national levels.

Contents

1. Introduction to the Estimation

- a) Definition
- b) Requirements of Estimation
- c) Need of the Estimation
- d) Types of Estimation

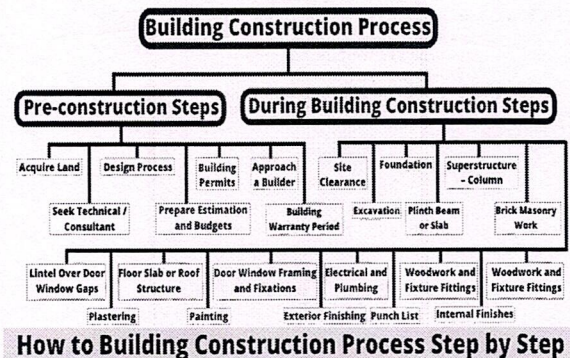
2. Items involved in building Estimation

- a) Items and their Units
- b) Quantity calculation as per the drawing of items in EXCEL Sheet
- c) Importance of Specification and Rate of the item

3. Methods of Estimation

4. Single Room, double room and Multy room Framed structure

5. Requirements of building plan Approval



Types of construction

1. Load Bearing of Wall Method
2. Framed Structures

Division of work

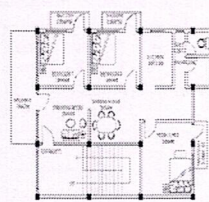
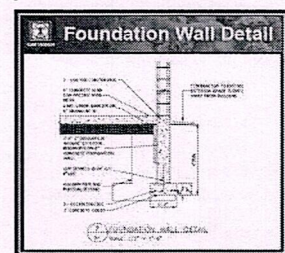
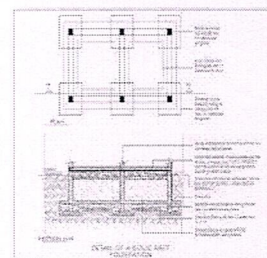
1. Pre Construction
2. Actual Construction
3. Post Construction

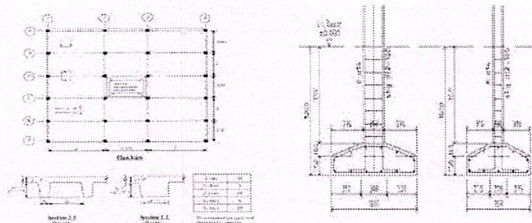
1. Preconstruction stage**a) Prepare Plans Based on requirements of a Client**

Layout plan
 Architectural Plans (According to VAATHU) (Square or Rectangle)
 Foundation Details Plan
 Structural Details (Columns, Plinth beam, Foundation, Roof Beam, slab)
 Water supply and Sanitary Layout Plan
 Safe Bearing Capacity of Soil

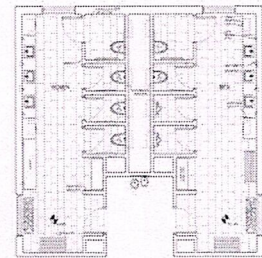
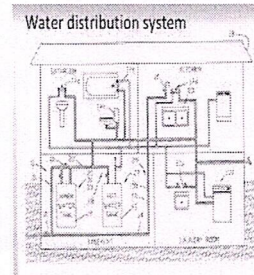
b) Estimation of Structure, Materials and Manpower**c) Design of structure****d) Approval of Drawings from client and Approving authorities(Municipality, Corporation)****2. Actual Construction**

Site clearance
 Preparation of job layout
 Marking as per the drawing
 Excavation
 Erection of Columns
 Stone masonry in outer periphery
 Back Filling
 Plinth beam
 Super structure
 Roof Beam
 Roof Slab
 Flooring
 Plastering(Inside and Out side)
 Painting(Inside and Outside)
 Finishing

3. Post Construction**Hand over structure****Maintenance Period****Performance of structure****a) Prepare Plans Based on requirements of The Client****Layout plan****2nd FLOOR PLAN
Architectural Plans****Foundation Details Plan and Cross section**



Structural Details



Water supply and Sanitary Layout Plan

1. Introduction

1. a) INTRODUCTION

DEFINITION OF ESTIMATING AND COSTING

- Estimating is the technique of calculating or Computing the various quantities and the expected Expenditure to be incurred on a particular work or project.
- In case the funds available are less than the estimated cost the work is done in part or by reducing it or

The following requirement are necessary for preparing an estimate.

- a) Drawings like plan, elevation and sections of important points.
- b) Detailed specifications about workmanship & properties of materials etc.
- c) Standard schedule of rates of the current year.

b) DATA REQUIRED TO PREPARE AN ESTIMATE

1. Drawings i.e. plans, elevations, sections etc.
2. Specifications.
3. Rates.

1 DRAWINGS

If the drawings are not clear and without complete dimensions the preparation of estimation become very difficult. So, It is very essential before preparing an estimate.

2 SPECIFICATIONS

a) General Specifications:

This gives the nature, quality, class and work and materials in general terms to be used in various parts of work. It helps to form a general idea of building.

b) Detailed Specifications:

These gives the detailed description of the various items of work laying down the Quantities and qualities of materials, their proportions, the method of preparation workmanship and execution of work.

3. RATES:

For preparing the estimate the unit rates of each item of work are required.

1. For arriving at the unit rates of each item.
2. The rates of various materials to be used in the construction.
3. The cost of transport materials.
4. The wages of labor, skilled or unskilled of masons, carpenters, Mazdoor, etc.,

C) NEED FOR ESTIMATION AND COSTING

1. Estimate give an idea of the cost of the work and hence its feasibility can be determined i.e whether the project could be taken up with in the funds available or not.
2. Estimate gives an idea of time required for the completion of the work.
3. Estimate is required to invite the tenders and Quotations and to arrange contract.
4. Estimate is also required to control the expenditure during the execution of work.
5. Estimate decides whether the proposed plan matches the funds available or not.

PROCEDURE OF ESTIMATING OR METHOD OF ESTIMATING.

Estimating involves the following operations

1. Preparing detailed Estimate.
2. Calculating the rate of each unit of work
3. Preparing abstract of estimate

D) Types of Estimates

1. Detailed Estimate
2. Approximate Estimate
3. Revised Estimate
4. Supplemental Estimate
5. Working Estimate
6. Annual Maintenance Estimate

8.1. Detailed Estimate**Detailed Measurement Form**

S.No	Description of Item	Length (L)	Breadth (B)	Height (D)	Quantity (LXBXD)
1	Earth Work Excavation	15	10	0.5	750 Cum

Abstract Measurement sheet

S.No	Description of Item	Quantity	Rate	Unit	Amount
1	Earth Work Excavation	750	80	Cum	750x80

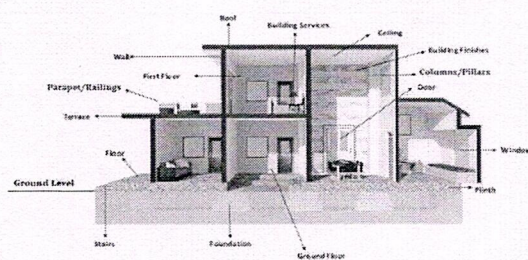
8.3. Revised Estimate

S.No	Description of Item	Sanctioned Quantity	Revised Quantity	Difference of Quantity	Rate	Units	Amount	Remarks
1	Brick Masonry	50 Cum	75 Cum	25	2800	Cum	25x2800	Reason

8.4. Supplemental Estimate

S.No	Description of Item	Description of Revised Item	Sanctioned Qty	Revised Qty	Sanctioned amount	Revised Amount	Difference	Remarks
1	Iron Grill	Aluminum	150 Sqm	150 Sqm	75000	100000	25000	

2. Items Involved In building Structure



Item of works in Building Structure

Site clearance
 Preparation of job layout
 Marking as per the drawing
 Excavation
 Erection of Columns
 Stone masonry in outer periphery
 Back Filling
 Plinth beam
 Super structure
 Roof Beam
 Roof Slab
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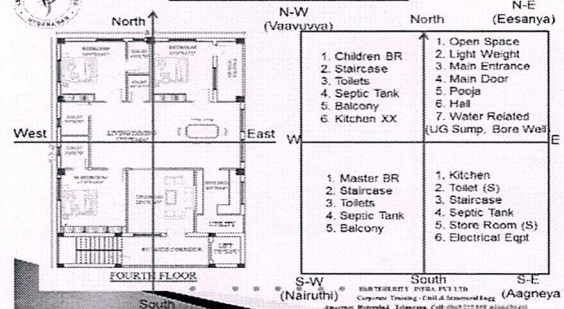
S.No	Description of Item	Units of Quantity	Rate calculation /unit
1	Earth work Excavation	Cum	10 Cum
2	Back Filling	Cum	10 Cum
3	PCC	Cum	Cum
4	Stone Masonry	Cum	Cum
5	Pointing	Sqm	10 Sqm
6	Concrete for all Structural elements	Cum	Cum
7	Brick Masonry (230mm)	Cum	Cum
8	Brick Masonry(115mm)	Sqm	Sqm
9	Plastering (Inside and Out side)	Sqm	10 Sqm
10	Painting (Inside and Out side)	Sqm	10 Sqm
11	DPC	Rmt	Rmt
12	Impervious coat	Smt	Smt
13	Structural Glazing	Sqm	Sqm
14	Aluminum Partition/UPVC Partition	Sqm	Sqm
15	Flooring(Vitrified, ceramic, granite)	Sqm	Sqm
16	Fall ceiling	Sqm	Sqm

Method of calculating quantity

S.No	Description of Item	Quantity	Quantity (A)	Any specific Deduction (B)	Net Quantity (A-B)
1	Earth work Excavation	Cum	LxBxD	Nil	
2	Back Filling(Morram)	Sqm	LxBxD	Footing, Pedestal, Column Below PL	
3	PCC	Cum	LxBxD	Nil	
4	Stone Masonry	Cum	LxBxD	Nil	
5	Pointing	Sqm	LxD	Nil	
6	Concrete for all Structural elements	Sqm	LxBxD	Nil (Including the Qty of steel)	
7	Brick Masonry (230mm)	Sqm	LxBxD	Qty of Door, Window and Ventilators	
8	Brick Masonry(115mm)	Rmt	LxD	Qty of Door, Window and Ventilators	
9	Plastering (Inside and Out side)	Smt	LxD	50% Qty of Door, Window and Ventilators or Based on the specification	
10	Painting (Inside and Out side)	Sqm	LxD	50% Qty of Door, Window and Ventilators or Based on the specification	
11	DPC	Rqm	Length	Nil	
12	Impervious coat	Sqm	LxB	Nil	
13	Structural Glazing	Sqm	LxD	Nil	

VASSTHU

Vastu Shastra is a traditional Hindu system
Architecture to fulfill as per the Science
VAASTHU – NORMS



VAASTHU – NORMS

Vastu for Sweet Home

Structural Positions	North	South	East	West	North East	North West	South East	South West
Kitchen	X	Good	Good	X	Skull	X	BEST	X
Staircase	X	Good	X	Good	Skull	Good	Good	BEST
Toilet	OK	Good	X	Good	Skull	BEST	Good	X
Boring or U-Grout Tank	Good	X	Good	X	BEST	X	X	Skull
Temple	Good	X	Good	Good	BEST	Good	Good	X
Over Head Tank	X	Good	X	BEST	X	X	X	Good
Master Bed-Room	OK	Good	X	Good	X	X	Good	BEST
Kids Room	X	Good	Good	Good	X	Good	X	Good
Guest Room	Good	X	Good	Good	X	BEST	Good	X
Living Room	Good	X	Good	Good	Good	BEST	Good	X

1. Number of Columns should be even, but does not end with "ZERO"
2. Number of Doors be should be even, but does not end with "ZERO"
3. Number of Windows should be even, but does not end with "ZERO"

LAB TEMERITY INFRA PVT LTD
Corporate Training - Civil & Structural Engg
Ammerpet, Hyderabad, Telangana. Call: 9805 222 555, 83066 39493

Materials used in the Construction

Cement is used as a binding material in mortar, concret, etc.

TYPES:

- ✓ OPC
- ✓ PPC, etc

GRADES:

- ✓ 33 Grade
- ✓ 43 Grade
- ✓ 53 Grade



Aggregates



Bricks

Grades of Bricks:

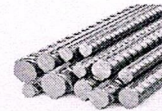
- 1st class Bricks
- 2nd class Bricks
- 3rd class Bricks



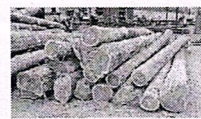
Reinforcement bars

Grades of reinforcement:

- ✓ FE 250
- ✓ FE 415
- ✓ FE 500
- ✓ FE 550



Wood



2. Actual Construction



Site clearance or Jungle clearance

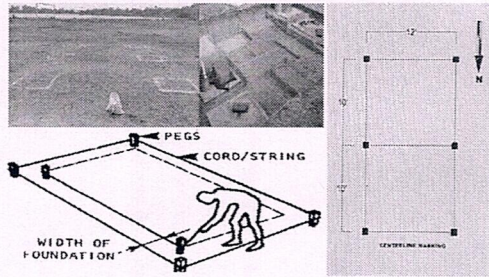
Leveling and grading

(Fig. 9.10.1)

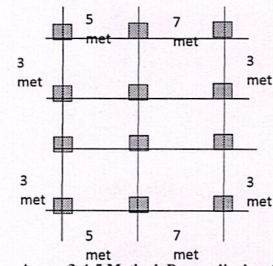


Fig. 9.10.2 Field house building. Civil construction work is not done without leveling.

Marking for foundation

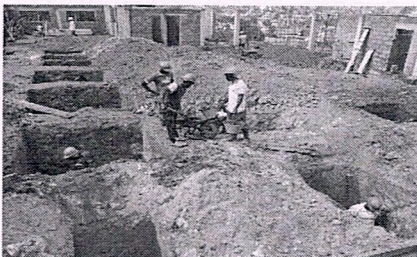


Marking as per the drawing

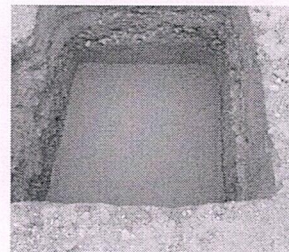


As per 3-4-5 Method, Perpendicular, Cross staff, Theodolite
Grids are developed and Make a marking

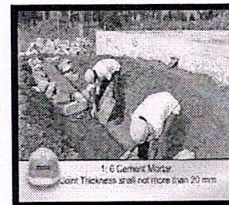
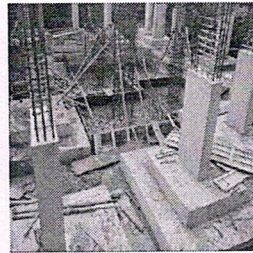
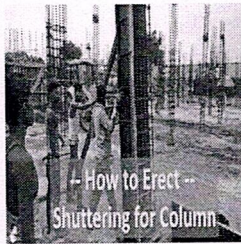
Excavation for Foundation



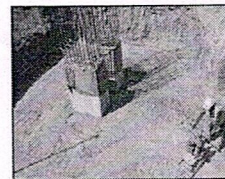
PCC for Footings



Concreting Footings



Stone masonry in outer periphery



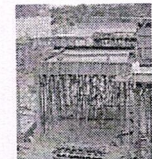
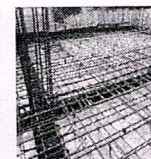
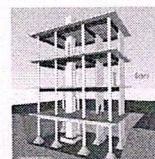
Back Filling with excavated earth and carted earth



Plinth beam



Super structure



Roof Beam and Roof Slab



Granite
Parking Tiles

Vitrified



Inside Plastering 12mm
Plastering 20mm

Cornice

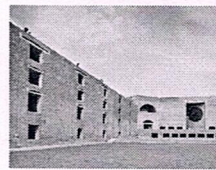
Out side



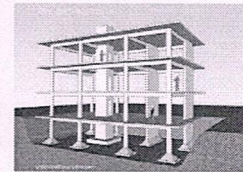
Completed structure

Load Bearing Wall Structure and Framed Structure

Significance of
Load Bearing Wall Structure
Framed Structure



Load Bearing Wall
Structure



Framed Structure

Methods of Estimating the quantities

The quantities like earth work, foundation concrete, brickwork in plinth and Super structure etc., can be worked out by any of following two methods:

- Long wall - short wall method
- Centre line method.

a) Long wall-short wall method:

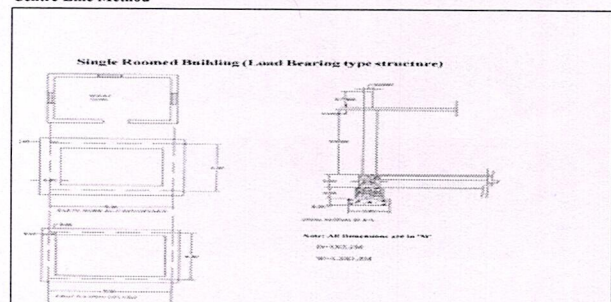
In this method, the wall along the length of room is considered to be long wall while the wall perpendicular to long wall is said to be short wall. To get the length of long wall or short wall, calculate first the centre line lengths of individual walls. Then the length of long wall, (out to out) may be calculated after adding half breadth at each end to its centre line length.

b) Centre line method.


This method is suitable for walls of similar cross sections. Here the total centre line length is multiplied by breadth and depth of respective item to get the total quantity at a time. When cross walls or partitions or verandah walls join with main wall, the centre line length gets reduced by half of breadth for each junction. such junction or joints are studied carefully while calculating total centre line length. The estimates prepared by this method are most accurate and quick.

Estimate quantities of Single room Structure (Load Bearing Wall Structure)

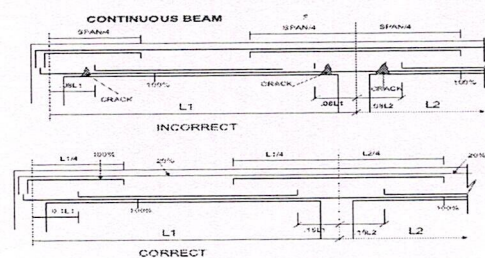
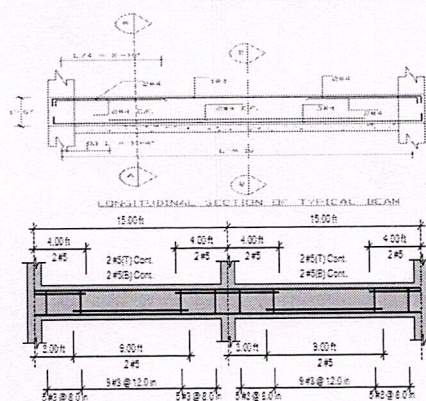
From the given figure below calculate the detailed and abstract estimate for the single roomed building (Load bearing type structure) by a) long wall & short wall method (b) Centre Line Method



S.No	Particulars of Items	No.	L	B	H	Q	Explanation
1	Earth Work excavation for foundations						
	a) Long walls	2	6.2	0.9	1.4	15.764	$1 \times 6.2 \times 0.9 \times 1.4$ $(3 \times 0.3) \times 1.4 \times 1.4$
	b) Short walls	2	3.4	0.9	1.4	8.568	$1 \times 3.4 \times 0.9 \times 1.4$
						Total 24.332	m³
2	C.C.(1:4:8) bed for foundation						
	a) Long walls	2	6.2	0.9	0.3	3.348	
	b) Short walls	2	3.4	0.9	0.3	1.836	
						Total 5.184	m³
3	R.R.Masonry in CM (1:4) for						
	a) Footings	2	5.9	0.6	0.3	3.54	$1 \times 5.9 \times 0.3 \times 0.6 \times 2$
	b) Long walls	2	3.7	0.6	0.3	2.22	$1 \times 3.7 \times 0.6 \times 0.3 \times 2$
						Total 5.76	m³
	Inherent						
	a) Long walls	2	5.259	0.4	0.6	3.165	$1 \times 5.259 \times 0.4 \times 0.6 \times 2$
	b) Short walls	2	1.856	0.4	0.6	2.076	$1 \times 1.856 \times 0.4 \times 0.6 \times 2$
						Total 5.241	m³
	Total R.R. Masonry for footing and Retention					8.961	m³
4	Brick-masonry with CM (1:4) for super structure						
	a) Long Wall	2	5.6	0.3	3.0	10.08	$1 \times 5.6 \times 0.3 \times 3.0 \times 2$
	b) Short Wall	2	4.0	0.3	3.0	7.20	$1 \times 4.0 \times 0.3 \times 3.0 \times 2$
						Total 17.28	m³

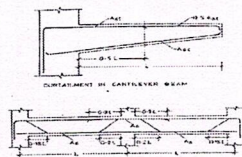
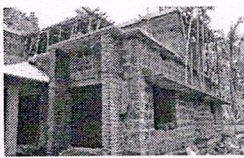
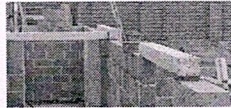
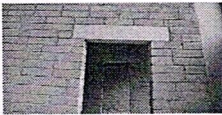
Centre Line Method							
S.No.	Particulars of Items	No	L	B	H	Q	Explanation
1.	Earth Work excavation for foundation <div style="text-align: center;">  </div>	1	19.2	0.9	1.4	24.192	m^3 $L=2(5.3+4.3)=19.2$
2.	C.C.(1:4:8) bed for foundation	1	19.2	0.9	0.3	5.184	m^3
3.	R.R.Masonry in CM (1:6) for						
	a)Footings	1	19.2	0.6	0.5	5.76	
	b)Basement	1	19.2	0.45	0.6	5.184	
					Total	10.944	m^3
4.	Brick masonry with CM(1:6)for superstructure	1	19.2	0.3	0.3	17.28	m^3

Estimation of Reinforcement



Main Bar Top: Full Length+ Hook Length
 Bottom: Full Length+ Hook Length
 Top Extra At Discontinuous Edge : $L/4 + \text{Hook Length}$
 Top Extra at Continuous Edge: $L/4 + L/4$
 Bottom Extra : $2/3 L$
 Stirrups : $(2(L+B) + \text{Hook}) \times \text{Cover at all sides} \times \text{No}$

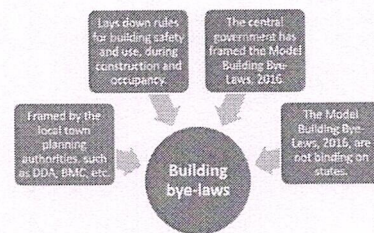
6. Lintel Beam
7. Sunshade
8. Staircase



Requirements of a Building plan

1) For Approval of a Residential Building

Andhra Pradesh Building Rules - 2012
Published vide Notification No. G.O. Ms. No. 168, M.A. & U.D., dated 07.04.2012



Building Byelaws covers

Under the building bye-laws in India, directions are laid down with respect to the following aspects of construction:

Area and usage
Building height
Building coverage
Floor space index
Density
Setbacks and projections
Parking facilities
Fire provisions with respect to staircase and exits
Basement facilities
Green spaces
Open spaces
Amenities in the project
Provision for elevators
Sewerage facilities
Provision for water
Provision for power supply
Provision for waste management
Rainwater harvesting
Barrier-free environment
Safety provisions
Effects of communication technology

Height of building	Setbacks (front, side and rear) in mtrs
Above 3.5 to 9.0	3.0
Above 9.5 m and up to 12 m	4.5
Above 12 m up to 15 m	5.0
Above 15 m up to 18 m	6.0
Above 18 m up to 21 m	7.0

These are changes for group housing, commercial buildings, Apartments, Multiplex
A strip of at least 1m greenery / lawn

Restrictions

Railway Property : 30 mets
High Tension Transmission lines: Min Safety distance is 3.0 met,
1.5 met for low tension transmission wires
Airport: 1 km from the boundary of airports

I LAYOUT/ BUILDING PERMIT FEE & CHARGES

- a. Residential use 1 sq.mt of site area Rs 15
 b. Non Residential uses 1 sq.mt of site area Rs 20

2. APPROVAL OF LAYOUTS :

Layout approval fee or Scrutiny fee per Hectare or part of
 25000

3. APPROVAL OF SITE

- a. Site approval Rs 20/ Sqm
 b. Betterment charges Residential Rs 125/ Sqm
 Non residential Rs 150/ Sqm

4. BUILDING PERMIT FEE

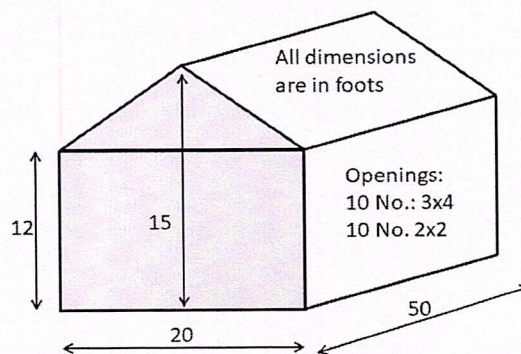
A Residential Buildings		
Up to 200 Sqm		Rs15/Sqm
200—500 Sqm		Rs 30/Sqm
Above 500 Sqm		Rs 75/Sqm
B. Non Residential Buildings: Commercial / Institutional/ Industrial/ Cinema Halls/ Function Halls etc.,		
Up to 200 Sqm		Rs35/Sqm
200—500 Sqm		Rs 70/Sqm
Above 500 Sqm		Rs 120/Sqm

Functional Requirements of a building Structure**Functional Requirements of Building Walls**

Strength.
 Stability.
 Durability.
 Weather resistance.
 Fire resistance.
 Heat insulation.
 Sound insulation.
 Privacy and security.

Cement brick work estimation

	Feet	meter
Wall thickness	0.656	0.1999488
front wall	240	22.2967296
	30	2.7870912
Number of front walls		2
Side walls	600	55.741824
Number of Side walls	2	
Openings	12	1.11483648
Number of openings	10	
Openings	4	0.37161216
Number of openings	10	
Toatal Wall area		146.7868032
Volume of Brick Work		29.34984516
Standard cement brick size	0.016	
Effective cement brick size	0.014079	
Number of bricks required	1834.365322	
Wet volume of mortar	3.523815784	
Wastage percentage	10	
Total Wet Volume	3.876197362	
Bulkage for Dry volume of mortar	25	
Dry Volume of Mortar	4.845246703	



Praportion of Mortar

1

6

cft

Cement (m3)

0.6921781

35.3147

Sand (m3)

4.776028893 168.6640275

Density of

Cement

Density (Kg/m3)

1440

Amount (Kg) No.of Bags (50Kg)

996.7364646

19.935

cost

7973.891717

River Sand

1650

7880.447673

157.61

6746.561102

bricks

22012.38387

Total material cost 36732.83669

Two Roomed Building

Item No.	Particulars of Items	No.	Length (m)	Breadth (m)	Hight or Depth (m)	Quantity
1	Earth Work					
	Long wall	2	11.7	1.1	1	25.74
	Short wall	3	5.2	1.1	1	17.16
					Total	42.9
2	Foundation (Lime concrete)					
	Long wall	2	11.7	1.1	0.3	7.722
	Short wall	3	5.2	1.1	0.3	5.148
					Total	12.87
3	Brick Work					
	Level 1					
	Long wall	2	11.4	0.8	0.2	3.648
	Short wall	3	5.5	0.8	0.2	2.64
					Total	6.288
	Level 2					
	Long wall	2	11.3	0.7	0.1	1.582
	Short wall	3	5.6	0.7	0.1	1.176
					Total	2.758
	Level 3					
	Long wall	2	11.2	0.6	0.1	1.344
	Short wall	3	5.7	0.6	0.1	1.026
					Total	2.37
	Level 4					
	Long wall	2	11.1	0.5	0.1	1.11
	Short wall	3	5.8	0.5	0.1	0.87
					Total	1.98
4	Plinth beam					
	Long wall	2	11	0.4	0.8	7.04
	Short wall	3	5.9	0.4	0.8	5.664
					Total	12.704
5	DPC					
	Long wall	2	11	0.4	-	8.8
	Short wall	3	5.9	0.4	-	7.08
						15.88
	Reduction	2	1.2	0.4	-	0.96
					Total	14.92
6	Super structure (brickwork)					
	Long wall	2	10.9	0.4	4.2	36.624
	Short wall	3	6	0.4	4.2	30.24

					Total	66.864
	Reduction					
	Doors	2	1.2	2.1	0.3	1.512
	Windows	4	1	1.5	0.3	1.8
	Shelves	2	1	1.5	0.2	0.6
					Total	3.912

Mosaic/Terrazo flooring

Rate analysis for 100 Sq.m Mosaic/Terrazo flooring			
Thickness of Cemen concrete layer (mm)			20
Thickness of Mosaic layer (6)			6
Toal Area of work (Sq.m)		100	
Cement concter proportion (M15)	1	2	4
Mosaic layer proportion	1	1	
	1	1.5	
	1	2	
Total Quanty of cement concrete (Cum)			
Total Quanty of Mosaic mortar (Cum)			
Total quantity (Cum)			0
Material	Quantity/No.	Unit Rate	Cost
1 Cement	26	183	4758
2 Coarse aggregate	1.88	1220	2293.6
3 Fine aggregate	0.94	510	479.4
4 Marble chips	1.762	90	158.58
	Total		7689.58
Labour			
1 Mistri (head mation)	0	840	0
2 Mation(skilled)	30	770	23100
3 Mazdoor	30	644	19320
4 Bhisti	10	700	7000
5 Polisher	70	735	51450
6 Polishing stone	2	2000	4000
7 Oxalic acid powder	1	1000	1000
8 Sundries	1	500	500
	Total		106370
	Grass amount		114060
Water Cherges @1.5%			1710.89
Contractor Profit @ 10%			11406
Grand total			127176

Single Room Building

Item No.	Particulars of Items	No.	Length (m)	Breadth (m)	Hight or Depth (m)	Quantity
1	Earth Work					
	Long wall	2	6.2	0.9	0.9	10.044
	Short wall	2	3.4	0.9	0.9	5.508
					Total	15.552
2	PCC					
	Long wall	2	6.2	0.9	0.3	3.348
	Short wall	2	3.4	0.9	0.3	1.836
					Total	5.184
3	Foundation Brick work					
	Level-1					
	Long wall	2	5.9	0.6	0.3	2.124
	Short wall	2	3.7	0.6	0.3	1.332
					Total	3.456
	Level-1					
	Long wall	2	5.8	0.5	0.3	1.74
	Short wall	2	3.8	0.5	0.3	1.14
					Total	2.88
4	Plinth level Brick work					
	Long wall	2	5.7	0.4	0.6	2.736
	Short wall	2	3.9	0.4	0.6	1.872
					Total	4.608
5	Superstructure					
	Long wall	2	5.6	0.3	3.5	11.76
	Short wall	2	4	0.3	3.5	8.4
					Total	20.16