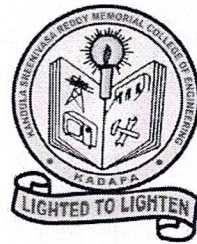# KANDULA SRINIVASA REDDY MEMORIAL COLLEGE OF ENGINEERING
(AUTONOMOUS)

KADAPA-516003. AP

(Approved by AICTE, Affiliated to JNTUA, Ananthapuramu, Accredited by NAAC)

(An ISO 9001-2008 Certified Institution)

DEPARTMENT OF MECHANICAL ENGINEERING

VALUE ADDED COURSE

ON

"ESTIMATING AND COSTING for Mechanical Engineers"

Resource Person   : Dr. P. Sreenivas, Associate Professor, Dept. of ME, KSRMCE

Course Coordinator: Dr. Shaik Khaja Peer Saheb Professor, Dept. of ME, KSRMCE

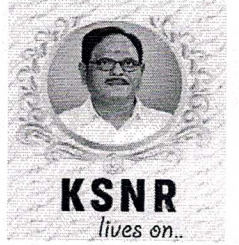Duration: 08/02/2023 to 24/02/2023

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

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Lr./KSRMCE/ME/2022-23/   Date:03-02-2023

To
The Principal,
KSRMCE,
Kadapa.

Respected Sir,

Sub: Permission to Conduct Value added Course on "ESTIMATING AND COSTING for Mechanical Engineers" **08/02/2023 to 24/02/2023**–Req- Reg.

The Department of Mechanical Engineering is planning to offer a Value Added Course on "ESTIMATING AND COSTING for Mechanical Engineers" to B. Tech. students. The course will be conducted from **08/02/2023 to 24/02/2023**. In this regard, I kindly request you to grant permission to conduct Value Added Course.

Thanking you sir,

Yours faithfully

Dr. Shaik Khaja peer saheb,

Professor in MED

Forwarded to principal
SV

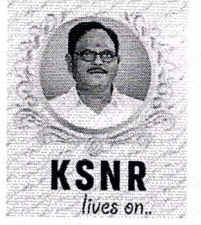Permitted
V. S. S. Murty
03/02/2023

Cr./KSRMCE/ME/2022-23/   Date: 04/02/2023

Circular

    The Department of Mechanical Engineering is offering a Value Added Course on "ESTIMATING AND COSTING for Mechanical Engineers" from **08/02/2023 to 24/02/2023** to B.Tech students. In this regard, interested students are requested to register for the Value Added Course with following registration link.

https://forms.gle/Lw5jaLzUwB19kLiw9

For further information contact Course Coordinator.

Course Coordinator: Dr. Shaik Khaja Peer Saheb ,Professor, Dept. of ME.-KSRMCE.

HOD
Professor & Head
Department of Mechanical Engineering
K.S.R.M. College of Engineering
KADAPA - 516 003.

Cc to:

IQAC-KSRMCE

Registration for Value Added Course Course on "ESTIMATING AND COSTING for Mechanical Engineers" From 08/02/2023 to 24/02/2023

* Required

1. Roll Number *

   _____

2. Name of the Student *

   _____

3. B.Tech Semester *

   Mark only one oval.

   ◯ I sem

   ◯ II sem

   ◯ III sem

   ◯ IV sem

   ◯ V sem

   ◯ VI sem

   ◯ VII sem

   ◯ VIII sem

   ◯ Other: _____

4. **BRANCH**

Mark only one oval.

- ⬭ ME
- ⬭ CE
- ⬭ EEE
- ⬭ ECE
- ⬭ CSE
- ⬭ AI&ML

5. **E-Mail ID**

_____

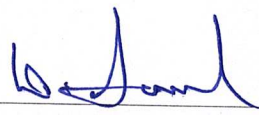This content is neither created nor endorsed by Google.

Google Forms

K.S.R.M College of Engineering
Department Of Mechanical Engineering
Registration list of Value Added Course On ESTIMATING & COSTING for MECHANICAL Engineers fdrom 08/02/2023 - 24/02/2023

S.No	Timestamp	Roll Number	Name of the Student	B.Tech Semester	BRANCH	E-Mail ID
1	2-4-2023 17:27:20	229y5a0312	C Mahammad Rafi	III sem	ME	229y5a0312@ksrmce.ac.in
2	2-4-2023 17:27:50	219y1a0327	Syed Mohammad Thasin	III sem	ME	219y1a0327@ksrmce.ac.in
3	2-4-2023 17:28:10	229Y5A0310	B suresh	III sem	ME	229Y5A0310@ksrmce.ac.in
4	2-4-2023 17:29:55	219y1a0312	Gandham Tarun	III sem	ME	219y1a0312@ksrmce.ac.in
5	2-4-2023 17:30:34	219y1a0328	T Naga Jagadeesh Reddy	III sem	ME	219y1a0328@ksrmce.ac.in
6	2-4-2023 17:33:16	219y1a0310	G.Venkata Bharath	III sem	ME	219y1a0310@ksrmce.ac.in
7	2-4-2023 17:38:22	229Y5A0306	A VISHNU VARDHAN REDDY	III sem	ME	229y5a0306@ksrmce.ac.in
8	2-4-2023 17:39:49	229y5a0309	B.Ermiya kumar	III sem	ME	229y5a0309@ksrmce.ac.in
9	2-4-2023 17:43:56	229y5A0307	A.Naga sandeep	III sem	ME	229y5a0307@ksrmce.ac.in
10	2-4-2023 17:47:53	219y1a0301	B sathish	III sem	ME	219y1a0301@ksrmce.ac.in
11	2-4-2023 17:49:02	229Y5A0305	A. GEETHA PRADEEP	III sem	ME	229Y5A0305@ksrmce.ac.in
12	2-4-2023 17:50:43	219y1a0324	Shaik Muddu baigari farid	III sem	ME	219y1a0324@ksrmce.ac.in
13	2-4-2023 17:52:29	219y1a0308	E Sunil Kumar Reddy	III sem	ME	219y1a0308@ksrmce.ac.in
14	2-4-2023 17:53:21	219Y1A0323	Shaik Mohammed Iqbal	III sem	ME	219y1a0323@ksrmce.ac.in
15	2-4-2023 17:54:26	219y1a0321	Shaik baba afzal	III sem	ME	219y1a0321@ksrmce.ac.in
16	2-4-2023 18:07:58	229y5a0302	a.manjunath	III sem	ME	229y5a0302ksrmce ac.in
17	2-4-2023 18:12:46	219y1a0309	E.Ramesh Reddy	III sem	ME	219y1a0309@ksrmce.ac.in
18	2-4-2023 18:17:07	219Y1A0313	G.SURESH	III sem	ME	219Y1a0313@ksrme.ac .in
19	2-4-2023 18:24:07	219y1a0302	Suresh	III sem	ME	219y1a0302@ksrmce.ac.in
20	2-4-2023 18:29:20	229y5a0311	B Surendra	III sem	ME	229y5a0311@ksrmce.ac.in
21	2-4-2023 18:47:23	219y1a0319	S althaf	III sem	ME	219y1a0319@ksrmce.ac.in
22	2-4-2023 18:54:04	229Y5A0303	Akula pradeep	III sem	ME	229Y5A0303@ksrmce.ac.in
23	2-4-2023 19:03:57	229Y5A0308	B.Kousik Nagendra	III sem	ME	229y5a0308@ksrmce.ac.in
24	2-4-2023 19:15:51	219Y1A0318	Shaik Waseem Akram	III sem	ME	219y1a0318@ksrmce.ac.in
25	2-4-2023 22:26:54	219ya0304	B.Vishnu Vardhan	III sem	ME	219y1a0304@ksrmce.ac.in
26	2-4-2023 23:07:35	219y1a0326	Syed ibrahim	III sem	ME	219y1a0326@ksrmce.ac.in
27	2-5-2023 11:21:07	219y1a0311	G Siva Sankar	III sem	ME	219y1a0311@ksrmce.ac.in
28	2-5-2023 15:33:38	229y5a0304	A.Jaswanth	III sem	ME	229y5a0304@ksrmce.ac.in
29	2-6-2023 10:58:22	219y1a0320	S. Arshad	III sem	ME	219y1a0320@ksrmce.ac.in
30	2-6-2023 13:01:32	219y1a0305	C.Charan Kumar reddy	III sem	ME	219y1a0305@ksrmce.ac.in
31	2-6-2023 13:01:37	219Y1A0306	C.Sainath Reddy	III sem	ME	219y1a0306@ksrmce.ac.in
32	2-6-2023 13:02:01	219y1a0303	Bodham vijay kumar reddy	III sem	ME	219y1a0303@ksrmce.ac.in
33	2-6-2023 13:02:15	219y1a0315	L.dwarakanathareddy	III sem	ME	219y1a0315@ksrmce.ac.in

34	2-6-2023 13:03:37	229y5a0313	C.Naveen	III sem	ME	229y5a0313@ksrmce.ac.in
35	2-6-2023 13:04:19	219y1a0329	Yaparalavenkatavamsikrishna	III sem	ME	219y1a0329@ksrmce.ac.in
36	2-6-2023 13:07:15	229y5a0301	ACHYUTHA UDAY NAVYA KRISHNA	III sem	ME	229y5a0301@ksrmce.ac.in
37	2-6-2023 13:07:39	219y1a0307	C.karthik	III sem	ME	219y1a0307@ksrmce.ac.in
38	2-6-2023 13:10:24	229Y5A0314	C P PAVAN KALYAN	III sem	ME	229y5a0314@ksrmce.ac.in
39	2-6-2023 13:13:24	229y5a0315	D Raj kumar	III sem	ME	229y5a0315@ksrmce.ac.in
40	2-6-2023 14:19:08	219y1a0325	Sundupalli sai mahesh	III sem	ME	219y1a0325@ksrmce.ac.in
41	2-6-2023 14:54:09	209Y10341	Pagadapula praneethkumar	III sem	ME	209Y1A0341@ksrmce.ac.in
42	2-7-2023 13:05:05	219y1a0304	B.Vishnu Vardhan	III sem	ME	219y1a0304@ksrmce.ac.in

CO-ORDINATOR

HoD

Professor & Head
Department of Mechnical Engineering
K.S.R.M. College of Engineering
KADAPA - 516 003.

ESTIMATING AND COSTING FOR MECHANICAL ENGINEERS

UNIT-1

INTRODUCTION TO ESTIMATION & COSTING: Estimation - Definition, Importance and Aims- Qualities and functions of an Estimator Source of errors in estimation- Constituents of Estimation- Costing - Definition and Aims - Difference between costing and estimating-

UNIT-2

ESTIMATION OF MATERIALS COST: Material - Direct material, indirect material and examples- Calculation of Material cost - Labour - direct, indirect labour and examples - Calculation of labour cost - Expenses - direct, indirect expenses and examples- Classification of expenses - factory, administrative, selling and distribution expenses - Fixed and variable expenses - Components of cost - prime cost, factory cost, office cost, total cost - Block diagram to show the relationship between elements and components of cost -Determination of selling price.

UNIT-3

ESTIMATION OF WEIGHTS OF MATERIALS & COST OF MATERIAL Mensuration, perimeters and areas of plane figures, Surface areas and volumes of solids. Depreciation and obsolescence: Definition, types, different methods of calculating depreciation- numeric examples.

UNIT-4

ESTIMATION IN FORGING SHOP: Cost terminology associated with forging shop- The procedure for calculating material cost of a product for forging shop- Procedure for estimating forging cost- forging losses to be considered while estimating -Estimation of forging cost.

UNIT-5

ESTIMATION IN FOUNDRY SHOP: Estimation in foundry shop-pattern allowances- The procedure for calculating material cost of a product for foundry shop - Procedure for estimating cost of pattern making. -Procedure for estimating in foundry cost.

TEXT BOOKS

1) Mechanical estimation and costing **T.R.Banga and S.C.Sharma**
2) Mechanical costing and estimation. **Singh and Khan**
3) Mechanical Estimation **Malhothra**
4) Estimating & Costing **O.P.Khanna**

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SCHEDULE

Department of Mechanical Engineering

Value Added Course

on

"Estimating & Costing For Mechanical Engineers"

Date	Timing	Course Instructor	Topic to be covered
08/02/2023	4 PM to 6 PM	Dr. P. Sreenivas	**INTRODUCTION TO ESTIMATION & COSTING:**
09/02/2023	4 PM to 6 PM	Dr. P. Sreenivas	Estimation - Definition, Importance and Aims
10/02/2023	4 PM to 6 PM	Dr. P. Sreenivas	Qualities and functions of an Estimate or Source of errors in estimation
11/02/2023	2 PM to 6 PM	Dr. P. Sreenivas	Constituents of Estimation- Costing - Definition and Aims
13/02/2023	4 PM to 6 PM	Dr. P. Sreenivas	Difference between costing and estimating
14/02/2023	4 PM to 6 PM	Dr. P. Sreenivas	**ESTIMATION OF MATERIAL COST:** Material - Direct material, indirect material and examples- Calculation of Material cost
15/02/2023	4 PM to 6 PM	Dr. P. Sreenivas	Labor - direct, indirect labor and examples - Calculation of labor cost - Expenses - direct, indirect expenses and examples
16/02/2023	4 PM to 6 PM	Dr. P. Sreenivas	Classification of expenses - factory, administrative, selling and distribution expenses - Fixed and variable expenses - Components of cost - prime cost, factory cost, office cost, total cost
17/02/2023	4 PM to 6 PM	Dr. P. Sreenivas	Block diagram to show the relationship between elements and components of cost - Determination of selling price.
20/02/2023	4 PM to 6 PM	Dr. P. Sreenivas	**ESTIMATION OF WEIGHTS OF MATERIALS & COST OF MATERIAL** Mensuration, perimeters and areas of plane figures, Surface areas and volumes of solids
21/02/2023	4 PM to 6 PM	Dr. P. Sreenivas	Depreciation and obsolescence: Definition, types, different methods of calculating depreciation- numeric examples.
22/02/2023	4 PM to 6 PM	Dr. P. Sreenivas	**ESTIMATION IN FORGING SHOP:**Cost terminology associated with forging shop-

			The procedure for calculating material cost of a product for forging shop- Procedure for estimating forging cost- forging losses to be considered while estimating -Estimation of forging cost
23/02/2023	4 PM to 6 PM	Dr. P. Sreenivas	**ESTIMATION IN FOUNDRY SHOP:** Estimation in foundry shop-pattern allowances- The procedure for calculating material cost of a product for foundry shop
24/02/2023	4 PM to 6 PM	Dr. P. Sreenivas	Procedure for estimating cost of pattern making. -Procedure for estimating in foundry cost.

CO ORDINATOR

HoD

Professor & Head
Department of Mechnical Engineering
K.S.R.M. College of Engineering
KADAPA - 516 003.

K.S.R.M. COLLEGE OF ENGINEERING

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Department of Mechanical Engineering
Attendance sheet of VALUE ADDED COURSE on "ESTIMATING AND COSTING FOR MECHANICAL ENGINEERING" from 08th FEB 2023 to 24th FEB 2023

Sl. No.	Roll No.	Name	08/02	09/02	10/02	11/02	13/02	14/02	15/02	16/02	17/02	20/02	21/02	22/02	23/02	24/02
1	209Y10341	Pagadapulapraneeth kumar		A												
2.	219y1a0301	B sathish						A								
3.	219y1a0302	Suresh	Suresh	Suresh	Suresh	Suresh	Suresh	Suresh	Suresh	Suresh	Suresh	A	Suresh	Suresh	Suresh	
4.	219y1a0303	Bodhamvijaykumarreddy	vijay	Vijay	vijay	A	vijay	vijay	vijay	vijay	vijay	vijay	vijay	vijay	vijay	vijay
5.	219y1a0304	B.VishnuVardhan	vishu	vishu	vishu	vish	vishu	vishu	vishu	vishu	A	vishu	vishu	vishu	vishu	vishu
6.	219y1a0305	C.Charan Kumar reddy		charan	charan	charan	charan	charan	charan	charan	charan	charan	charan	charan	A	charan
7.	219Y1A0306	C.Sainath Reddy	Saai		Sai	Sai	Cross	Sai	A		Cross	Sai	Sai	C.Sai	C.Sai	C.Sai
8.	219y1a0307	C.karthik			D											
9.	219y1a0308	E Sunil Kumar Reddy	E.Sunil	E.Sunil	E.Sunil	E.Sunil	E.Sunil	E.Sunil	E.Sunil	E.Sunil	A	E.Sunil	E.Sunil	E.Sunil	E.Sunil	E.Sunil
10	219y1a0309	E.Ramesh Reddy	E.Reo	E.Reo	E.Reo	E.Reo	E.AT	E.Reo	E.Reo	E.Reo	E.Reo	A	E.Reo	E.Reo		
11	219y1a0310	G.VenkataBharath	Bharath	Bharath	Bharath	Bharath	Bharath	Bharath	A	Bharath	vishu	Bharath	vishu	Bharath	Bharath	
12	219y1a0311	G Siva Sankar	A	Siva	Siva	Siva	Siva	Siva	Siva	Siva	Siva	Siva	Siva	Siva	Siva	Siva
13	219y1a0312	GandhamTarun	Tharun	Tharun	Tharun	Tharun	Tharun	Tharun	Tharun	Tharun	Tharun	Tharun	Tharun	Tharun	Tharun	A

14	219Y1a0313	G.SURESH		A												
15	219y1a0315	L.dwarakanathareddy							A							
16	219Y1A0318	ShaikWaseemAkram				A										
17	219y1a0319	S althaf									A						
18	219y1a0320	S. Arshad			A												
19	219y1a0321	Shaik baba afzal						A									
20	219Y1A0323	Shaik Mohammed Iqbal					A										
21	219y1a0324	ShaikMuddubaigarifarid	A														
22	219y1a0325	Sundupallisaimahesh						A									
23	219y1a0326	Syed ibrahim												A			
24	219y1a0327	Syed Mohammad Thasin					A										
25	219y1a0328	T Naga Jagadeesh Reddy			A												
26	219y1a0329	Yaparalavenkatavamsikrishna							A								
27	219ya0304	B.VishnuVardhan	A														
28	229y5a0301	ACHYUTHA UDAY NAVYA KRISHNA									A						
29	229y5a0302	a.manjunath										A					
30	229Y5A0303	Akulapradeep												A			
31	229y5a0304	A.Jaswanth											A				
32	229Y5A0305	A. GEETHA PRADEEP															
33	229Y5A0306	A VISHNU VARDHAN REDDY										A					
34	229y5A0307	A.Nagasandeep					A										
35	229Y5A0308	B.KousikNagendra			A												
36	229y5a0309	B.Ermiyakumar							A								
37	229Y5A0310	B suresh	A														

38	229y5a0311	B Surendra	A													
39	229y5a0312	C Mahammad Rafi							A							
40	229y5a0313	C.Naveen			A											
41	229Y5A0314	C P PAVAN KALYAN											A			
42	229y5a0315	D Raj kumar						A								

Coordinator

HOD-Mechanical Engg.

KSRM
COLLEGE OF ENGINEERING

(UGC - Autonomous)
Kadapa, Andhra Pradesh, India– 516 005
Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.

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Value Added course on

Estimating and Costing for Mechanical Engineers

Department of Mechanical Engineering

ME - 103

08/02/2023 to 24/02/2023

Resource Person — **Dr. P. Sreenivas**
Associate Professor, Department of Mechanical Engineering

Coordinator — **Dr. Shaik Khaja Peer Saheb**
Professor, Department of Mechanical Engineering

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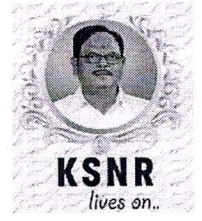
Report of
Value Added Course on "Estimating & Costing for Mechanical Engineers"
From 8/02/2023 to 24/02/2023

Target Group	:	**B.Tech Students**
Details of Participants	:	**42 Students**
Co-coordinator	:	**Dr. Shaik Khaja Peer Saheb**
Resource Person	:	**Dr. P Sreenivas**
Organizing Department	:	**Mechanical Engineering**
Venue	:	**Seminar Hall, Mechanical Department**

Description:

The Department of Mechanical Engineering conducted a Value Added Course on **"Estimating & Costing for Mechanical Engineers"** from 8th Feb 2023 to 24nd Feb 2023. The course Resource Person is Dr.P. Sreenivas , Asso. Professor Department Mechanical Engineering, KSRMCE.

The main objective of this course is to introduce the fundamental concepts Qualities and functions of an Estimator Source of errors in estimation- Constituents of Estimation- Costing - Definition and Aims - Difference between costing and estimating.

ESTIMATION OF MATERIALS COST: Material - Direct material, indirect material and examples- Calculation of Material cost - Labour - direct, indirect labour and examples - Calculation of labour cost - Expenses - direct, indirect expenses and examples- Classification of expenses - factory, administrative, selling and distribution expenses - Fixed and variable expenses - Components of cost - prime cost, factory cost, office cost, total cost - Block diagram to show the relationship between elements and components of cost -Determination of selling price.

Cost terminology associated with forging shop- The procedure for calculating material cost of a product for forging shop- Procedure for estimating forging cost- forging losses to be considered while estimating - Estimation of forging cost.

With this Certificate course students enhanced their knowledge in the area of Estimating & Costing.

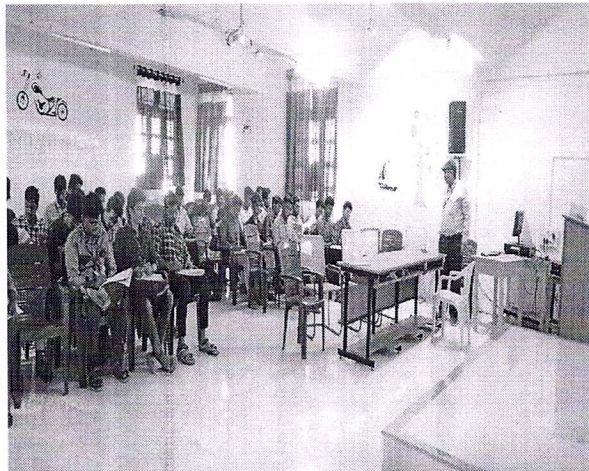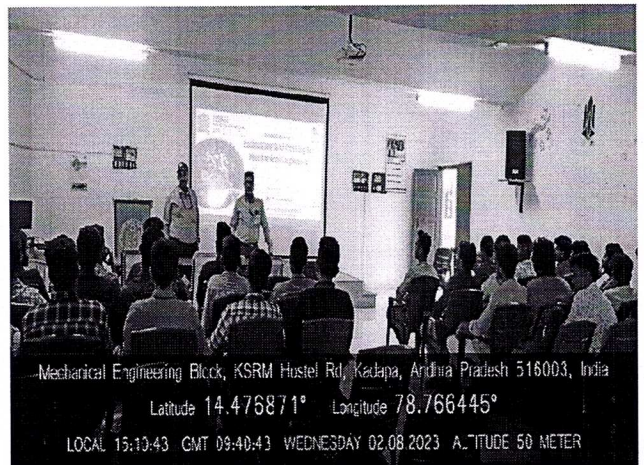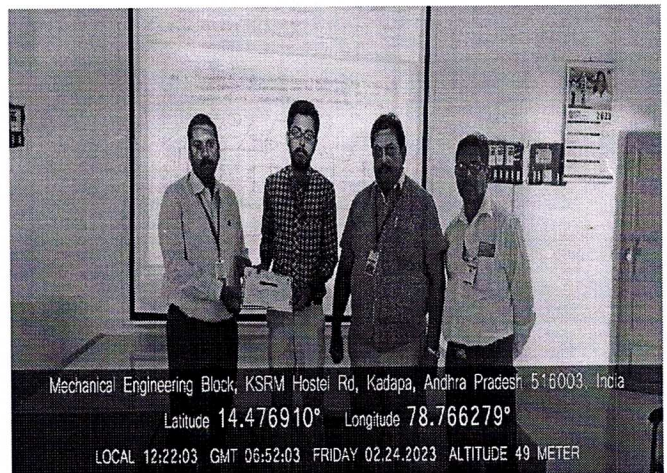The pictures taken during the course are given below:

Resource Person Dr. P. Sreenivas, Asso. Prof in MED, giving Keynote Address

Coordinator Dr. S. Khaja Peer Saheb Prof. in MED, addressing the Gathering

Participants Keenly Listening the Lecture

Certificates Distribution by the HoD
Dr. D. Ravikanth

Coordinator

HoD
Professor & head
Department of Mechnical Engineering
K.S.R.M. College of Engineering
KADAPA - 516 003.

K.S.R.M. COLLEGE OF ENGINEERING

(UGC - Autonomous)

Kadapa, Andhra Pradesh, India– 516 003

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

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Certificate of Completion

This is to certify that Mr/Mrs. __Gajula Venkata Bharath__ Bearing the Roll Number __219Y1A0310__ has Successfully Completed Value Added Course on "Estimating and Costing for Mechanical Engineers" from 08/02/2023 to 24/02/2023, Organized by Department of Mechanical Engineering, KSRMCE, Kadapa.

Coordinator

HoD ME

Principal

K.S.R.M. COLLEGE OF ENGINEERING

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Kadapa, Andhra Pradesh, India– 516 003

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Certificate of Completion

This is to certify that Mr/Mrs. **Shaik Muddu Baigari Farid** Bearing

the Roll Number **219Y1A0324** has Successfully Completed Value Added Course

on "Estimating and Costing for Mechanical Engineers" from 08/02/2023 to 24/02/2023, Organized by

Department of Mechanical Engineering, KSRMCE, Kadapa.

Coordinator

HoD ME

Principal

K.S.R.M. COLLEGE OF ENGINEERING

(UGC - Autonomous)

Kadapa, Andhra Pradesh, India– 516 003

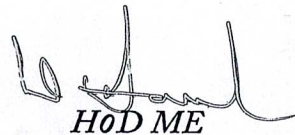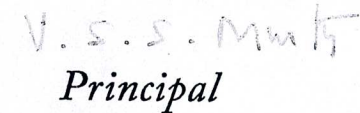Approved by AICTE, New Delhi & Affiliated to JNTUA, Ananthapuramu.

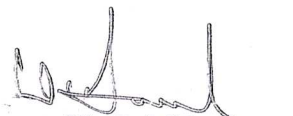**KSNR**
lives on..

Certificate of Completion

This is to certify that Mr/Mrs. **Badiginchala Kousik Nagendra** Bearing the Roll Number **229Y5A0308** has Successfully Completed Value Added Course on "Estimating and Costing for Mechanical Engineers" from 08/02/2023 to 24/02/2023, Organized by Department of Mechanical Engineering, KSRMCE, Kadapa.

Coordinator

HoD ME

U. S. S. Murty
Principal

Feedback form on Value Added Course "Estimating & Costing For Mechanical Engineers" from 08/02/2023 to 24/02/2023

* Indicates required question

1. Email *

2. Roll Number *

3. Name of the Student *

4. The objectives of the Value Added Course were met (Objective) *

   Mark only one oval.

   ◯ Excellent

   ◯ Good

   ◯ satisfactory

   ◯ Poor

5. The content of the course was organized and easy to follow (Delivery) *

Mark only one oval.

- Excellent
- Good
- Satisfactory
- Poor

6. The Resource Persons were well prepared and able to answer any question *
(Interaction)

Mark only one oval.

- Excellent
- Good
- Satisfactory
- Poor

7. The exercises/role play were helpful and relevant (Syllabus Coverage) * *

Mark only one oval.

- Excellent
- Good
- Satisfactory
- Poor

8. The Value Added Course satisfy my expectation as a value added Programme   *
(Course Satisfaction)

Mark only one oval.

○ Excellent

○ Good

○ Satisfactory

○ Poor

9. Any Issues *

_____

Feed Back on Estimating & costing for Mechanical Engineers

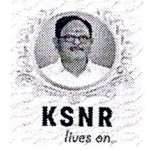| S.No	Timestamp	Email Address	Roll Number	Name of the Student	The objectives of the	The content of the cou	The Resource Person	The exercises/role pla	The Value Added Cou	Any Issues
1	2-24-2023 13:18:38	219y1a0312@ksrmce.a	219y1a0312	G Tarun	Excellent	Good	Excellent	Good	Good	
2	2-24-2023 13:18:42	229y5a0307@ksrmce.a	229y5A0307	Ayyapu Naga Sandeep	Excellent	Excellent	Excellent	Excellent	Excellent	
3	2-24-2023 13:18:42	219y1a0327@ksrmce.a	219y1a0327	Syed Mohammad Thas	Excellent	Excellent	Excellent	Excellent	Excellent	
4	2-24-2023 13:19:00	219y1a0323@ksrmce.a	219y1a0323	Shaik Mohammed Iqba	Excellent	Good	Excellent	Excellent	Excellent	
5	2-24-2023 13:19:07	229y5a0311@ksrmce.a	229y5a0311	B Surendra	Excellent	Good	Excellent	Satisfactory	Good	
6	2-24-2023 13:19:12	219y1a0318@ksrmce.a	219Y1A0318	Shaik Waseem Akram	Excellent	Excellent	Excellent	Good	Excellent	
7	2-24-2023 13:19:16	219y1a0322@ksrmce.a	219y1a0322	S mahammad sajid	Excellent	Excellent	Excellent	Excellent	Good	
8	2-24-2023 13:19:17	229y5a0314@ksrmce.a	229Y5A0314	C P PAVAN KALYAN	satisfactory	Satisfactory	Good	Good	Excellent	Nothing issues
9	2-24-2023 13:19:34	229y5a0312@ksrmce.a	229y5a0312	C Mahammad Rafi	Excellent	Excellent	Excellent	Excellent	Excellent	
10	2-24-2023 13:19:37	229y5a0313@ksrmce.a	229y5a0313	C.Naveen	Excellent	Good	Excellent	good	Good	No Issues
11	2-24-2023 13:19:43	229y5a0315@ksrmce.a	229y5a0315	D. Raj kumar	Excellent	Good	Excellent	Excellent	Good	
12	2-24-2023 13:20:07	219y1a0329@ksrmce.a	219y1a0329	Yaparalavenkatavamsi	Excellent	Good	Good	Excellent	Excellent	All are good
13	2-24-2023 13:20:07	219y1a0324@ksrmce.a	219y1a0324	Shaik Muddu baigari fa	Excellent	Good	Excellent	Good	Good	No issues
14	2-24-2023 13:21:56	219y1a0328@ksrmce.a	219y1a0328	T Naga Jagadeesh Red	Good	Satisfactory	Good	Good	Satisfactory	No
15	2-24-2023 13:25:40	219y1a0302@ksrmce.a	219y1a0302	Suresh	Good	Good	Good	Good	Good	No issues
16	2-24-2023 13:30:30	219y1a0310@ksrmce.a	219y1a0310	G.Bharath	Excellent	Excellent	Good	Excellent	Excellent	No
17	2-24-2023 13:42:02	219y1a0306@ksrmce.a	219y1a0306	c.sainath Reddy	Good	Excellent	Satisfactory	Excellent	Satisfactory	No
18	2-24-2023 13:42:09	219y1a0308@ksrmce.a	219y1a0308	E Sunil Kumar Reddy	Good	Good	Good	Good	Good	No
19	2-24-2023 13:47:26	229y5a0310@ksrmce.a	229Y5A0310	B suresh	Excellent	Excellent	Excellent	Excellent	Excellent	Nothing
20	2-24-2023 13:55:37	229y5a0304@ksrmce.a	229y5a0304	A.Jaswanth	satisfactory	Satisfactory	Satisfactory	Satisfactory	Satisfactory	no
21	2-24-2023 14:34:03	219y1a0326@ksrmce.a	219y1a0326	Syed ibrahim	Excellent	Excellent	Excellent	Excellent	Excellent	No
22	2-24-2023 17:16:54	209y1a0341@ksrmce.a	209Y1A0341	p.praneethkumar	Good	Good	Good	Good	Good	No
23	2-24-2023 17:37:22	219y1a0321@ksrmce.a	219y1a0321	Baba afzal.shaik	Good	Good	Good	Good	Good	No
24	2-24-2023 18:17:36	219y1a0311@ksrmce.a	219y1a0311	G Siva Sankar	Excellent	Excellent	Excellent	Excellent	Excellent	No
25	2-24-2023 18:17:52	219y1a0315@ksrmce.a	219y1a0315	L.dwaraka natha reddy	Excellent	Excellent	Good	Good	Excellent	Noo
26	2-24-2023 18:19:45	229y5a0308@ksrmce.a	229Y5A0308	B.Kousik Nagendra	Good	Satisfactory	Good	Satisfactory	Satisfactory	No Issues
27	2-24-2023 18:20:25	229y5a0309@ksrmce.a	229y5a0309	B.Ermiya kumar	Good	Satisfactory	Good	Satisfactory	Satisfactory	No Issues
28	2-24-2023 18:22:11	229y5a0303@ksrmce.a	229Y5A0303	Akula pradeep	Excellent	Excellent	Excellent	Excellent	Excellent	No issues
29	2-24-2023 18:25:00	219y1a0304@ksrmce.a	219Y1A0304	B.Vishnu Vardhan	Excellent	Good	Excellent	Good	Excellent	No
30	2-24-2023 18:25:55	219y1a0320@ksrmce.a	219y1a0320	S. Arshad	Good	Excellent	Excellent	Excellent	Excellent	No
31	2-24-2023 18:29:28	219y1a0305@ksrmce.a	219y1a0305	C Charan Kumar Redd	Excellent	Excellent	Excellent	Excellent	Good	No
32	2-24-2023 18:37:48	229y5a0306@ksrmce.a	229y5a0306	A VISHNU VARDHAN	Excellent	Good	Excellent	Good	Excellent	No
33	2-24-2023 18:53:19	219y1a0313@ksrmce.a	219Y1A0313	G.SURESH	Excellent	Good	Excellent	Good	Excellent	No
34	2-24-2023 18:55:09	229y5a0305@ksrmce.a	229Y5A0305	A. Geetha Pradeep	satisfactory	Good	Good	Good	Excellent	No issues.
35	2-24-2023 18:57:21	219y1a0319@ksrmce.a	219y1a0319	Shaik Althaf	Good	Satisfactory	Excellent	Excellent	Satisfactory	No
36	2-24-2023 19:02:28	229y5a0301@ksrmce.a	229Y5A0301 LE	A uday navya krishna	Excellent	Excellent	Excellent	Excellent	Excellent	No
37	2-24-2023 19:08:20	219y1a0301@ksrmce.a	219y1a0301	B Sathish	Good	Good	Good	Good	Good	Noo
38	2-24-2023 19:09:41	229y5a0302@ksrmce.a	229Y5a0302	MANJuNATH	Excellent	Good	Satisfactory	Excellent	Excellent	
39	2-24-2023 19:10:53	219y1a0307@ksrmce.a	219y1a0307	C.karthik	Good	Good	Good	Good	Good	No issues
40	2-24-2023 19:12:03	219y1a0303@ksrmce.a	219y1a0303	Bodham vijay kumar re	Excellent	Excellent	Good	Good	Good	
41	2-24-2023 19:12:48	219y1a0325@ksrmce.a	219y1a0325	S. Sai mahesh	Excellent	Excellent	Good	Good	Good	Good
42	2-24-2023 20:04:59	219y1a0309@ksrmce.a	219y1a0309	E.Ramesh Reddy	satisfactory	Satisfactory	Satisfactory	Satisfactory	Satisfactory	No comments / No issues

K.S.R.M. COLLEGE OF ENGINEERING

(UGC-AUTONOMOUS)
Kadapa, Andhra Pradesh, India– 516 003
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An ISO 14001:2004 & 9001: 2015 Certified Institution

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DEPARTMENT OF MECHANICAL ENGINEERING

VALUE ADDED COURSE ON
ESTIMATING & COSTING FOR MECHANICAL ENGINEERS
FROM 08/02/2023 TO 24/02/2023

AWARD LIST

S. No	Roll Number	Name of the Student	Marks Obtained
1	209Y1A0341	P PRANEETH KUMAR	12
2.	219Y1A0301	BANGI SATHISH	13
3.	219Y1A0302	BATTALA SURESH	14
4.	219Y1A0303	BODHAM VIJAY KUMAR REDDY	12
5.	219Y1A0304	BUPATHI VISHNUVARDHAN	14
6.	219Y1A0305	CHAPPIDI CHARAN KUMAR REDDY	14
7.	219Y1A0306	CHINNABAYANNAGARI SAINATH REDDY	13
8.	219Y1A0307	CHINTAKOMMADINNE KARTHIK	13
9.	219Y1A0308	ERAGAM REDY SUNIL KUMAR REDDY	12
10	219Y1A0309	ERAGAMREDDY RAMESH REDDY	13
11	219Y1A0310	GAJULA VENKATA BHARATH	12
12	219Y1A0311	GALI SIVA SANKAR	14
13	219Y1A0312	GANDHAM TARUN	12
14	219Y1A0313	GANUGAPENTA SURESH	14
15	219Y1A0315	LINGALA DWARAKANATHA REDDY	14
16	219Y1A0318	SHAIK WASEEM AKRAM	13
17	219Y1A0319	SHAIK ALTHAF	12
18	219Y1A0320	SHAIK ARSHAD BASHA	13
19	219Y1A0321	SHAIK BABA AFZAL	13
20	219Y1A0322	SHAIK MAHAMMAD SAJID	12
21	219Y1A0323	SHAIK MOHAMMED IQBAL	14
22	219Y1A0324	SHAIK MUDDU BAIGARI FARID	12
23	219Y1A0325	SUNDUPALLI SAI MAHESH	13
24	219Y1A0326	SYED IBRAHIM	13
25	219Y1A0327	SYED MOHAMMAD THASIN	14
26	219Y1A0328	THONDURU NAGA JAGADEESH REDDY	12
27	219Y1A0329	YAPARALA VENKATA VAMSI KRISHNA	13
28	229Y5A0301	ACHYUTHA UDAY NAVYAKRISHNA	12

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29	229Y5A0302	ADHIMULAM MANJUNATH	12
30	229Y5A0303	AKULA PRADEEP	12
31	229Y5A0304	AMINPALLI JASWANTH	12
32	229Y5A0305	ANKANI GEETHA PRADEEP	13
33	229Y5A0306	ANNAREDDY VISHNU VARDHAN REDDY	13
34	229Y5A0307	AYYAPU NAGA SANDEEP	14
35	229Y5A0308	BADIGINCHALA KOUSIK NAGENDRA	12
36	229Y5A0309	BARIGELA ERMIYA KUMAR	12
37	229Y5A0310	BINGI SURESH	14
38	229Y5A0311	BOMMISETTY SURENDRA	12
39	229Y5A0312	CHEPPALI MAHAMMAD RAFI	12
40	229Y5A0313	CHINNABBIGARI NAVEEN	14
41	229Y5A0314	CHINNAPAPIGALLA PAVAN KALYAN	12
42	229Y5A0315	DASARI RAJ KUMAR	13

Coordinator

HoD

Professor & Head
Department of Mechnical Engineering
K.S.R.M. College of Engineering
KADAPA - 516 003.

K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA-516003
DEPARTMENT OF MECHANICAL ENGINEERING
VALUE ADDED /CERTIFICATE COURSE ON
ESTIMATING AND COSTING FOR MECHANICAL ENGINEERS
FROM 08/02/2023 TO 24/02/2023
ASSESSMENT TEST

Roll Number: 219Y1A0319   **Name of the Student:** S. Althaf

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

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

1. ___ is the process employed to shape a metal by plastically deforming it.   [a]
   a) casting   b) forging   c) machining   d) None of the above

2. From the following which is the type of forging   [b]
   a) Hand forging   b) metal forging   c) butt forging   d) None of the above

3. ___ is the done with the help of hand tools by a blacksmith.   [d]
   a) drop forging   b) machine forging   c) press forging   d) hand forging

4. From the following which method is used to produce nuts,washers etc.   [b]
   a) hand forging   b) machine forging   c) drop forging   d)None of the above

5. Form which following is not the type of forging operations.   [d]
   a) Drawing down operation   b) Bending operation
   c) Upsetting operation   d) Drawing up operation

6. Form which following is the type of forging operations.   [d]
   a) Drawing down operation   b) Swaging operation
   c) Bending operation   d) All of the above

7. Upsetting operation increases the cross-section area of bar-stock.   [b]
   a) False   b) True

8. In drawing down operation cross-section area of bar-stock increases.   [a]
   a) False   b) True

9. The product of volume of the job is calculated by using the dimensions given in the drawing and density of job material is called ___ of the job.   [b]
   a) Net weight   b) shape weight   c) gross weight   d) consumed material

10. ___ is the average weight of finished forged parts.   [d]
    a) consumed materials   b) shaped weight   c) gross weight   d) net weight

11. From the following which is the type of loss in forging.   [d]
    a) tong loss   b) boundary loss   c) drawing loss   d) handle loss

12. Tong loss is generally taken as 10 to 15 cm.
    a) True   b) False

13. ____ is the loss of material due to surface oxidation in heating and forging
    a) flash loss   b) tong loss   c) scale loss   d) sprue loss

14. ___ is also called as cut waste loss.
    a) False   b) True

15. Shear loss is consider as 5% of the weight.
    a) False   b) True

16. Sprue loss is consider as 2 to 3 cm of net weight.
    a) False   b) True

17. ___ is a model of the product to be casted.
    a)Forging   b) Core   c) Pattern   d) Drag

18. ___ is also called as contraction allowance.
    a)Machining allowance   b) Draft allowance
    c)shake allowance   d)shrinkage allowance

19. Machine allowance is generally taken as 3 to 10 mm.
    a) True   b) False

20. Distortion allowance is generally provided for _____.
    a) Regular casting   b) Irregular casting
    c) Small casting   d) None of the above
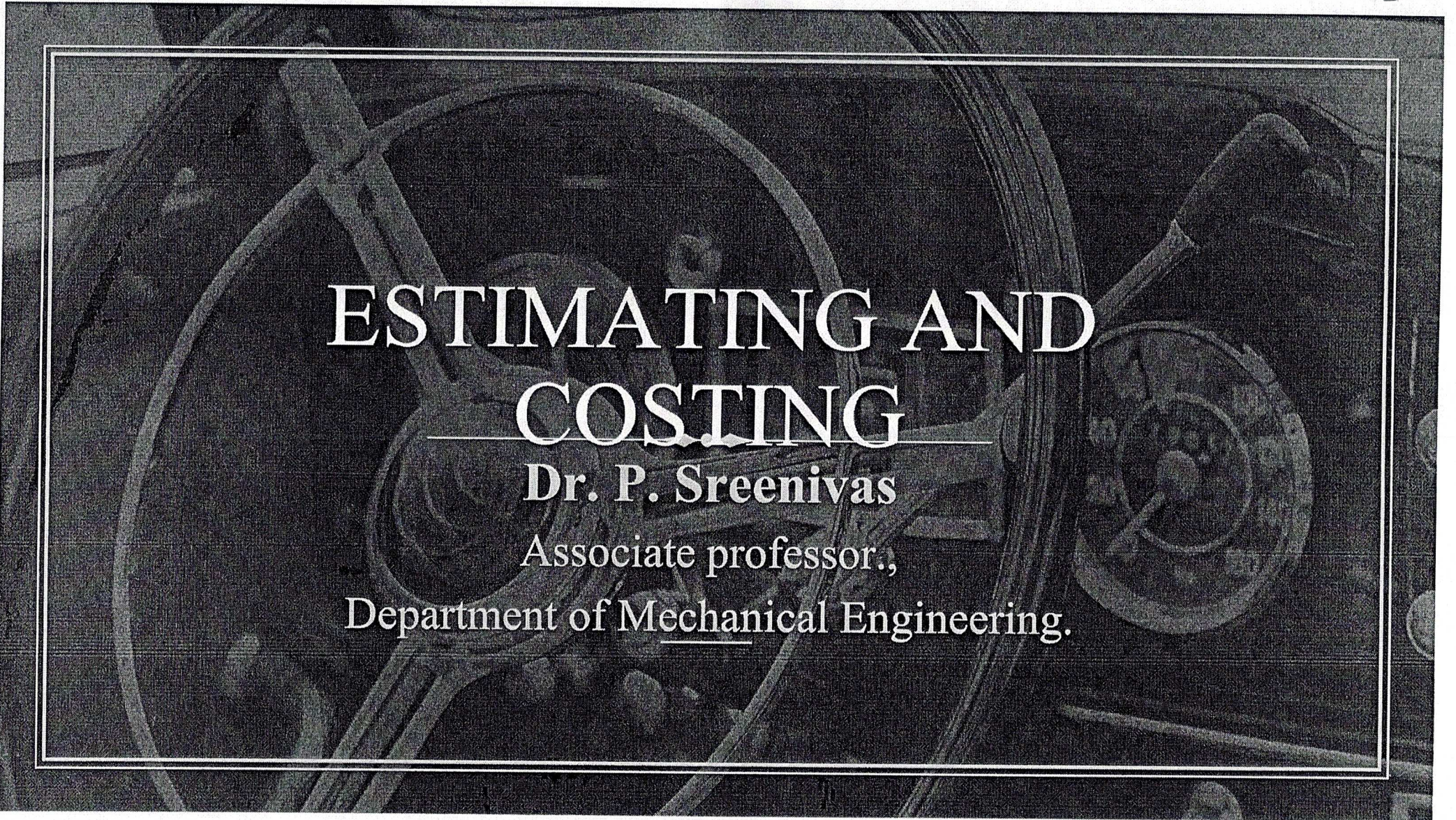
K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA-516003
DEPARTMENT OF MECHANICAL ENGINEERING
VALUE ADDED /CERTIFICATE COURSE ON
ESTIMATING AND COSTING FOR MECHANICAL ENGINEERS
FROM 08/02/2023 TO 24/02/2023
ASSESSMENT TEST

Roll Number: 219Y1A0327 Name of the Student: S.Mohammad Thasin

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

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

1. ___ is the process employed to shape a metal by plastically deforming it. [b] ✓
   a) casting   b) forging   c) machining   d) None of the above

2. From the following which is the type of forging [a] ✓
   a) Hand forging   b) metal forging   c) butt forging   d) None of the above

3. ___ is the done with the help of hand tools by a blacksmith. [d] ✓
   a) drop forging   b) machine forging   c) press forging   d) hand forging

4. From the following which method is used to produce nuts,washers etc. [c] ✗
   a) hand forging   b) machine forging   c) drop forging   d)None of the above

5. Form which following is not the type of forging operations. [d] ✓
   a) Drawing down operation b) Bending operation
   c) Upsetting operation   d) Drawing up operation

6. Form which following is the type of forging operations. [d] ✓
   a) Drawing down operation   b) Swaging operation
   c) Bending operation   d) All of the above

7. Upsetting operation increases the cross-section area of bar-stock. [b] ✓
   a) False   b) True

8. In drawing down operation cross-section area of bar-stock increases. [b] ✗
   a) False   b) True

9. The product of volume of the job is calculated by using the dimensions given in the drawing and density of job material is called ___ of the job. [b] ✓
   a) Net weight   b) shape weight   c) gross weight   d) consumed material

10. ___ is the average weight of finished forged parts. [   ] ✗
    a) consumed materials   b) shaped weight   c) gross weight   d) net weight

11. From the following which is the type of loss in forging. [   ] ✗
    a) tong loss   b) boundary loss   c) drawing loss   d) handle loss

12. Tong loss is generally taken as 10 to 15 cm.
    a) True   b) False

[c]

13. _____ is the loss of material due to surface oxidation in heating and forging
    a) flash loss b) tong loss   c) scale loss   d) sprue loss

[c]

14. ___ is also called as cut waste loss.
    a) False   b) True

[9]

15. Shear loss is consider as 5% of the weight.
    a) False   b) True

[b]

16. Sprue loss is consider as 2 to 3 cm of net weight.
    a) False   b) True

[a]

17. ___ is a model of the product to be casted.
    a)Forging   b) Core   c) Pattern   d) Drag

[c]

18. ___ is also called as contraction allowance.
    a)Machining allowance   b) Draft allowance
    c)shake allowance   d)shrinkage allowance

[d]

19. Machine allowance is generally taken as 3 to 10 mm.
    a) True   b) False

[a]

20. Distortion allowance is generally provided for _____.
    a) Regular casting   b) Irregular casting
    c) Small casting   d) None of the above

[b]

K.S.R.M. COLLEGE OF ENGINEERING (AUTONOMOUS), KADAPA-516003
DEPARTMENT OF MECHANICAL ENGINEERING
VALUE ADDED /CERTIFICATE COURSE ON
ESTIMATING AND COSTING FOR MECHANICAL ENGINEERS
FROM 08/02/2023 TO 24/02/2023
ASSESSMENT TEST

Roll Number: 2294SA0308 **Name of the Student:** B. Koushik nagendra

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

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

1. ___ is the process employed to shape a metal by plastically deforming it. [b] ✓
   a) casting   b) forging   c) machining   d) None of the above

2. From the following which is the type of forging   [a] ✓
   a) Hand forging b) metal forging   c) butt forging   d) None of the above

3. ___ is the done with the help of hand tools by a blacksmith.   [d] ✓
   a) drop forging   b) machine forging   c) press forging d) hand forging

4. From the following which method is used to produce nuts,washers etc.   [c] ✗
   a) hand forging   b) machine forging   c) drop forging d)None of the above

5. Form which following is not the type of forging operations.   [d] ✓
   a) Drawing down operation b) Bending operation
   c) Upsetting operation   d) Drawing up operation

6. Form which following is the type of forging operations.   [d] ✓
   a) Drawing down operation   b) Swaging operation
   c) Bending operation   d) All of the above

7. Upsetting operation increases the cross-section area of bar-stock.   [a] ✗
   a) False   b) True

8. In drawing down operation cross-section area of bar-stock increases.   [b] ✗
   a) False   b) True

9. The product of volume of the job is calculated by using the dimensions given in the
   drawing and density of job material is called ___ of the job.   [B] ✓
   a) Net weight   b) shape weight   c) gross weight   d) consumed material

10. ___ is the average weight of finished forged parts.   [d] ✓
    a) consumed materials b) shaped weight c) gross weight d) net weight

11. From the following which is the type of loss in forging.   [b] ✗
    a) tong loss   b) boundary loss   c) drawing loss   d) handle loss

12. Tong loss is generally taken as 10 to 15 cm.
    a) True   b) False

13. ____ is the loss of material due to surface oxidation in heating and forging
    a) flash loss   b) tong loss   c) scale loss   d) sprue loss

14. ___ is also called as cut waste loss.
    a) False   b) True

15. Shear loss is consider as 5% of the weight.
    a) False   b) True

16. Sprue loss is consider as 2 to 3 cm of net weight.
    a) False   b) True

17. ___ is a model of the product to be casted.
    a)Forging   b) Core   c) Pattern   d) Drag

18. ___ is also called as contraction allowance.
    a)Machining allowance   b) Draft allowance
    c)shake allowance   d)shrinkage allowance

19. Machine allowance is generally taken as 3 to 10 mm.
    a) True   b) False

20. Distortion allowance is generally provided for _____.
    a) Regular casting   b) Irregular casting
    c) Small casting   d) None of the above

ESTIMATING AND COSTING

Dr. P. Sreenivas

Associate professor.,

Department of Mechanical Engineering.

ESTIMATING AND COSTING |DATA REQUIRED FOR PREPARATION OF ESTIMATE
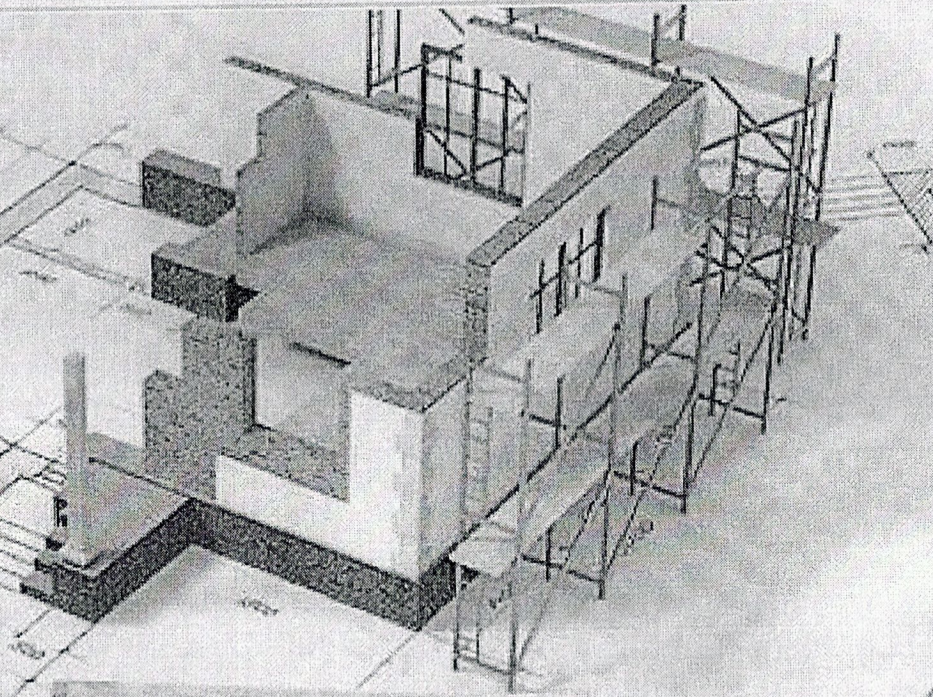
Needs for Estimation and Costing

* 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.

* Estimate gives an idea of time required for the completion of the work.

* Estimate is required to invite the tenders and Quotations and to Arrange contract.

* Estimate is also required to control the expenditure during the execution of work.

* Estimate decides whether the proposed plan matches the funds avail or not.
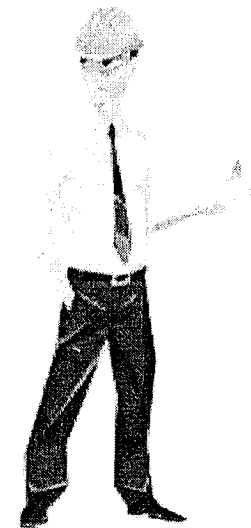
ESTIMATING

DEFINITION OF ESTIMATING : It is an art of finding the cost , which is likely to be incurred on the manufacturing of an article ,before it is actually manufactured .Thus it is the calculation of probable cost of an article before the manufacturing starts .it also includes predetermination of the quantity and quality of material , labour required etc.

Estimating requires highly technical knowledge about manufacturing methods and operation times etc.

AIMS OF ESTIMATING : The main aims of estimating are us under :

(i) To help the factory owner in deciding the manufacturing and selling policies

(ii) To help in filling up the tending enquiries .

(iii) To decide about the amount of overheads , which helps in comparing and checking the actual overheads of   the factory.

FUNCTIONS OF ESTIMATING DEPARTMENT :

The important functions of estimation department are summarised below :

(i) To determine material cost , taking into considerations different allowances required for different manufacturing operations .

(ii) To determine labour cost ,considering the labour time with the help of wage rates

(iii) To determine cost of materials to be purchased from outside.

(iv) To determine the cost of tools , equipment etc ., to be purchased from outside.

(v) To determine different overhead charges including selling ,packing and transportations charges.

SOURCES OF ERROR IN ESTIMATING :

There may be some errors in estimating . These errors are of the following two types :

(i) Unavoidable errors .

(ii) Avoidable errors.

(*i*) Unavoidable error : These are those, which cannot be avoided some of the examples of such errors are given below :

(*a*) Machinery breakdown .

(*b*) Power failure.

(*c*) Accidents.

(*d*) Drop in the efficiency of workers.

(*e*) Drop in the efficiency of machines and tools .

(*f*) Strikes.

(*ii*) Avoidable error : some of the errors can be avoided by the estimator while preparing the estimates .

(*a*) Poor analysis.

(*b*) Omission of some factors.

(*c*) Not considering up-to -date data.

(*d*) Repetition of some factors .

COSTING
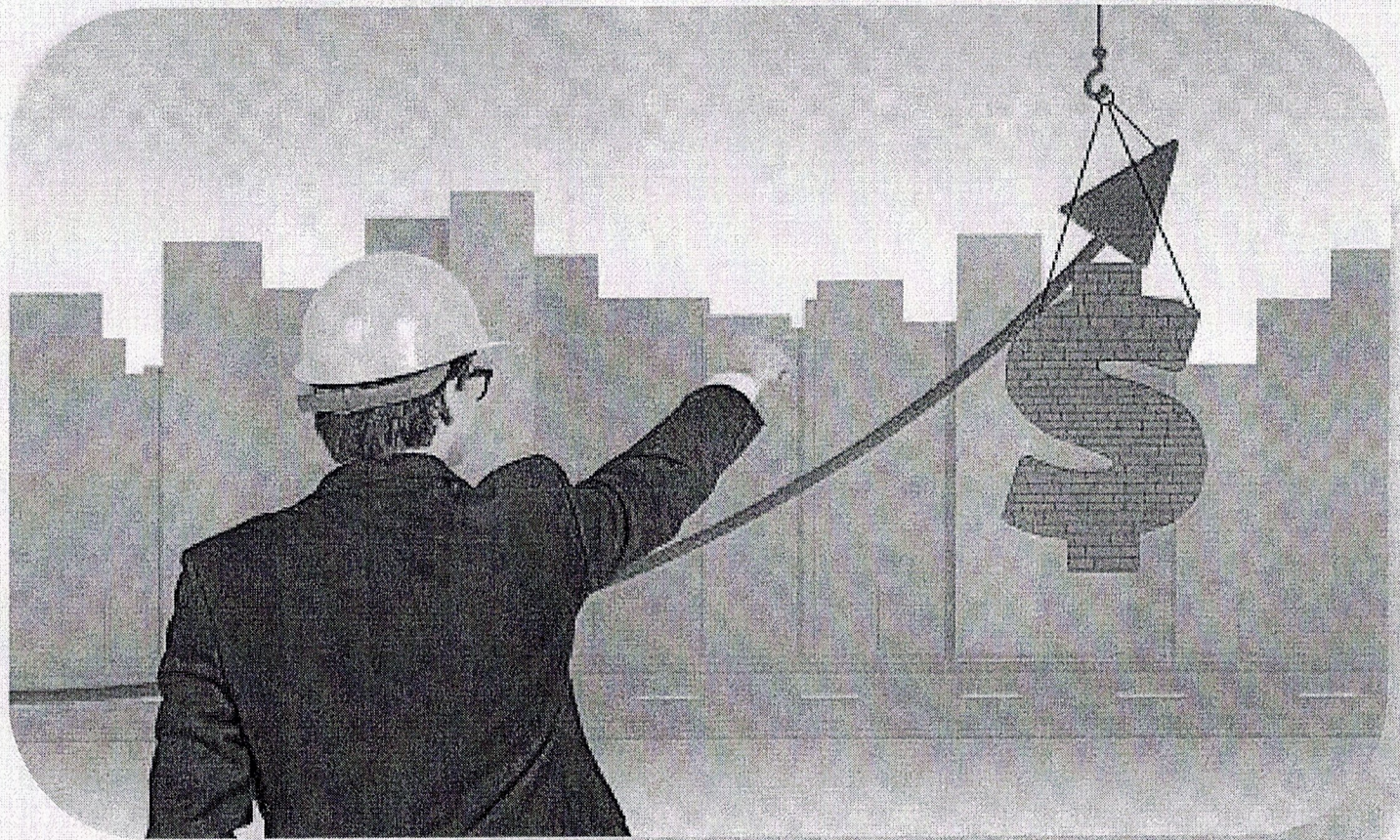
COSTING:-

Costing has been defined by the institute of cost and works Accountants , England as:

The technique and process of ascertaining costs . whereas, Whel don has defined the costing as:

Costing is the classifying , recording , the appropriate allocation of expenditure for the determination of the costs of products or services ; and for presentation of suitably arranged data for the purposes of control , and guidance of management .

AIMS OF COSTING : The important aims and objects of costing are :

(i) To determine the cost of each article .

(ii) To determine the cost of incurred during each operation , to keep control over workers wages .

(iii) To provide information to ascertain the selling price of the project .

(iv) To supply information for detection of wastages .

(v) It helps in reducing the total cost of manufacture .

(vi) It suggests, changes in design , when the cost is higher .

(vii) To help in formulating the policies for charging the prices of the products .

ELEMENTS OF COSTING

INTRODUCTION : This topic is very useful in the subject ESTIMATING AND COSTING . In any factory , the cost of the product is calculated , so that the exact idea of the amount of profit can be made . We know that there are hundreds of different items of expenditures , which are incurred in the factory and all these are charged on the product manufactured . No item of expenditure should be left . while calculating the total cost of any product . This total cost is divided into different headings known as Elements Of Cost .

Elements of cost:-

For easy and accurate calaculations, the total cost of a product manufactured can be divided into three main Element. These are:

1) Materials
2) Labour
3) Expenses

/) Materials:- These can be further classified into :

   (i) Direct materials

   (ii) Indirect materials

(i)**Direct Materials**:-These are those materials which when operated or processed in the factory shops through various stages from the final useful shape of the main product or component part of the main product. These are also known as Productive materials.

(ii) **Indirect Materials**:- These are those materials which are essential needed in various shops for helping the materials to be converted into final useful shapes. Difference between direct and indirect forms of materials can be easily understood.

/) Labour:- Labour's esmployed in any factory may be of the following two classes:

   (i) Direct labour, and

   (ii) Indirect labour

(i) **Direct labour**:- The workers, who actually work or process different material manually or wish the aid of machines is known as Direct Labour. This is also called Productive Labour. The nature of their duties is such that their wages can be directly charged to this job, which they are manufacturing.

Workers engaged for operating on various production machines in machine shop and assembly shop etc is known as Direct Labour.

(i) **Indirect Labour**:- Any other labour, who helps the productive labour in performing their duties is known as indirect Labour. The nature of their duties is such that their wages cannot be charged directly to a particular job but are charged on the total number of products produced in the plant during a particular period.

Foremen, Supervisors, Inspectors, Chowkidars, Gate-Keepers, Store keepers, Crane Driver and Gangmen etc. are classified as Indirect labour.

/) Expenses:- We haved discussed, direct Material cost and indirect labour cost but apart from this ,you will find that, in in each factory there are serveral other expenditures,such as cost of advertisement, building rent, depreciation charges of palnt and factory building,cost of packing, cost of transportation, Salaries and commission of salesmenetc. All these expenditures are known as Expenses. So we can say that expect direct material and direct labour cost, all other expenses, which are incurred in the factory are known as Expenses.

The cost of Indirect materials and Indirect labour is also included in the expenses.

Expenses may be of two classes.

(ii) Direct or chargeable Expenses, and

(iii) Indirect Expenses.

(i) **Direct Expenses :-** These are those expenses, which can be charged directly to a particular job and are incurred for that specific job only.for example, cost of special jigs and fixtures, cost of some special patterns and cost of experimental work on a particular lob etc

(ii) **Indirect Expenses :-** These are also known as overhead charges, on cost, burden or indirect charges. These can be further classified as:

(a) Factory Expenses

(b) Administrative Expenses

(c) Selling Expenses

(d) Distribution Expenses

Fixed and Variable overheads:-

All overheads described above can be classified into following two forms:

(1) Fixed overheads
(2) Variable overheads

1)Fixed Overheads:-These are those in direct Expenses which remain constant whatever may be the volume of production . Examples of the Overheads are :

(a) Salaries of officers:- These charges are for the salaries and allowances paid to the supervisors, and other Engineers, Officers etc. These are known as supervisors charges and are generally calculated in terms of expenses per machine hour.

(b) Depreciation of machines and equipment:- This is the dimintion in value due to the age ,wear and tear. Various methods of calculating depreciation have been described in detail in next.

(c) Interest on capital invested:- The interest on capital invested is calculated assuming, if the capital is deposited in some bank.lculated

(d) Rent of building and insurance.

2) Variable Overheads:-These are those indirect expenses, which vary with the volume of production. Examples of these over heads are :

(a) Power or fuel consumed:- These are expenses on power (i) if generated in the factory includes expenditure on fuel, salary of power – house staff, expenditure on running and maintenance, and depreciation of power – house building , plants etc. (ii) if bought from other agency, includes charges paid to them.

(b) Repairs and maintenance:- This includes the expenditure incurred on the repairs and maintenance of the machines in the factory. This expenditure is converted into expenditure per machine hour and then charged to various departments of the factory.

(c)Consumable store supplies:- The expenditure made on the salary of store staff , stationary etc. required in stories, lightingcharges for stores and other similar expenses are included in this category.

(d) Expenses on tools :- Generally the tools very short life and are required to be purchased frequently. Hence they are charged in two ways . Firstly, the expenditure incurred on the purchase of such tools are directly charged. Secondly, these are depreciated.

Components of cost:- The various components of cost are:

1) Prime cost
2) Factory cost
3) Office cost
4) Total cost

1)Prime cost :- It consists of direct material cost, direct labour cost and direct expenses.

i.e Prime cost= Direct material cost + Direct Labour cost + Direct expenses.

Prime cost is also named as Direct cost.

2) Factory cost :- It consists of prime cost and facory expenses.

i.e Factory cost = Prime cost + Factory expenses.

Factory cost is also named as Works Cost.

3) cost :- th It consists of factory cost and administrative expenses.

i.e Office cost = Factory cost + Administrative expenses

Office cost is also named as manufacturing cost or cost of production.

4)Total cost :- It includes Office cost and selling and distribution expenses.

i.e Total costs = Office cost+ Selling expenses+ Distribution expenses.

Block diagram to illustrate the relation between 'Elements of Cost' & 'Components of Cost'.
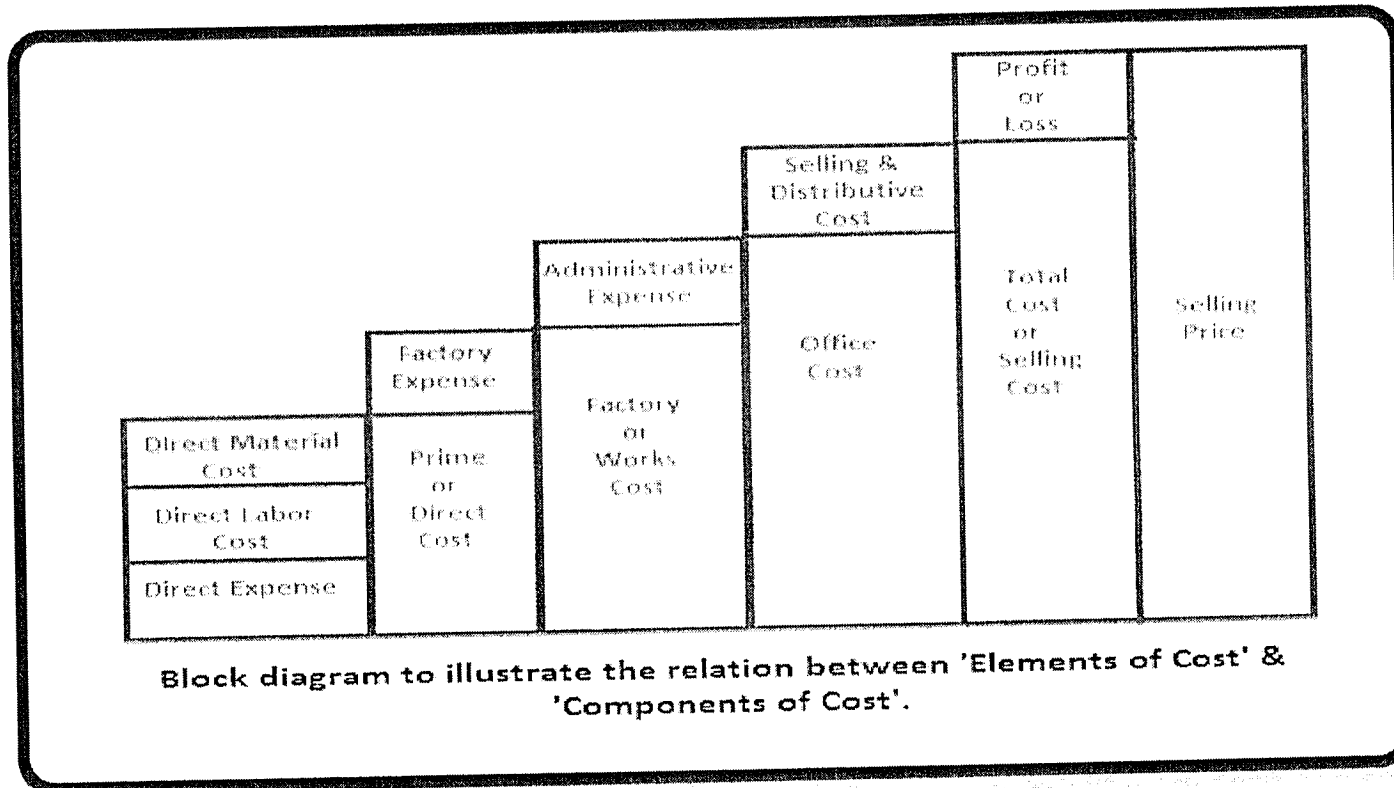
ESTIMATING AND COSTING

Example

Prepare a statement giving the following information:

(i) Material cost (ii) Prime cost (iii) Factory cost (iV) Administrative overheads (V) Selling overheads (Vi) Total cost and (Vii) Profit.

Following data refer to a factory for the financial year ending, 31st March, 1981

1.	Stock of materi al on 1st April, 1980	
2.	Material purchased	= Rs. 50 000
3.	Drml'ing office salaries	= Rs. 340,000
4.	Rent, taxes and insurance of factory	=Rs. 5,000
5.	Pay and commission to salesmen	= Rs. 10,000
6.	Depreciation of equipment	= Rs. J0.000
7.	Wages to labour (Direct labour cost)	=Rs. 200
8.	General administrative expenses	=Rs. -50,000
9.	JVater and pol l•er for factory	=Rs. 3400
10.	S:lle of products	= Rs. 9000
11.	Works Alawlger's salary	= Rs. 000 ,000
12.	Salary of office staff (including executives)	=Rs. 15,000
13.	Depreciation of rhe plant	=Rs. 60,000
14.	Material transportation	= Rs. 8,000
15.	lVater and lightin J for office	=Rs. 2,000
16.	Rent, taxes and insur.1nce of office	=Rs. 3,000
17.	Repairs and maintenance of plant	=Rs. 1,500
18.	Direct Expenses	= Rs. 5,000
19.	Stock of nnterial on 31st \1arch, 1981	=Rs. 500
		= Rs. 45,000

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Solution: First we have to determine the material cost

Material cost = Stock of material on 1st April 1980+ Material purchased- Stock of material on 31 March 1981

$$= Rs.50000 + Rs. 340000 - Rs.450000$$

$$= Rs.345000$$

(*i*) Prime cost= Direct materials+ Direct labour+ Direct Expenses
$$= 345000 + 250000 + 500 = Rs.595000$$

(*ii*) Factory overheads are:

Rent,taxesand insurance of factory=Rs.10000
Water and Power of factory= Rs.9000
Works mangers salary= Rs.15000
Depreciation of plant = Rs.8000
Material transportation= Rs.2000
Repair and maintenance of plant= Rs.5000
Total = Rs.49000
Factory cost= Prime cost+Factory overheads
$$= 595000 + 49000 = Rs.644500$$

(i)   Administrative overheads are :

Drawing office salaries= Rs.5000

Depreciation of office equipment= Rs. 200

General administration Expenses= Rs.3400

Salaries of office staff=Rs. 60000

Water and lighting for office=Rs.3000

Rent taxes and insurance of office= Rs. 1500

Total=. Rs.73100

(ii)   Selling overheads are:

= Pay to salesmen = Rs.1000

(iii)   Total cost = Factory cost+ Administrative overheads+ Selling Overheads

=644500+73100+10000

=Rs. 727600

(iv)   Net profit= Selling price-Total cost

= 90000-727600=Rs.172400

ESTIMATION OF WEIGHTS OF MATERIALS & COST OF MATERIAL

PRINCIPLES

The principles or step by step procedure of estimating weight of material and thus cost of material are as follows:

- break up the component drawing into simple and meaningful parts

calculate the volume of each individual part making use of Mensuration formulae

small fillets and rounded corners may be neglected

sum up all these volumes to get the total volume of the component

multiply the volume by density (specific weight) of material if the entire component is made of same material; or else compute weights independently.

account for scrap and wastage

direct material cost is obtained by multiplying the weight of component by cost per unit weight of the material.

MENSURATION

Mensuration is the science of measuring It is the branch of applied Mathematics which deals with finding the lengths of lines, perimeters and areas of surfaces, volumes of solids etc., The formulae given hereunder will be of immense use and serve for

ready reference in estimating the volumes and weights of given components
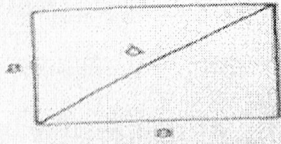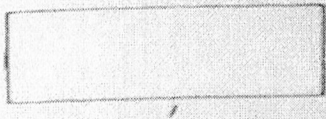
7.2.1 Perimeters and Areas of Plane Figures :

Table – 1

FIGURE	DIMENSIONS	PERIMETER (P)	AREA (A)
1. Square	a : Side d : diagonal	4a	a^2 or $\dfrac{d^2}{2}$
2. Rectangle	l : length b : width	$2(l + b)$	$l \times b$
3. Parallelogram	h : height l, b : sides	$2(l + b)$	$l \times h$

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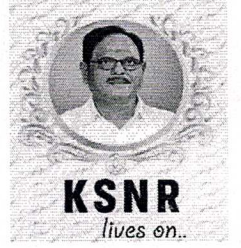| FIGURE	DIMENSIONS	PERIMETER (P)	AREA (A)
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Lr./KSRMCE/ME/2022-23/ Date:03-02-2023

To
The Principal,
KSRMCE,
Kadapa.

Respected Sir,

Sub: Permission to Conduct Value added Course on "ESTIMATING AND COSTING for Mechanical Engineers" **08/02/2023 to 24/02/2023**–Req- Reg.

The Department of Mechanical Engineering is planning to offer a Value Added Course on "ESTIMATING AND COSTING for Mechanical Engineers" to B. Tech. students. The course will be conducted from **08/02/2023 to 24/02/2023**. In this regard, I kindly request you to grant permission to conduct Value Added Course.

Thanking you sir,

Yours faithfully

Dr. Shaik Khaja peer saheb,

Professor in MED

Forwarded to principal SSV ME3

Permitted
V. S. S. Murty
03/02/2023