



Sri Indu Institute of Engineering & Technology

Recognized Under 2(f) of UGC Act 1956

Approved by AICTE, New Delhi

Affiliated to JNTUH, Hyderabad.

COURSE FILE

ON

TOTAL QUALITY MANAGEMENT

Course Code – ME831OE

IV B.Tech II-SEMESTER

A.Y.: 2022-2023

Prepared by

Mr. MARUTI S W
Assistant Professor

B. Raktia Kaul
Computer Science & Engg. Dept.
SRI INDU INSTITUTE OF ENGG & TECH.
Sheriguda(V), Ibrahimpatnam(M), R.R.Dist-501 10.


PRINCIPAL
Sri Indu Institute of Engineering & Tech.
Sheriguda(VIII), Ibrahimpatnam
R.R. Dist. Telangana-501 510.



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

Academic Year	2022-2023
Course Title	TOTAL QUALITY MANAGEMENT
Course Code	ME831OE
Programme	B.Tech
Year & Semester	IV year II-semester
Branch & Section	CSE-A
Regulation	R18
Course Faculty	Mr.MARUTI S W, Assistant Professor

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

INSTITUTE VISION AND MISSION

Vision:

To become a premier institute of academic excellence by providing the world class education that transforms individuals into high intellectuals, by evolving them as empathetic and responsible citizens through continuous improvement.

Mission:

IM1: To offer outcome-based education and enhancement of technical and practical skills.

IM2: To continuous assess of teaching-learning process through institute-industry collaboration..

IM3: To be a centre of excellence for innovative and emerging fields in technology development with state-of-art facilities to faculty and students fraternity.

IM4: To create an enterprising environment to ensure culture, ethics and social responsibility among the stakeholders

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

DEPARTMENT VISION AND MISSION

Vision:

To become a prominent knowledge hub for learners, strive for educational excellence with innovative and industrial techniques so as to meet the global needs.

Mission:

- DM1 :** To provide ambience that enhances innovations, problem solving skills, leadership qualities, decision making, team-spirit and ethical responsibilities.
- DM2 :** To impart quality education with professional and personal ethics, so as to meet the challenging technological needs of the industry and society.
- DM3 :** To provide academic infrastructure and develop linkage with the world class organizations to strengthen industry-academia relationships for learners.
- DM4 :** To provide and strengthen new concepts of research in the thrust area of Computer Science and Engineering to reach the needs of Government and Society.

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DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

PROGRAM EDUCATIONAL OBJECTIVES

- PEO1:** To develop trained graduates with strong academic and technical skills of modern computer science and engineering.
- PEO2:** To promote trained graduates with leadership qualities and the ability to solve real time problems using current techniques and tools in interdisciplinary environment.
- PEO3:** To motivate the graduates towards lifelong learning through continuing education and professional development.

PROGRAM SPECIFIC OUTCOMES

- PSO1 : Professional Skills:** To implement computer programs of varying complexity in the areas related to Web Design, Cloud Computing, Network Security and Artificial Intelligence.
- PSO2: Problem-Solving Skills:** To develop quality products using open ended programming environment.

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PROGRAMME OUTCOMES (POs)

- PO1: Engineering knowledge:** Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.
- PO2: Problem analysis:** Identify, formulate, review research literature, and analyse complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.
- PO3: Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.
- PO4: Conduct investigations of complex problems:** Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.
- PO5: Modern tool usage:** Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.
- PO6: The engineer and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.
- PO7: Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
- PO8: Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.
- PO9: Individual and team work:** Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- PO10: Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.
- PO11: Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.
- PO12: Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

JAWAHARLALNEHRUTECHNOLOGICALUNIVERSITYHYDERABAD**B.Tech in COMPUTERSCIENCEANDENGINEERING****IV YEAR COURSESTRUCTURE AND SYLLABUS (R18)****ApplicableFrom2018-19Admitted Batch****IVYEAR I SEMESTER**

S.No	Course Code	Course Title	L	T	P	Credits
1	CS701PC	Data Mining	4	0	0	4
2	CS702PC	Principles of Programming Languages	4	0	0	4
3		Professional Elective–II	3	0	0	3
4		Professional Elective– III	3	0	0	3
5		Professional Elective–IV	3	0	0	3
6	CS703PC	Data Mining Lab	0	0	3	2
7	CS751PC	PE-II Lab [#]	0	0	3	2
8	CS705PC	Industry Oriented Mini Project	0	0	3	2
9	CS706PC	Seminar	0	0	2	1
		Total Credits	17	0	11	24

IV YEAR II SEMESTER

S.No	Course Code	Course Title	L	T	P	Credits
1	ME831OE	Open Elective–III	3	0	0	3
2		Professional Elective–V	3	0	0	3
3		Professional Elective–VI	3	0	0	3
4	CS801PC	Major Project	0	0	30	15
		Total Credits	9	0	30	24

***MC-Environmental Science–Be registered by Lateral Entry Students Only.**

Note: Industrial Oriented Mini Project/ Summer Internship is to be carried out during the summer vacation between 6th and 7th semesters. Students should submit report of Industrial Oriented Mini Project/Summer Internship for evaluation.

Professional Elective-V

CS851PE	Information Theory & Coding
CS852PE	Real-Time Systems
CS853PE	Data Analytic
CS854PE	Modern Software Engineering

Professional Elective–VI

CS861PE	Advanced Algorithms
CS862PE	Web Services and Service Oriented Architecture
CS863PE	Computer Forensics
CS864PE	Neural Networks and Deep Learning

***Open Elective** subjects' syllabus is provided in a separate document.

***Open Elective** – Students should take Open Electives from the List of Open Electives Offered by Other Departments/Branches Only.

Ex: - A Student of Mechanical Engineering can take Open Electives from all other Departments/branches except Open Electives offered by Mechanical Engineering Dept.

Open Elective-III

CS831OE	Linux Programming
CN831OE	Remote Sensing and GIS
ME831OE	Total Quality Management
EM831OE	Data Analytic

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

(ME831OE) Total Quality Management (Open elective-III)

B.Tech. IV Year II SEM

L T P C

3 0 0 3

Course Objectives:

- Understand what is Total Quality Management
- Analyze the concept of customer focus and satisfaction
- Analyze the Total Quality Management organization
- Explain seven Tools of TQM
- Understand the cost of quality
- Understand the ISO 9000 Standards.

Course Outcomes:

- Ability to understand what is Total Quality Management.
- Ability to analyze the concept of customer focus and satisfaction
- Ability to analyze the Total Quality Management organization
- Ability to understand the cost of quality
- Ability to understand the ISO 9000 Standards.

UNIT - I

Introduction: - The concept of TQM, Quality and Business performance, attitude, and involvement of top management, communication, culture and management systems.

Management of Process Quality:- Definition of quality, Quality Control, a brief history, Product Inspection vs. Process Control, Statistical Quality Control, Control Charts and Acceptance Sampling.

UNIT –II

Customer Focus and Satisfaction: - Process vs. Customer, internal customer conflict, quality focus, Customer Satisfaction, role of Marketing and Sales, Buyer – Supplier relationships.

Bench Marking:- Evolution of Bench Marking, meaning of bench marking, benefits of bench marketing, the bench marking procedure, pitfalls of bench marketing.

UNIT- III

Organizing for TQM: The systems approach, organizing for quality implementation, making the transition from a traditional to a TQM organization, Quality Circles,

Seven Tools of TQM:- Stratification, check sheet, Scatter diagram, Ishikawa diagram, paneto diagram, Kepner &Trego Methodology.

UNIT- IV

The Cost of Quality: Definition of the Cost of Quality, Quality Costs, Measuring Quality Costs, use of Quality Cost information, Accounting Systems and Quality Management.

UNIT –V

ISO9000: Universal Standards of Quality: ISO around the world, The ISO9000 ANSI/ASQC Q- 90. Series Standards, benefits of ISO9000 certification, the third party audit, Documentation ISO9000 and services, the cost of certification implementing the system.

TEXT BOOK: 1. Total Quality Management / Joel E. Ross/Taylor and Francis Limited

2. Total Quality Management/P. N. Mukherjee/PHI

REFERENCE BOOKS:

1. Beyond TQM / Robert L.Flood

2. Statistical Quality Control / E.L. Grant.

3. . Total Quality Management:A Practical Approach/H.Lal

4. . Quality Management/Kanishka Bedi/Oxford University Press/2011

5. . Total Engineering Quality Management/Sunil Sharma/Macmillan



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Khalsa Ibrahimpatnam, Sheriguda (V), Ibrahimpatnam (M), Ranga Reddy Dist., Telangana – 501 510

Website: <https://siiet.ac.in/>

CO-PO Mapping Justification

C421.1	Analyze and Understand what total quality management is. (Application)
	Justification
PO1	Knowledge of Engineering Fundamentals by product and service quality.
PO2	Identify and formulate the engineering problems by using basic concepts in total quality management.
PSO1	Importance of integrating professional skills within the context of TQM tools and techniques.

C421.2	Analyze the concept of customer focus and satisfaction.(Application)
	Justification
PO1	Improve the Knowledge by using various TQM tools and techniques.
PO2	Problem analysis is done by TQM principles.

C421.3	Analyze and describe Total Quality Management Organization.(Application)
	Justification
PO1	Knowledge is gained by using different types of QFD tool.
PO2	Problem analysis applying ISO Standards and Quality system concepts.
PSO1	Explain the various ISO Standards and Quality systems practiced in various sector.

C421.4	Describe and explain the working principle of Seven Tools of Total Quality Management.(Knowledge)
	Justification
PO1	Apply the knowledge of TQM principles for quality improvement.
PO2	Problem analysis understands the concepts QFD tool to design and develop a new product.
PO3	Development of solutions by using ISO Standards and Quality systems.

C421.5	Understand and Discuss the Cost of Quality in total quality management. (Knowledge)
	Justification
PO1	Apply the knowledge of TQM principles for quality improvement.
PO2	Analyze the concepts of Total Quality Management.
PO3	Develop the solutions by using Genuchi's method.

C421.6	Discuss and understand the ISO 9000 Standards. (Knowledge)
	Justification
PO1	Knowledge is gained by using ISO 9000 Standards.
PO2	Describe various ISO Standards and Quality systems practiced in various sector.
PSO1	Discuss the knowledge of different Quality management methods to improve the manufacturing sectors.



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TIME TABLE FOR A.Y 2022-23

Class: IV B. Tech CSE -A

Semester: II

LH. NO: A-101

W.E.F:29-08-2022

Period/ Day	1	2	3	4	1:00- 1:30	5	6	7
	9:40-10:30	10:30-11:20	11:20-12:10	12:10-1:00		1:30-2:20	2:20-3:10	3:10-4:00
Monday	PROJECT WORK STAGE-II				L U N C H	PROJECT WORK STAGE-II		
Tuesday	PROJECT WORK STAGE-II					PROJECT WORK STAGE-II		
Wednesday	PROJECT WORK STAGE-II					PROJECT WORK STAGE-II		
Thursday	DS	COUN	TQM	OB		TQM	LIB	OB
Friday	OB	TQM	INT	OB		DS	TQM	SPORTS
Saturday	TQM	DS	OB	DS		CO-C/SS/DAA		DS

(T) - Tutorial (concern faculty)

Subject Code	Subject Name	Name of the Faculty	Subject Code	Subject Name	Name of the Faculty
SM801MS	Organizational Behaviour	Mrs G Nikitha		Project Stage - II	Dr.B.Ratna Kanth/Mr.Veera kishore K/ Mrs K.Anusha
CS812PE	Distributed Systems	Mrs M Karuna	INT	Internet	Mrs K.Manmadha
	Total Quality Management	S W Maruthi	LIB	Library	Mrs K.Anusha
	CO-C/SS/DAA	Mrs M Karuna	COUN	Counselling	Mrs K.Manmadha
Sports	Sports	Mr Ch Prabhakar			
Class In-Charge :Mrs M.Karuna		Mentor 1 : M.Karuna		Mentor 2: K.Anusha	

Class In-Charge
Karuna

Computer Science & Engg. Dept.
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Sheriguda(V), Ibrahimpatnam (M), Ranga Reddy Dist. - Tel.

Principal
Anusha
Sri Indu Institute of Engineering & Tech.
Sheriguda(V), Ibrahimpatnam
Ranga Reddy Dist. - Tel.



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LESSON PLAN

Course Title	TOTAL QUALITY MANAGEMENT
Course Code	ME831OE
Programme	B.Tech
Year & Semester	IV-year II-semester
Regulation	R18
Course Faculty	Mr. MARUTI. S.W, Assistant Professor , MECH

S.NO	Unit	TOPIC	Number of Sessions Planned	Teaching method/Aids	REFERENCE
1	I	The concept of TQM,	1	Black Board	T1
2		Quality and Business performance,	1	Black Board	T1
3		Attitude, and involvement of top management,	1	Black Board	T1
4		Communication, culture and management systems.	1	Black Board	T1
5		Management of Process Quality	1	Black Board	T1
6		Definition of quality.	1	Black Board	T1
7		Quality Control- A brief history.	1	Black Board	T1
8		Product Inspection vs. Process Control.	1	Black Board	T1
9		Product Inspection vs. Process Control.	1	Black Board	T1
10		Control Charts and Acceptance Sampling.	1	Black Board	T1
11	II	Customer Focus and Satisfaction	1	Black Board	T1

12		Process vs. Customer	1	Black Board	T1
13		Internal customer conflict	1	Black Board	T1
14		Quality focus	1	Black Board	T1
15		Customer Satisfaction	1	Black Board	T1
16		Role of Marketing and Sales	1	Black Board	T1
17		Buyer – Supplier relationships	1	Black Board	T1
18		Bench Marking:- Evolution of Bench Marking	1	Black Board	T1
19		Meaning of bench marking	1	Black Board	T1
20		Benefits of bench marketing	1	Black Board	T1
21		The bench marking procedure	1	Black Board	T1
22		Pitfalls of bench marketing	1	Black Board	T1
23	III	Organizing for TQM: The systems approach	1	Black Board	T1
24		Organizing for quality implementation	1	Black Board	T1
25		Making the transition from a traditional to a TQM organization	1	Black Board	T1
26		Quality Circles.	1	Black Board	T1
27		Seven Tools of TQM:- Stratification.	1	Black Board	T1
28		Check sheet.	1	Black Board	T1
29		Scatter diagram.	1	Black Board	T1
30		Lshikawa diagram.	1	Black Board	T1
31		Paneto diagram.	1	Black Board	T1
32		Kepner &Trego Methodology.	1	Black Board	T1
33		IV	The Cost of Quality:- Definition	1	Black Board
	of the Cost of Quality				

34		Quality Costs	1	Black Board	T1
35		Measuring Quality Costs	1	Black Board	T1
36		Use of Quality Cost information	1	Black Board	T1
37		Accounting Systems	1	Black Board	T1
38		Quality Management.	1	Black Board	T1
39	V	ISO9000:- Universal Standards of Quality.	1	Black Board	T1
40		ISO around the world.	1	Black Board	T1
41		The ISO9000 ANSI/ASQC Q-90.	1	Black Board	T1
42		Series Standards.	1	Black Board	T1
43		Benefits of ISO9000 certification	1	Black Board	T1
44		The third party audit.	1	Black Board	T1
45		Documentation ISO9000 and services.	1	Black Board	T1
46		The cost of certification implementing the system.	1	Black Board	T1
47		The ISO9000 ANSI/ASQC Q-90-Revision	1	Black Board	T1
48		Documentation ISO9000 and services-Revision	1	Black Board	T1
49		Use of Quality Cost information	1	Black Board	T1
50		The cost of certification implementing the system.	1	Black Board	T1

TEXT BOOK: 1. Total Quality Management / Joel E. Ross/Taylor and Francis Limited

2. Total Quality Management/P. N. Mukherjee/PH

REFERENCE BOOKS:

1. Beyond TQM / Robert L.Flood
2. Statistical Quality Control / E.L. Grant.
3. Total Quality Management:A Practical Approach/H. Lal
4. Quality Management/Kanishka Bedi/Oxford University Press/2011
5. Total Engineering Quality Management/Sunil Sharma/Macmillan

WEB REFERENCE

S.No	Web Link
1	https://asq.org/quality-resources/total-quality-management
2	https://management.org/quality/total-quality-management.
3	https://www.bmc.com/blogs/tqm-total-quality-management/



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LECTURER NOTES

UNIT-1

https://drive.google.com/file/d/1mV-yMMsxNmp8rZarCiEEaMNk33JT57Rq/view?usp=drive_link

UNIT-2

https://drive.google.com/file/d/1lXXbidAQX75Q-7_HEgZiF9M6EJ7Xv6Vf/view?usp=drive_link

UNIT-3-5

https://drive.google.com/file/d/1CyUisnqD0h4KcNEb8ts4lm89vS8Sd6Tt/view?usp=drive_link



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POWER POINT PRESENTATIONS

1. <https://docs.google.com/presentation/d/14oVqf5pC75wXB9sxggCxt8r3F1IRgd2e/edit?usp=sharing&ouid=116127377653932696240&rtpof=true&sd=true>
2. https://docs.google.com/presentation/d/1BT6iK9DEWYwwqgbQyUmYCv5oMPq1c6Tg/edit?usp=drive_link&ouid=116127377653932696240&rtpof=true&sd=true
3. <https://www.slideshare.net/SzAli1/organizing-for-total-quality-management>
4. <https://www.slideshare.net/jeffinscaria25/cost-of-quality-qm>
5. https://docs.google.com/presentation/d/1FeaKHkOWwmqH9kAPKio94geby9IG6oSd/edit?usp=drive_link&ouid=116127377653932696240&rtpof=true&sd=true

Code No: 128EY

R15

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech IV Year II Semester Examinations, May - 2019

TOTAL QUALITY MANAGEMENT

(Mechanical Engineering)

Time: 3 hours

Max. Marks: 75

Note: This question paper contains two parts A and B.

Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

PART - A

(25 Marks)

- Why inspection is called just a screening process? [2]
- b) Define quality. [3]
- c) How does process control enable better quality than product control? [2]
- d) Who is an internal customer? [3]
- e) What does scatter diagram reveal? [2]
- f) What is Pareto Principle? [3]
- g) Give two examples of quality appraisal costs. [2]
- h) Give three components of external failure costs. [3]
- i) Are ISO 9000 standards, process based or product based? [2]
- j) What is ISO 9004 standard about? [3]

PART - B

(50 Marks)

2. Construct the number of defect chart for the data given below:

Sub group	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	25	25
No. of defect	2	3	0	1	3	5	3	1	2	2	0	1	0	2	4	1	2	0	3	2	1	4	0	0	3

Mark the central level, UCL and LCL and plot.

[10]

OR

- 3.a) What is acceptance sampling? What are its advantages and disadvantages?
b) What are the benefits of TQM?

- 4.a) Define benchmarking.
b) Explain the process of benchmarking.

OR

- 5.a) Who is customer? What is customer satisfaction?
What is vendor rating?

- 6.a) What is fishbone diagram? What purpose does it serve?
b) Explain briefly what is meant by quality circle.

OR

- 7.a) How does Check- sheet serve as TQM tool?
b) What is the role of teams in organizing for TQM?

8. a) What is the importance of analyzing quality cost information?
b) What is the need for separate quality accounting system? [5+5]

OR

9. Discuss the various types of quality costs. [10]

10. a) Explain the benefits of ISO certification.
b) What is quality policy statement? [5+5]

OR

11. What are the various quality-documentation requirements for ISO 9000 certification? [10]

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CodeNo:138HC

JAWAHARLALNEHRUTECHNOLOGICALUNIVERSITY HYDERABAD**B.TechIVYearIISemesterExaminations,December-2020 TOTAL****QUALITY MANAGEMENT****(Common to CE,EEE,ECE,CSE,IT)****Time:2Hours****Max.Marks:75**

**Answer any Five
Questions All Questions Carry Equal Marks**

- 1.a) What are considered the four absolutes of quality?
- b) What are the underlying assumptions and guiding principles of TQM? [7+8]
- 2.a) What are the various features of quality?
- b) What is the weakness of the 'policy of inspection' as a quality improvement measure? [7+8]
- 3.a) What is the difference between 'competitive benchmarking' and 'functional Benchmarking'?
- b) Distinguish between 'internal customers' and 'external customers'. [8+7]
- 4.a) What are the operations and characteristics which should be compared during benchmarking?
- b) What are the most important reasons for failures of benchmarking? [9+6]
- 5.a) What are the roles of various functionaries of quality circle?
- b) What is the role of check-sheet in locating quality problem? [9+6]
6. Describe the organization structure for TQM implementation. [15]
- 7.a) What is the step-by-step approach to conduct cost of quality study in an organization?
- b) What is process cost approach reporting cost of quality? [9+6]
8. What are the basic stages of ISO 9000 certification process? Explain the steps of assessment procedure by the certifying agency. [15]

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Sri Indu Institute of Engineering & Technology

Sheriguda (V), Ibrahimpatnam (M), R.R.Dist-501 510

Set - I

I- Mid Examinations, MAY-2023

Year & Branch: **IV-II-CSE (A, B&C) and MECH**

Date: **09-05-2023(FN)**

Subject: **Total Quality Management**

Max. Marks: **10**

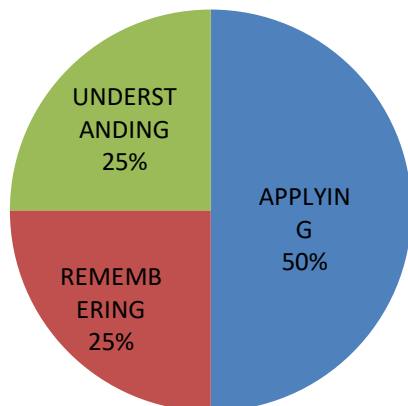
Time: **60 Min**

Answer any **TWO** Questions. All Question Carry Equal Marks

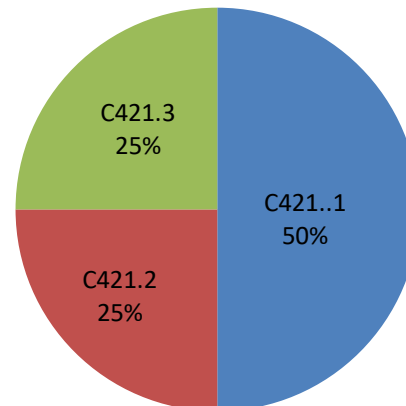
2X5=10 marks

1. Define TQM According to ISO. (Applying-L3) (C421.1) (5M)
2. Who is an internal customer? (Remembering-L1) (C421.2) (5M)
3. Explain PDCA cycle. (Applying-L3) (C421.1) (5M)
4. Explain Statistical Quality Control (Understanding-L2) (C421.3) (5M)

QUESTION PAPER MAPPING WITH BT'S



QUESTION PAPER MAPPING WITH CO'S



Sri Indu Institute of Engineering & Technology

Sheriguda (V), Ibrahimpatnam (M), R.R.Dist-501 510

Set - II

I- Mid Examinations, MAY-2023

Year & Branch: **IV-II-CSE (A, B&C) and MECH**

Date:**09-05-2023(FN)**

Subject: **Total Quality Management**

Max. Marks: **10**

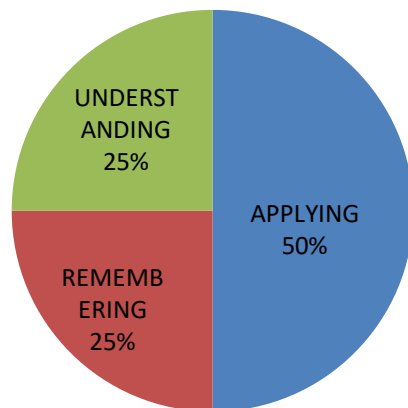
Time: **60 Min**

Answer any **TWO** Questions. All Question Carry Equal Marks

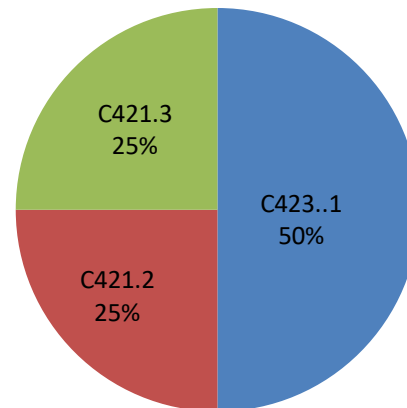
2X5=10 marks

1. Explain PDCA cycle. (Applying-L3) (C421.1) (5M)
2. Who is an internal customer? (Remembering-L1) (C421.2) (5M)
3. Define TQM According to ISO. (Applying-L3) (C421.1) (5M)
4. Explain Statistical Quality Control (Understanding-L2) (C421.3) (5M)

QUESTION PAPER MAPPING WITH BT'S



QUESTION PAPER MAPPING WITH CO'S



Sri Indu Institute of Engineering & Technology

Sheriguda (V), Ibrahimpatnam (M), R.R.Dist-501 510

B.Tech. IV Year II Sem., I Mid, Examinations, MAY-2023

Department of Mechanical Engineering

Sub: Total Quality Management

Date: 09-05-2023 (FN)

OBJECTIVE EXAM

Name: _____

Hall Ticket no.

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Answer all Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

I. Choose the correct answer.

- How a quality can be quantified ()
A. performance + expectations
B. performance x expectations
C. performance – expectations
D. performance / expectation
- Traditional culture of quality requirements focuses on ()
A. product oriented
B. process oriented
C. customer oriented
D. supplier oriented
- American quality guru who took the message of quality to Japan ()
A. genichi taguchi
B. masaaki imai
C. shigeo shingo
D. w. edwards deming
- PDCA cycle is the contribution of ()
A. walter shewhart
B. philip crosby
C. genichi taguchi
D. w. edward deming
- Which one is Juran's "three- role model" ()
A. supplier – process – customer
B. customer - process – customer
C. process – customer – supplier
D. process – supplier – customer
- In TQM, how many elements are there in Quality statements ()
A. 1
B. 2
C. 3
D. 4
- What are the elements of Quality statements ()
A. vision statement
B. mission statement
C. quality policy statement
D. all the above
- Quality Trilogy is the contributions of ()
A. Walter shewhart
B. Philip Crosby
C. joseph m juran
D. w. Edward demin

9. In TQM, the contributions of quality Guru Joseph M Juran ()
A. internal customer C. breakthrough concept
B. cost of quality D. all the above
10. The contributions of quality Guru Philip Crosby in TQM ()
A. pdca cycle C. pdsa
B. quality trilogy D. concept of zero defects

II. Fill in the blanks

11. _____ is primarily about detecting defective output rather than preventing it.
12. _____ is the outcome of poor quality.
13. The _____ should be committed to making changes to maximize the profit within
the given time period.
14. A _____ should be issued of the categories defining the cost of poor quality.
15. _____ is a term used to describe the process of preparing and collecting data.
16. The _____ of reports can also be improved with a cover letter or executive summary.
17. If the _____ do not want to see a Quality culture in the organization then
procedures, tools, and database are all useless.
18. According to the theory (Maslow, 1987), human needs fall into _____ fundamental categories.
19. To build a quality organisation, _____ high-level skills are needed.
20. Providing _____ at all levels is a starting point to ensure
action on quality.

Sri Indu Institute of Engineering & Technology

Sheriguda (V), Ibrahimpatnam (M), R.R.Dist-501 510

II- Mid Examinations, JUNE-2023

Set - I

Year & Branch: IV-CSE-A, B&C&ME

13-06-2023(FN)

Subject: Total Quality Management

Date:-

Max.

Marks: 10

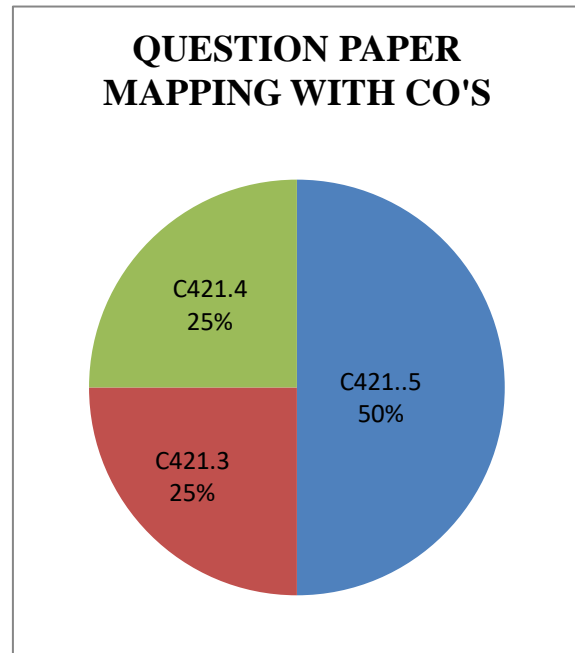
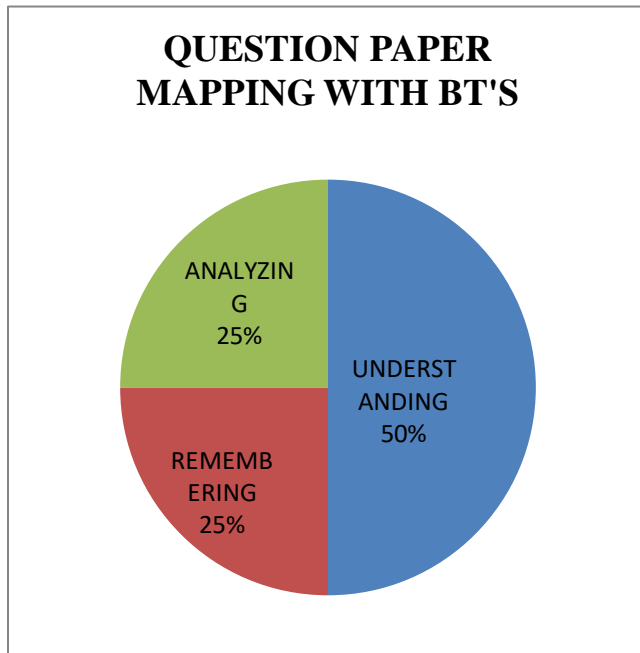
Time: 60 Min

Note: i) Answer any **TWO** Questions.

ii) All Question Carry Equal Marks

2X5=10 marks

1. Discuss Stratification and Ishikawa Diagram. (Remembering-L1) (C421.3) (5M)
2. Explain Costs of quality and list its main types. (Understanding-L2) (C421.5) (5M)
3. Explain Prevention costs and Appraisal costs with Examples. (Understanding-L2) (C421.5) (5M)
4. List the benefits of ISO 9000 quality management system. (Analyzing-L4) (C421.4) (5M)



Sri Indu Institute of Engineering & Technology

Sheriguda (V), Ibrahimpatnam (M), R.R.Dist-501 510

II- Mid Examinations, JUNE-2023

Set - II

Year & Branch: **IV-CSE-A, B&C & ME**

Date: **-13-**

06-2023(FN)

Subject: **Total Quality Management**

Max. Marks:

10

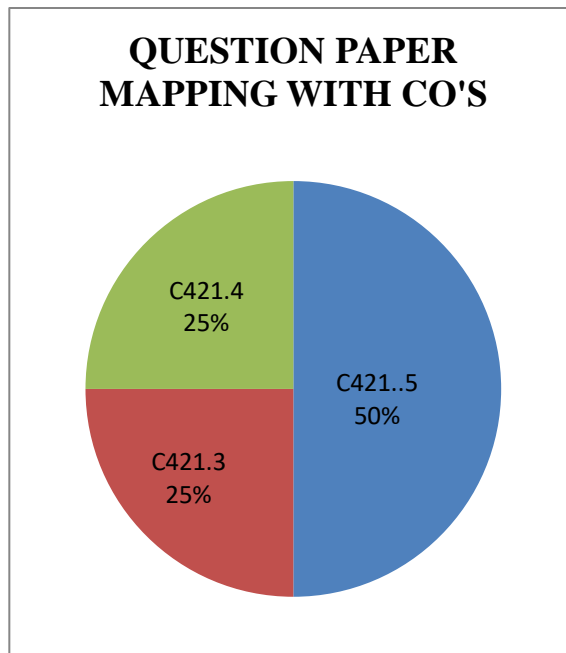
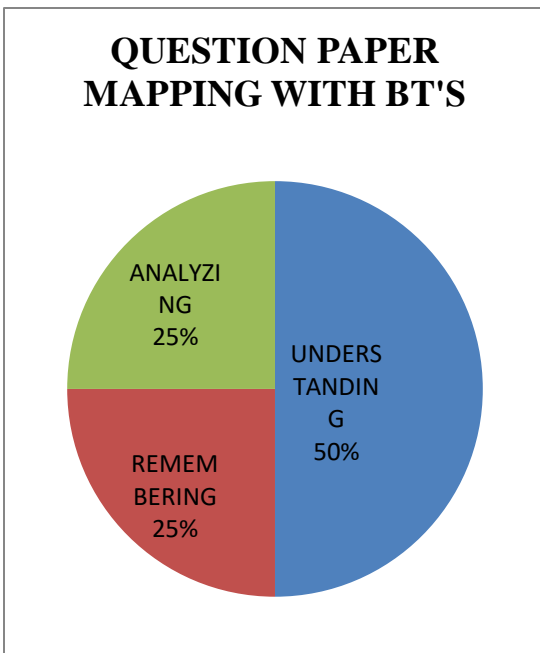
Time: **60 Min**

Note: i) Answer any **TWO** Questions.

ii) All Question Carry Equal Marks

2X5=10 marks

1. Discuss Stratification and Ishikawa Diagram (Remembering-L1) (C421.3) (5M)
2. Explain Prevention costs and Appraisal costs with Examples.(Understanding-L2) (C421.5)(5M)
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4. List the benefits of ISO 9000 quality management system. (Analyzing-L4) (C421.4) (5M)



Sri Indu Institute of Engineering & Technology

Sheriguda (V), Ibrahimpatnam (M), R.R.Dist-501 510

B.Tech. IV Year II Sem., II Mid, Examinations, JUNE-2022

Department of Mechanical Engineering

Sub: Total Quality Management

Date: 13-06-2023(FN)

OBJECTIVE EXAM.

Name: _____

Hall

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Ticket no.

Answer all Questions. All Questions Carry Equal Marks. Time: 20 Min. Marks: 10.

I. Choose the correct answer.

- Which statistical technique integrates product design and manufacturing process ()
A. Tree analysis C. Quality function deployment
B. Problem solving techniques D. Taguchi approach
- What is the key step in Taguchi's approach? ()
A. Tolerance design C. Parameter design
B. System design D. Process design
- What is called the stratification of information ()
A. Breaking down a whole group into smaller sub groups. C. Grouping of scattered information
B. Isolating the vital few from the trivial many D. Sequencing of processes in a quality system
- Which technique is used to relate complex cause and effect relationships? ()
A. Affinity diagram C. Scatter diagram
B. Pareto diagram D. Interrelationship diagram
- What is PDPC? ()
A. A statistical tool C. Quality assurance technique
B. Quality improvement technique D. Statistical process control technique
- What is the first step in problem solving process? ()
A. Plan C. Check
B. Do D. Action
- How many control charts are normally used for statistical control of variables? ()
A. 1 C. 3
B. 2 D. 4

8. Which tool is used to analyze the effects of a failure of individual components on the system? ()

- A. FTA
- B. FMEA
- C. Quality circles
- D. Fool proofing.

9. Which of the following does not belong to Prevention Costs ()

- A. Marketing research
- B. Customer/User perception surveys
- C. Design quality progress reviews

10. Which of the following does not belong to Internal Failure Costs? ()

- A. Uncontrolled Material Losses
- B. Purchased Material Replacement Costs
- C. Re-inspection / Retest Costs
- D. Supplier Reviews

II. Fill in the blanks.

11. The cost associated with NOT producing quality products or services is called _____.

12. Costs associated with improving quality or cost of conformance is called _____.

13. Costs associated with appraising a product or service for conformance to requirements is called _____.

14. Quality improvement, Quality education, and Quality performance reporting fall under the category of _____.

15. Retrofit costs fall under the category of _____.

16. ISO 9000 determines _____.

17. ISO 9000 is a series is a _____.

18. The ISO 9000 series was originally introduced in _____ year.

19. ISO 9000 having been adopted in over _____ countries.

20. The frequency distribution of a numerical data can be graphically represented by a _____.

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Sheriguda (V), Ibrahimpatnam (M), R.R.Dist-501 510

I- Mid Examinations, NOV-2022

Set - I

Year & Branch: IV-CSE (A,B,C)&ME

Date: 09-05-2023(FN)

Subject: Total Quality Management

ANSWER KEY

Descriptive paper key link:

https://drive.google.com/file/d/1mV-yMMsxNmp8rZarCiEEaMNk33JT57Rq/view?usp=drive_link

Objective/Quiz Key Paper

I. Multiple Choice Questions.

1. D.
2. A.
3. D.
4. D.
5. A.
6. C.
7. D.
8. C.
9. D.
10. A.

II. Fill in the blanks.

11. Quality control.
12. Failure Costs
13. Management
14. Draft
15. Data collection
16. Effectiveness.
17. Senior management.
18. Five
19. Three
20. Quality goals and measurements

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Sheriguda (V), Ibrahimpatnam (M), R.R.Dist-501 510

II- Mid Examinations, JAN-2023

Set - I

Year & Branch: IV-CSE(A,B,C)&ME

Date: 13-06-2023 (FN)

Subject: Total Quality Management

ANSWER KEY

Descriptive paper key link:

https://drive.google.com/file/d/1lXXbidAQX75Q-7_HEgZiF9M6EJ7Xv6Vf/view?usp=drive_link

Objective/Quiz Key Paper

I. Multiple Choice Questions.

1. D
2. C
3. A
4. D
5. B
6. A
7. C
8. B
9. D
10. D

II. Fill in the blanks

11. Cost of Quality.
12. Cost of Good Quality.
13. Appraisal Costs.
14. Prevention Costs.
15. External Failure Costs.
16. If the company practices its written procedures.
17. Quality management standards.
18. 1987.
19. 178.
20. Histogram.



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Khalsa Ibrahimpatnam, Sheriguda (V), Ibrahimpatnam (M), Ranga Reddy Dist., Telangana – 501 510

Website: <https://siiet.ac.in/>

Assignment Questions-I

(Assignment Questions are mapped with CO's, BT)

1. Explain PDCA cycle. (Applying-L3) (C421.3)
2. Who is an internal customer? (Remembering-L1) (C421.1)
3. Define TQM According to ISO. (Applying-L3) (C421.3)
4. Explain Statistical Quality Control (Understanding-L2) (C421.2)
5. What is the first step in problem solving process? (Remembering-L1) (C421.1)

Assignment Answer Key Link:

https://drive.google.com/file/d/1yn0bUst87j55AhiuMTNgp8TjznSWA9hq/view?usp=drive_link



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Khalsa Ibrahimpatnam, Sheriguda (V), Ibrahimpatnam (M), Ranga Reddy Dist. Telangana – 501 510

Website: <https://siiet.ac.in/>

Assignment Questions-II

(Assignment Questions are mapped with CO's, BT)

1. Discuss Stratification and Ishikawa Diagram (Remembering-L1) (C421.1)
2. Explain Prevention costs and Appraisal costs with Examples. (Understanding-L2) (C421.2)
3. Explain Costs of quality and list its main types. (Understanding-L2) (C421.3)
4. List the benefits of ISO 9000 quality management system. (Analyzing-L4) (C421.4)
5. What is the key step in Taguchi's approach? (Remembering-L1) (C421.1)

Assignment Answer Key Link:

https://drive.google.com/file/d/13Ryim0E1sWHqHrXKf8SXjBY2tnWg6H9p/view?usp=drive_link



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Khalsa Ibrahimpatnam, Sheriguda (V), Ibrahimpatnam (M), Ranga Reddy Dist. Telangana – 501 510

Website: <https://siiet.ac.in/>

Course Title	Total Quality Management
Course Code	ME831OE
Programme	B.Tech
Year & Semester	IV-year II-semester
Regulation	R18
Course Faculty	Mr. MARUTI S W, Assistant Professor , MECH

Slow learners:

S No	Roll no	No of backlogs	Internal-I Status	Internal-II Status
1	19X31A0510	5	14	16
2	19X31A0527	5	16	15
3	19X31A0556	5	15	16
4	19X31A0559	5	18	16
5	19X31A0546	4	16	14
6	19X31A0555	3	14	17

Advanced learners:

S.NO	ROLL.NO.	Documentation
1	19X31A0503	Total Quality Management:-Basics of TQM Principles, Methods of quality cost reduction.Genichi Taguchi Method. TQM Framework. Scope of ISO 9000 models of Standards.
2	19X31A0504	
3	19X31A0505	
4	19X31A0517	
5	19X31A0518	
6	19X31A0519	
7	19X31A0520	
8	19X31A0524	
9	19X31A0534	
10	19X31A0537	
11	19X31A0539	
12	19X31A0543	
13	19X31A0547	
14	19X31A0550	
15	19X31A0551	
16	19X31A0552	



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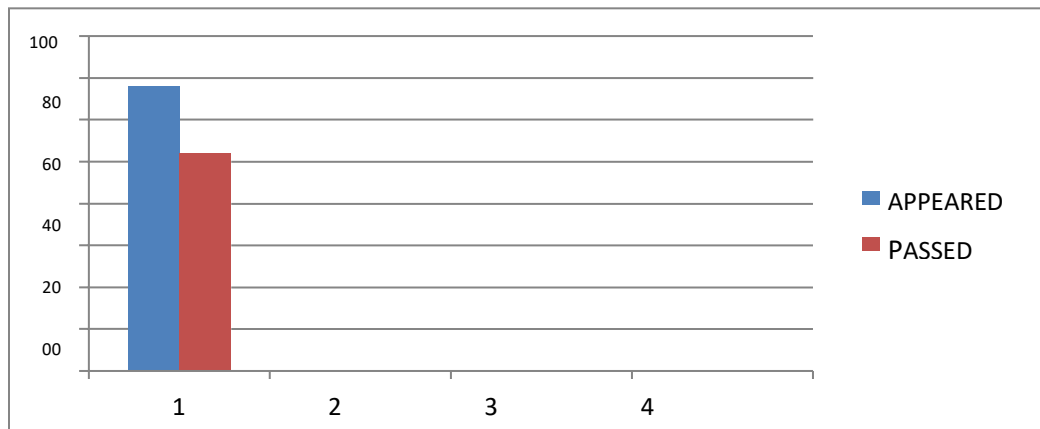
Khalsa Ibrahimpatnam, Sheriguda (V), Ibrahimpatnam (M), Ranga Reddy Dist. Telangana – 501 510

Website: <https://siiet.ac.in/>

B.TECH. IV- II SEM CSE-A RESULT ANALYSIS

ACADAMIC YEAR	COURSE NAME	NUMBER OF STUDENTS		QUESTION PAPER SETTING		PASS%
		APPEARED	PASSED	INTERNAL	EXTERNAL	
2022-2023	TOTAL QUALITY MANAGEMENT (ME831OE)	68	60	Course Faculty	Jntuh	88%

TOTAL QUALITY MANAGEMENT (ME831OE) RESULT ANALYSIS.





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DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

REMEDIAL CLASSES TIME TABLE

A.Y 2022-23

SEMESTER-II

BRANCH/ SEC	MON 4.00 PM- 5.00 PM	TUE 4.00 PM-5.00 PM	WED 4.00 PM- 5.00 PM	THUR 4.00 PM- 5.00 PM	FRI 4.00 PM- 5.00 PM
II CSE-A	DM	JAVA	DBMS	BEFA	OS
II CSE-B	BEFA	DBMS	DM	OS	JAVA
II CSE-C	DBMS	OS	BEFA	JAVA	DM
III CSE-A	CD	ML	DAA	STM	FIOT
III CSE-B	DAA	FIOT	CD	ML	STM
III CSE-C	ML	STM	FIOT	CD	DAA
IVCSE-A	OB	TQM	DS	-	-
IV CSE-B	DS	OB	TQM	-	-
IV CSE-C	TQM	DS	OB	-	-

HOD

Computer Science & Engg. Dept.
SRI INDU INSTITUTE OF ENGG & TECH.
Sheriguda(V), Ibrahimpatnam(M), R.R.Dist-501 10.

PRINCIPAL
PRINCIPAL

Sri Indu Institute of Engineering & Techn.
Sheriguda(Vill), Ibrahimpatnam,
R R Dist Telangana -501 510



SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

Department of Computer science and Engineering

Course Outcome Attainment (Internal Examination-1)

Name of the faculty : MARUTI S W										Academic Year: 2022-23					
Branch & Section: CSE -A										Examination: I Internal					
Course Name: TOTAL QUALITY MANAGEMENT										Year: IV Semester: II					
S.No	HT No.	Q1a	Q1b	Q1c	Q2a	Q2b	Q2c	Q3a	Q3b	Q3c	Q4a	Q4b	Q4c	Obj1	A1
Max. Marks ==>		5			5			5			5			10	5
1	18X31A0511	3						2						5	5
2	18X31A0522				3			2						5	5
3	18X31A0531				3			2						5	5
4	18X31A0593				3			2						5	5
5	19X31A0501				5			3						9	5
6	19X31A0502	5						3						9	5
7	19X31A0503				4			4						10	5
8	19X31A0504				5			4						10	5
9	19X31A0505	5						5						10	5
10	19X31A0506							5			3			9	5
11	19X31A0507				5			3						9	5
12	19X31A0508				4			4						10	5
13	19X31A0509	5						4						10	5
14	19X31A0510	5			5									10	5
15	19X31A0511				5			3						9	5
16	19X31A0512				5						3			9	5
17	19X31A0513				5			5						10	5
18	19X31A0514				3			5						8	5
19	19X31A0515	4						4						10	5
20	19X31A0517	5						3						9	5
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23	19X31A0520	3						5						8	5
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25	19X31A0522	5						3						9	5
26	19X31A0523				5			3						9	5
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33	19X31A0530	4						4						10	5
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41	19X31A0538				5			4						10	5
42	19X31A0539	5						5						10	5
43	19X31A0540	5						3						9	5
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51	19X31A0548				4			4						10	5
52	19X31A0549				3			5						8	5
53	19X31A0550				4			4						10	5
54	19X31A0551				4			4						10	5
55	19X31A0552	3						4						5	5
56	19X31A0553				5			5						10	5
57	19X31A0554	3						5						5	5
58	19X31A0555				4			4						10	5
59	19X31A0556	5						4						10	5
60	19X31A0557				5			5						10	5
61	19X31A0558				4			4						10	5
62	19X31A0559				5			3						9	5
63	20X35A0501	5						3						9	5
64	20X35A0502				4			4						10	5
65	20X35A0503				4			4						10	5
66	20X35A0504				5			4						10	5
67	20X35A0505	5						3						9	5
68	20X35A0506				4			4						10	5
Target set by the faculty / HoD		3.00	0.00	0.00	3.00	0.00	0.00	3.00	0.00	0.00	3.00	0.00	0.00	6.00	3.00
Number of students performed above the target		27	0	0	39	0	0	60	0	0	6	0	0	61	68

Number of students attempted	27	0	0	39	0	0	64	0	0	6	0	0	68	68
Percentage of students scored more than target	100%			100%			94%			100%			90%	100%

CO Mapping with Exam Questions:

CO - 1	Y												Y	Y
CO - 2				Y			Y						Y	Y
CO - 3										Y			Y	Y
CO - 4														
CO - 5														
CO - 6														

CO Attainment based on Exam Questions:

CO - 1	100%												90%	100%
CO - 2				100%			94%						90%	100%
CO - 3										100%			90%	100%
CO - 4														
CO - 5														
CO - 6														

CO	Subj	obj		Asgn	Overall	Level
CO-1	100%	90%		100%	97%	3.00
CO-2	97%	90%		100%	96%	3.00
CO-3	100%	90%		100%	97%	3.00
CO-4						
CO-5						
CO-6						

Attainment Level	
1	40%
2	50%
3	60%

Attainment (Internal 1 Examination) = **3.00**

37	19X31A0534	4						3						8	5
38	19X31A0535	3						4						7	5
39	19X31A0536	5						3						9	5
40	19X31A0537	4						3						6	5
41	19X31A0538	5			3									9	5
42	19X31A0539	5						3						9	5
43	19X31A0540	4									3			8	5
44	19X31A0541							4			4			10	5
45	19X31A0542	4						3						8	5
46	19X31A0543							4			3			8	5
47	19X31A0544				3						4			7	5
48	19X31A0545							5			3			9	5
49	19X31A0546				4			3						6	5
50	19X31A0547				4			4						10	5
51	19X31A0548							4			3			8	5
52	19X31A0549	3									4			7	5
53	19X31A0550	4									3			8	5
54	19X31A0551				3						5			8	5
55	19X31A0552	4						4						10	5
56	19X31A0553							4			4			10	5
57	19X31A0554	4						4						10	5
58	19X31A0555	3						5						8	5
59	19X31A0556	3						5						8	5
60	19X31A0557				4			4						10	5
61	19X31A0558	4						3						8	5
62	19X31A0559				4			3						8	5
63	20X35A0501				3			4						7	5
64	20X35A0502				3			5						8	5
65	20X35A0503							4			3			8	5
66	20X35A0504							5			3			9	5
67	20X35A0505	3						4						7	5
68	20X35A0506	3						5						8	5
	Target set by the faculty / HoD	3.00	0.00	0.00	3.00	0.00	0.00	3.00	0.00	0.00	3.00	0.00	0.00	6.00	3.00
	Number of students performed above the target	37	0	0	22	0	0	41	0	0	28	0	0	64	68
	Number of students attempted	40	0	0	23	0	0	43	0	0	30	0	0	68	68
	Percentage of students scored more than target	93%			96%			95%			93%			94%	100%

CO Attainment based on Exam Questions:

CO - 1														
CO - 2														
CO - 3														
CO - 4	93%												94%	100%
CO - 5				96%			95%						94%	100%
CO - 6										93%			94%	100%

CO	Subj	obj		Asgn	Overall	Level
CO-1						
CO-2						
CO-3						
CO-4	93%	94%		100%	96%	2.00
CO-5	96%	94%		100%	97%	2.00
CO-6	93%	94%		100%	96%	2.00

Attainment Level	
1	40%
2	50%
3	60%

Attainment (Internal Examination-2) = **2.00**

**SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY**

Department of Computer science and Engineering

Course Outcome Attainment (University Examinations)

Name of the faculty : MARUTI S W

Academic Year:2022-23

Branch & Section: CSE -A

Year / Semester: IV/II

Course Name: TOTAL QUALITY MANAGEMENT

S.No	Roll Number	Marks Secured		S.No	Roll Number	Marks Secured
1	18X31A0511	8		36	19X31A0533	37
2	18X31A0522	-1		37	19X31A0534	48
3	18X31A0531	13		38	19X31A0535	43
4	18X31A0593	-1		39	19X31A0536	41
5	19X31A0501	26		40	19X31A0537	52
6	19X31A0502	26		41	19X31A0538	30
7	19X31A0503	28		42	19X31A0539	39
8	19X31A0504	26		43	19X31A0540	46
9	19X31A0505	26		44	19X31A0541	28
10	19X31A0506	14		45	19X31A0542	26
11	19X31A0507	15		46	19X31A0543	27
12	19X31A0508	16		47	19X31A0544	7
13	19X31A0509	6		48	19X31A0545	26
14	19X31A0510	10		49	19X31A0546	11
15	19X31A0511	15		50	19X31A0547	26
16	19X31A0512	26		51	19X31A0548	12
17	19X31A0513	12		52	19X31A0549	29
18	19X31A0514	26		53	19X31A0550	28
19	19X31A0515	26		54	19X31A0551	26
20	19X31A0517	26		55	19X31A0552	28
21	19X31A0518	33		56	19X31A0553	26
22	19X31A0519	34		57	19X31A0554	30
23	19X31A0520	32		58	19X31A0555	37
24	19X31A0521	34		59	19X31A0556	12
25	19X31A0522	17		60	19X31A0557	26
26	19X31A0523	26		61	19X31A0558	12
27	19X31A0524	29		62	19X31A0559	6
28	19X31A0525	28		63	20X35A0501	28
29	19X31A0526	42		64	20X35A0502	11
30	19X31A0527	14		65	20X35A0503	15
31	19X31A0528	26		66	20X35A0504	38
32	19X31A0529	32		67	20X35A0505	26
33	19X31A0530	26		68	20X35A0506	34
34	19X31A0531	26				
35	19X31A0532	41				

Max Marks	75			
Class Average mark	25		Attainment Level	% students
Number of students performed above the target	47		1	40%
Number of successful students	66		2	50%
Percentage of students scored more than target	71%		3	60%
Attainment level	3			

SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY



Department of Computer science and Engineering

Course Outcome Attainment

Name of the faculty : MARUTI S W	Academic Year: 2022-23
Branch & Section: CSE -A	Examination: I Internal
Course Name: TOTAL QUALITY MANAGEMENT	Year: IV Semester: II

Course Outcomes	1st Internal Exam	2nd Internal Exam	Internal Exam	University Exam	Attainment Level
CO1	3.00		3.00	3.00	3.00
CO2	3.00		3.00	3.00	3.00
CO3	3.00		3.00	3.00	3.00
CO4		3.00	3.00	3.00	3.00
CO5		3.00	3.00	3.00	3.00
CO6		3.00	3.00	3.00	3.00
Internal & University Attainment:			3.00	3.00	
Weightage			25%	75%	
CO Attainment for the course (Internal, University)			0.75	2.25	
CO Attainment for the course (Direct Method)			3.00		

Overall course attainment level = 3.00



SRI INDU INSTITUTE OF ENGINEERING & TECHNOLOGY

Department of Electronics and Communication Engineering

Program Outcome Attainment (from Course)

Name of Faculty:	Academic Year: 2022-23
Branch & Section: CSE -A	Year: IV
Course Name: TOTAL QUALITY MANAGEMENT	Semester: II

CO-PO mapping

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12	PSO1	PSO2
CO1	2	3											3	
CO2	3	2												
CO3	2	3											2	
CO4	2	3	2									3		
CO5	1	2	3											
CO6	3	2											2	
Course	2.1	2.5	2.5									3	2.5	

CO	Course Outcome Attainment
CO1	3.00
CO2	3.00
CO3	3.00
CO4	3.00
CO5	3.00
CO6	3.00
Overall course attainment level= 3.00	

PO-ATTAINMENT

	PO1	PO2	PO3	PO4	PO5	PO6	PO7	PO8	PO9	PO10	PO11	PO12
CO Attainment	2.10	2.50	2.50									3.00

CO contribution to PO - 33%, 67%, 100% (Level 1/2/3)



SRI INDU INSTITUTE OF ENGINEERING AND TECHNOLOGY

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(Approved by AICTE, New Delhi and Affiliated to JNTUH, Hyderabad)

Khalsa Ibrahimpatnam, Sheriguda (V), Ibrahimpatnam (M), Ranga Reddy Dist., Telangana – 501 510

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