

Mechanical Engineering Department
Quality Engineering – 2181920 (M803)

8th SEMESTER

ASSIGNMENT

CO1	Understand quality dimensions, management tools, techniques and standards
1.	Define Quality and write about views of different Quality Gurus.
2.	Explain your understanding about the importance of the subject Quality Engineering.
3.	Write down any three different definitions of quality
4.	State the importance and application of ISO 9000, ISO 14000 and QS 9000
5.	State the importance of national and international quality awards as per your understanding
6.	Explain your understanding about quality circle
7.	Explain the concept and scope of implementing QS 9000
8.	Define quality engineering.
9.	Define variable and attribute quality characteristics
10.	Define Quality. What are the functions of Quality Management?
11.	Define and explain quality circle.
12.	Define following: (1) Quality (2) TQM (3) Poka yoke.
13.	Explain Seven tools of Quality Improvements
14.	Explain various Quality costs
15.	Explain the process of operation of Quality Circle
16.	Explain PDCA cycle in details
17.	Explain the process of operation of Quality Circle
18.	Explain 4 basic cost elements covered under “Cost of Quality” system giving at least two examples of each cost element.
19.	Explain 7 New Quality Improvement Tools
20.	Explain Poka-Yoke with two examples.
21.	Enlist seven new quality management tools
22.	Analyze the contribution of any one quality guru in your language.
23.	What is the role of Quality Engineer in organization
24.	Write a short note on quality improvement practices in Indian industries.
25.	Draw conceptual frame work for quality management.
26.	As natural resources become scare, Explain the role of ISO 14000 in promoting good environmental management practices
27.	What do you understand by ISO? State its levels. Mention its importance in the field of quality
28.	Write two methodologies of Six Sigma.
CO2	Describe total quality management approach and its implementation
•	What is TQM? Explain the principles of Total Quality Management (TQM).
•	State the importance of total quality management
•	What is W. Edward’s contribution to TQM
•	Explain how TQM can be ensured

•	Explain and Enumerate the quality documents and systems needed in TQM.
•	Explain the barriers in implementing TQM.
•	Explain the implementation requirement of TQM
•	What do you understand by Total Quality Management? Describe the contribution of Deming in the field of TQM.
•	Give roadmap for implementation of TQM in a manufacturing company
•	Give cause and effect diagram for following:- I. High cost of textile industry II. TQM in Technical Education
•	Explain any two TQM models
CO-3	Design for quality to specific case with tools like; QFD, FMEA, ANNOVA etc.
1.	Explain QFD. Explain house of Quality –product planning matrix
2.	What is FMEA? Draw the format of FMEA
3.	Define and explain Concurrent Engineering
4.	Explain Taguchi method and various steps of Taguchi method.
5.	Define FMEA. Explain how it helps in ensuring quality of a product. Draw a typical format of FMEA and explain its elements in brief
6.	Explain Taguchi’s philosophy for quality Improvement, loss function and its contributions
7.	Write application of FMEA
8.	Describe preparation of Quality Function Deployment (QFD) house of quality matrix by giving suitable example
9.	How Taguchi method is useful in design of experimental?
10.	Write a short note on QFD
11.	What is concurrent engineering
12.	Write a short note on FMEA
13.	Write Taguchi’s contribution in quality engineering
14.	Write the steps in experimental design in DOE.
15.	Explain Concurrent Engineering list out its merits and demerits
16.	What do you understand by the word – Robust Design? How Taguchi Techniques helps achieving robust design of a product?
17.	What is Design of Experiments (DOE)? What are the components and benefits of DOE
18.	Write the importance of ANNOVA.
19.	What is S/N ratio and explain in detail.
CO4	Elaborate contempory trends in quality engineering and management
1.	Differentiate between Lean and Agile manufacturing
2.	Explain how you will implement Lean manufacturing technique in a manufacturing organization
3.	Explain JIT with real field application
4.	Write about seven basic types of waste
5.	Compare Lean and Agile manufacturing system
6.	Explain World class manufacturing system
7.	What is six sigma? Compare Six sigma and TQM.
8.	Define Benchmarking with its types
9.	Write a note on Agile manufacturing

10.	Write a short note on World Class Manufacturing
11.	Define Six sigma with one example
12.	Explain Six Sigma
13.	Explain JIT with real field application
14.	Write in brief contemporary trends in quality engineering and management
15.	Define and explain about benchmarking
16.	What are the characteristics and merits of JIT production system
17.	Briefly explain the concepts of Lean and Agile Manufacturing. What are the Advantages offered by these systems to the industries?
18.	What is Kaizen? Explain with example.
19.	You are working at a manufacturing concern as a Manager- Quality Control Department. Prepare following assignment:-Activity/Task:- Preparation of “5S work sheet and One H” checklist for Kaizen
20.	List various tools and techniques of KAIZEN. Explain any two of them.
21.	What is Kaizen? Explain with example
22.	Write the limitation of six sigma
23.	Define (1) JIT, (2) TPM and (3) BPR
24.	Explain about 5-S technique.
CO5	Evaluate the Quality in different service Sectors
1.	Explain characteristics & quality dimensions of service sectors.
2.	Explain various quality dimensions of service sectors.
3.	Explain your understanding about importance of Quality Service sectors.
4.	Explain various quality dimensions in manufacturing sectors
5.	Explain characteristics of Quality in service sectors.
6.	Write a short note on quality dimensions of service sectors.
7.	Explain various quality dimensions of service sectors.
8.	Write about the role of 5-S in Quality Improvements in Manufacturing Sectors.

All 8th semester students are informed to write all the questions of above assignment.

Sub. Coordinator

R K Jani