SET - 1

Code No: 2420304

IV B. Tech II Semester Regular Examinations, April/May 2009

TOTAL QUALITY MANAGEMENT

(Mechanical Engineering)

Time: 3 Hours **Max. Marks 80**

Answer any FIVE questions

All questions carry equal marks

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1. a) Give overview of TQM

   b) List out various elements of TQM. Explain any two in detail.

2. a) Explain the need for standardization

   b) Explain the structure of ISO 9000 series of standards.

3. Explain the subprograms of Documentation, Management review, Resource Management of QMS

4. a) Explain several of steps involved in problem solving process in detail.

   b) Mention 7 QC tools for problem solving and explain any one in detail.

5. a) Explain the procedure for launching quality circle in a typical organization.

   b) Explain the benefits of quality circle.

6. a) What is benchmarking? Explain the process of benchmarking.

   b) Classify the benchmarking and explain one in detail.

7. a) Explain about supplier training.

   b) What is DMAIC? Explain its methodology.

8. Write Short notes on any two of the following

   a) Internal & external customers

   b) Pareto analysis

   c) Value Analysis

SET - 2

Code No: 2420304

IV B. Tech II Semester Regular Examinations, April/May 2009

TOTAL QUALITY MANAGEMENT

(Mechanical Engineering)

Time: 3 Hours **Max. Marks 80**

Answer any FIVE questions

All questions carry equal marks

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1. a) Explain Deming approach to TQM
   b) Explain various steps for implementing TQM

2. a) Which type of companies should go for ISO 9001 certification and why?
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   b) If an industry desire to get ISO 9001:2000 certification, explain the different steps to be followed.

3. a) Explain the subprograms of customer –Related process, & Product Realization.
   b) Explain the importance of monitoring and measurement for QMS

4. a) Define Failure Mode and Effect Analysis (FMEA). Draw Design FMEA Form.
   b) What are the benefits of FMEA.

5. What is Ishikawa diagram? Explain how is it used for the root cause of problem with example.

6. a) What is Quality Function Deployment (QFD)? Explain benefits of QFD.

   b) What is house of quality? Explain various steps briefly for building house Of quality?

7. a) Explain different phases of benchmarking process.

   b) Explain the role of six sigma in manufacturing & service industries.

8. Write short notes on any two of the following
   a) Continuous improvement
   b) Non-conformance database
   c) Control charts for attributes

SET - 3

Code No: 2420304

IV B. Tech II Semester Regular Examinations, April/May 2009

TOTAL QUALITY MANAGEMENT

(Mechanical Engineering)

Time: 3 Hours **Max. Marks 80**

Answer any FIVE questions

All questions carry equal marks

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1. a) Explain philosophies of Gurus of TQM

   b) Explain the barriers to TQM implementation.

2. a) Mention Quality system requirements for ISO 9001 certification

   b) Compare ISO 9001, ISO 9002 and ISO 9003

3. Explain various steps that are necessary to implement a Quality Management System.

4. a) What is Failure mode and effect analysis and what are its objectives.

   b) Explain the steps of Failure mode and effect analysis briefly.

5. a) In a manufacturing process the number of defectives in the inspection of 15 lots of 400 items each are given below.

Lot No	No.of Defectives
1	2
2	5
3	0
4	14
5	3
6	0
7	1
8	0
9	18
10	8
11	6
12	0
13	3
14	0
15	6

   Plot P chart and draw conclusions

   b) Explain the importance of fishbone diagram in identifying the root cause of the problem

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6. a) Explain various phases of QFD process.

   b) Explain the following loss functions (i) Nominal the Best (ii) Smaller-the-Better & (iii) Larger the Better

7. a) Explain various types of belts of six sigma

   b) Compare Six sigma & TQM

8. Write short notes on two of the following

   a) Various techniques to sustain continuous improvement.

   b) Comparison between ISO 9000 and ISO 14000 series

   c) Benchmarking.

SET - 4

Code No: 2420304

IV B. Tech II Semester Regular Examinations, April/May 2009

TOTAL QUALITY MANAGEMENT

(Mechanical Engineering)

Time: 3 Hours **Max. Marks 80**

Answer any FIVE questions

All questions carry equal marks

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1 a) Explain the various steps in continuous improvement

b) What are the benefits of TQM implementation?

2 a) Explain structure of ISO 14000 certification. Mention its salient features.

b) Compare ISO 9000 Vs TQM.

3 a) What are the general requirements for Quality Management systems (QMS).

b) Explain various subprograms under Management Responsibility pertaining to QMS .

4 a) Explain various stages of Failure Mode and Effect Analysis (FMEA).

b) How Fault tree Analysis (FTA) and FMEA are different.

5 a) Explain structure of Quality circle

b) What are the reasons for the success of quality circle?

6 a) Explain various elements of QFD.

b) Explain various steps of Taguchi design experiments.

7 a) Explain various phases of value analysis? Explain Fast diagram for value improvement

b) Explain six sigma with suitable example. Explain various steps involved in Six sigma implementation.

8 Write short notes on any two of the following

a) Clauses & sub clauses of ISO 9001:2000.

b) Control charts for variables

c) Benchmarking & TQM