



**ST. ANNE'S  
COLLEGE OF ENGINEERING AND TECHNOLOGY**

**DEPARTMENT: MECHANICAL**

Subject code/ Name: Total Quality Management

Semester /Year: VII/ IV Year

UNIT-1  
**PART –A**

1. Define quality? (A.U Nov/Dec 2005, Nov/Dec 2008(2))
2. Define quality as per Ed.Deming. (A.U Nov/Dec 2005)
3. Write the equations that quantify quality. (A.U May/June 2009)
4. List the dimensions of quality. (A.U Nov/Dec 2008)
5. List the dimensions of service quality. (A.U Nov/Dec 2008)
6. Define TQM.
7. List out the six basic concept of TQM.
8. What is vision statement? Given an Example. (A.U Nov/Dec 2007)
9. What is the cost of quality?
10. Define quality cost index. (A.U Nov/Dec 2009)
11. List the elements categories of quality costs. (A.U May /June 2005)
12. What are quality statements? (A.U Nov/Dec 2005, Nov/Dec 2008(2))
13. Mention any four principles of TQM.
14. What are the barriers for TQM implementation? (A.U May/June 2010)
15. What are the pillars of TQM?
16. What are the basic concepts that a successful TQM programme required?(A.U Nov/Dec 2005)
17. Draw the figure to depict customer satisfaction mode (A.U Nov/Dec 2005, Nov/Dec 2008(2))
18. Name some of the most common ways to collect customer needs. (A.U Nov/Dec 2012)
19. What is meant by customer retention? (A.U Nov/Dec 2009)
20. What do you mean by service quality? (A.U May/June 2013)
21. Define TQM & TQM frame.
22. What are the essential steps of quality planning?
23. List out the different quality costs. (A.U Nov/Dec 2005)
24. Distinguish between appraisal and failure costs.
25. What are prevention costs? (A.U Nov/Dec 2008)

**PART –B**

1. What are basic concepts of TQM? Explain each. (A.U May/June 2009)
2. Briefly discuss on customer satisfaction. (A.U Nov/Dec 2008)
3. Distinguish between internal and external customers (A.U Nov/Dec 2012)
4. What are the customer's perceptions on quality? Explain (A.U Nov/Dec 2006)
5. How customer needs are translated into requirements in kano model(A.U Nov/Dec 2008)
6. Discuss Juran's principles of quality improvement (A.U Nov/Dec 2005)
7. Explain the Deming Philosophy for improving quality, productivity and competitiveness
8. Describe the barriers in the implementation of TQM (A.U Nov/Dec 2005)
9. Explain the various dimensions of quality (A.U Nov/Dec 2008)

10. Illustrate the various steps involved in customer satisfaction.
11. Explain the cost of quality in detail. (A.U Nov/Dec 2008)
12. How do the businesses measure customer satisfaction? (A.U May /June 2009)
13. What should a leaders know and understand in order to be effective?(6)
12. Explain TQM and Juran’s ten steps to quality improvement. (A.U May/June 2009)
13. Describe the steps involved in strategic planning. (A.U May/June 2011)
14. Enumerate the duties of quality council. (A.U May/June 2009)

## **UNIT – II TQM PRINCIPLES**

### **PART-A**

1. What do you mean by strategic planning? (A.U May/June 2009)
2. List the characteristics of successful quality leaders. (A.U May/June 2013)
3. What are the Maslow’s basic needs? (A.U Nov/Dec 2006)
4. Define empowerment? (A.U Nov/Dec 2005, Nov/Dec 2008, Nov/Dec 2009)
5. What do you mean performance appraisal? (A.U May /June 2005, May /June 2006)
6. What are the conditions necessary for empowerment? (A.U Nov/Dec 2006)
7. List four common barriers to team progress? (A.U Nov/Dec 2010)
8. What is the use of performance appraisal? (A.U May/June 2009)
9. What is 5S practice? (A.U Nov/Dec 2005)
10. Name the 5S’s? (A.U Apr/May 2005, Nov/Dec 2007, Nov/Dec 2008)
11. What is Kaizen? (A.U Apr/May 2005, Nov/Dec 2008)
12. What are the benefits of 5S? (A.U Apr/May 2006, Nov/Dec 2007)
13. What is supplier partnering? (A.U Nov/Dec 2014)
14. Explain supplier selection. (A.U Nov/Dec 2008)
15. Define leadership. What are the principles of leadership?
16. Write down the Juan’s quality planning.
17. What is hidden cost?
18. Write down the objectives of quality cost evaluation.
19. What are the popular awards for quality?
20. What is quality council? (A.U Nov/Dec 2008)

### **PART-B**

1. i) list the fourteen principle of Deming’s approach.(6)  
 ii) Employee involvement (4)  
 iii) Explain on PDSA cycle (6) (A.U May /June 2005)
2. i) Explain on Juran’s ten steps to quality improvement (10)  
 ii) Explain continuous process improvement (6) (A.U May /June 2005)
3. Explain Juran’s Quality trilogy in detail (16) (A.U Nov/Dec 2005)
4. Explain the following with their advantages and limitations: i. 5S concept ii. Kaizen iii. Performance appraisal (16) (A.U Nov/Dec 2005)
5. What are the duties of quality council? Explain in detail (10) (A.U Nov/Dec 2006)
6. i) What are the seven steps strategic planning?  
 ii) What are the major benefits of 5S implementation? Explain how are they achieved? (A.U Nov/Dec 2006)

7. Describe briefly any eight criteria that need to be considered while developing performance measuring organizations (8) (A.U Nov/Dec 2007)
8. Describe the Maslow's need hierarchy theory and Herzberg's two factor theory for motivation. (A.U Nov/Dec 2007)
9. i) what are the characteristics of successful teams(6)
  - ii) Explain the types of problems expected in a product and the improvement strategies which are applied on the product? (10) (A.U Nov/Dec 2008)
10. Write short notes on quality circles
11. What is supplier partnering? (A.U Nov/Dec 2014)
12. Write short notes on relationship development. (A.U Nov/Dec 2008)
13. Discuss the important elements to achieve customer/supplier partnering relationship . (A.U Nov/Dec 2009)
14. What is meant by vendor development? Give an example. (A.U Nov/Dec 2015)

### **UNIT III TOM TOOLS & TECHNIQUES I** **PART-A**

1. List out the Seven Tools of quality. (Dec 12, May 13, May 15)
2. What is Pareto diagram? (May 04, Dec 08, Dec 12, May 13, May 14)
3. Draw a Cause and Effect diagram. (Dec 12, May 13, May 14)
4. Draw the sample diagrams for the following: i. Graph ii. Histogram iii. Scatter Diagram iv. Check she et(May 04, Dec 08)
5. Define Benchmarking. (Apr/May 2005)
6. What is FMEA? (Apr/May 2005)
7. What is six sigma? (Nov/Dec 2010)
8. What are the new seven management tools of quality? (May 04, Dec 08)
9. What are the steps required to construct an affinity diagram? (May 04, Dec 08)
10. Draw the different types of histograms and specify their characteristics? (Nov/Dec 2008)
11. What are the five phases in six sigma process? (Apr/May 2005)
12. What are the objectives for benchmarking? (Nov/Dec 2006)
13. What are the limitations of benchmarking? (Nov/Dec 2005)
14. Indicate any two strengths and weaknesses of benchmarking technique. (Nov/Dec 2007)
15. Define failure rates. (Nov/Dec 2009)
16. Differentiate the terms "failure mode" and "failure effects". (Nov/Dec 2010)
17. Name some new management tools. ". (Nov/Dec 2011)
18. What are the benefits of FMEA? (Nov/Dec 2011)
19. What are the stages of FMEA? (Nov/Dec 2010)

20. What is meant by PDPC? (Apr/May 2005)
21. What are the duties of quality council? (A.U Nov/Dec 2005)
22. What is quality statement? Give example for each.
23. Why is it difficult to change organizational culture? (A.U Nov/Dec 2006)

### **PART-B**

1. Explain the seven tools of quality (Apr/May 2005)
2. How the Pareto analysis done? Explain with example (Nov/Dec 2006)
3. How is cause and effect diagram constructed? (Nov/Dec 2009)  
Discuss in detail with a case study. (Nov/Dec 2011)
4. Briefly explain the concept of six sigma with an example. (Apr/May 2005)
5. Discuss about the new seven management tools of quality. (Apr/May 2005)
6. Explain the three main types of Benchmarking. In what circumstances would each type more appropriate. (Nov/Dec 2008)
7. Explain FMEA in detail with suitable example. (Nov/Dec 2008)
8. Outline the steps used to construct the tree diagram (Apr/May 2006)

## **UNIT IV - TQM Tools & Techniques – II**

### **Part-A**

1. When is QFD used? [Nov/Dec'06]
2. What are the objectives of QFD? [ May/June'06]
3. What are control charts for attributes? [Nov/Dec'06]
4. Distinguish between a defect and defective. [ May/June'06]
5. Mention the ways to reduce variability. [ May/June'09]
6. Define process capability ratio.[Nov/Dec'09]
7. Define process capability. [Nov/Dec'05, May/June'06, Nov/Dec'09]
8. What are the categories of variations in piece part production? [Nov/Dec'08]
9. Mention the use of control chart. [ May/June'09]
10. Differentiate between control charts for variables and attributes. [Nov/Dec'05]
11. What is meant by “house of quality”? [May/June'12, Nov/Dec'09]
12. What does “DMAIC” convey in six sigma? [May/June'12]
13. What are the benefits of QFD? [Nov/Dec'08]
14. Write down the philosophy of quality loss function? [Nov/Dec'12] 4
15. What is the difference between Taguchi's approach and traditional approach? [Nov/Dec'10]
16. What are the objectives/benefits of TPM? Or why TPM is required? [Nov/Dec'05, May/June'06, May/June'09]
17. What is the structure of a control chart? [Nov/Dec'06]
18. Write and draw the parts of the house of quality? [May/June'12, Nov/Dec'09]
19. What are the goals of TPM?
20. How can QFD be deployed? [Nov/Dec'06]
21. What are the strategic goals of performance? (A.U May/June 2009)
22. What is meant by reactive and proactive behavior? (A.U Nov/Dec 2008)

### **Part – B**

1. Explain the seven step plan to establish the TPM in an organization in detail [Nov/Dec'11, May/June'15]
2. Explain the concept of Taguchi's Quality loss function in detail. Give an example [Nov/Dec'09,Nov/Dec'11, May/June'13,Nov/Dec'14]
3. Explain the procedure to construct a "House of Quality" in detail with neat diagram. [Nov/Dec'06,May/June'13, May/June'14, May/June'15]
4. Explain the different types of control charts available for solving. Enumerate on the different patterns commonly noticed in control charts.[ May/June'09]

1. Discuss the QFD process with new chart and flow diagram. [Nov/Dec'08]
2. Explain briefly the QFD process. [Nov/Dec'07]
3. What are the six major loss areas that are measured, tracked and measured in TPM program? Indicate the method of measuring any two of these major losses. [Nov/Dec'07]
4. Explain QFD with a suitable example. What are its advantages and limitations? [May/June'12,Nov/Dec'12,Nov/Dec'13May'June'15]
5. Write a short note on TPM [May/June'05]
6. Explain the process capability studies by control chart method. [Nov/Dec'10]

### **UNIT V - Quality Systems**

#### **Part-A**

1. What is the need for ISO 9000? [Nov/Dec'08]
2. What are the objectives of ISO 9000? [May/June'14]
3. Give the ISO 9000 Series of Standards? [Nov/Dec'09]
4. Draw the model of process based quality management system given in ISO 9001:2000. [Nov/Dec'08]
5. What is the equivalent Indian standard for ISO: 8402? [May/June'05 ]
6. Define Quality Audits? [May/June'05 ]
7. What is the third party audit? [Nov/Dec'10]
8. Explain about NCR[Nov/Dec'08]
9. Mention any two organizational benefits of QS 9000. [Nov/Dec'08]
10. Differentiate between TS 16949 and ISO 14001 standards. [Nov/Dec'07]
11. List down the main elements of ISO -14000. [May/June'12]
12. What are the concepts of ISO 14000? [Nov/Dec'06]
13. What is meant by environmental policy? [May/June'09]
14. List out the various product evaluation standards of ISO 14000? [Nov/Dec'10]
15. What is need for documentation? [Nov/Dec'11]
16. Explain the need for the quality systems in an origination [Nov/Dec'08]
17. What are the elements of a quality system? [May/June'12]
18. State the benefits of documentation. [Nov/Dec'11]
19. Name the ISO 9000 series. [Nov/Dec'09]
20. Mention any two organizational benefits of QS 9000. [Nov/Dec'08]

### **Part – B**

1. Discuss various elements of ISO 9000:2000 quality system [Nov/Dec'12, Nov/Dec'13, Nov/Dec'14]
2. Explain the steps followed to get ISO 9000 certification for an educational institute. [May/June'05]
3. Explain the steps to be followed in implementing quality system ISO 9001:2000[May/June'06, Nov/Dec'08]
4. Define quality system and explain the evaluation of ISO 9000[May/June'05]
5. Explain in detail about the quality system auditing with its different types Nov/Dec'08]
6. Explain the documentation process in ISO 9000:2000 system [Nov/Dec'08]
  
7. Discuss the implementation of TQM with a case study from the manufacturing industry [Nov/Dec'11]
8. Explain the concept of ISO 14001. [Nov/Dec'09]
9. What are the requirements of ISO 14000.explain them briefly. [Nov, Dec'13, Nov/Dec'14]
10. Explain the benefits of EMS. [Nov/Dec'11]
11. Discuss the benefits of ISO 9000 certification [May/June'13, May/June'15]
12. Explain the major clauses of QS 9000 standard [May/June'13]
13. Explain QMS auditing. [Nov/Dec'11, May/June'12, May/June '15]