



INDIAN INSTITUTE OF MATERIALS MANAGEMENT

June 2012

Post Graduate Diploma in Materials Management Paper 18.E Total Quality Management

Date: 16.06.2012
Time: 2.00 to 5.00 p.m

Max. Marks 100
Duration 3 hours

Instructions

1. The question paper is in three parts A, B & C.
 2. Part A is compulsory. Each question carries one mark. Total : 32 Marks
 3. In Part B, answer 3 questions out of 5. Each question carries 16 marks.Total : 48 Marks
 4. Part C is a case study with sub questions and it is compulsory. It carries 20 marks.
 5. Use of calculator is allowed wherever necessary.
 6. Graph sheets can be used wherever necessary.
-

PART - A

Q.1. State True or False

Marks: 08

- 1) Slogans demanding quality from everyone are likely to achieve everything.
- 2) CED is a true statistical technique.
- 3) Little 'q' is synonym with New Quality.
- 4) Concentrate on "Prevention of defects" rather than "detection of defects".
- 5) Quality issues permeate all aspects of business enterprise.
- 6) Control charts proposed by Walter Shewhart were refused by Deming.
- 7) 3.4ppm is synonyms with six sigma capability.
- 8) The OHSAS 18001 specification follows PDCA cycle.

Q.2. Fill in the blanks.

Marks: 08

1. Higher salaries motivates on ----- term basis where as taking pride in one's work motivates on ----- term basis.
2. The three components of Juran Trilogy are planning, ----- and improvement.
3. Tom Peters developed the concept of Management by ----- around.
4. The ability of a product or service is to meet ----- needs.
5. ----- finding means understanding the true state of quality.
6. The Cause and Effect diagram was introduced by ----- of Japan and it is also called as ----- diagram.
7. Statistical correlation analysis is used to interpret ----- diagram.
8. ----- is a technique to present data into different categories to explain abnormality of histograms.

Q.3. Expand the following.

Marks: 08

1. QIT , 2. PPM , 3. DFM , 4. PDSA
5. ZDDP , 6. PDPC , 7. QUEST , 8. GPNQA

Q.4. Match A and B

Marks: 08

A	B
1. Suppliers	a. Deming's disciple
2. H. F. Dodge	b. W.G. Ouchi
3. Fool proofing	c. Apple I-Pod
4. Quality without tears	d. Shigeo Shingo
5. CEDAC	e. Tables for accepting sampling
6. Bill Conway	f. Philip Crosby
7. Theory Z	g. Partners
8. Steve Jobs	h. Ryuji Fukuda

PART - B

Answer any 3 questions out of 5 questions from sl.no.5 to 9.

(16 x 3 = 48 marks)

Q.5. Discuss various customer service quality elements.

Q.6.a. Discuss seven management tools which helps in achieving TQM.

Q.6.b. Mention the basic steps of building the House of Quality.

Q.7.a. What are the benefits one can get from Quality Function Deployment?

Q.7.b. Explain various issues before starting a Benchmarking exercise.

Q. 8. Prove with various sampling techniques that entire population testing is costly and time consuming.

Q.9. Write short notes on any 4 from the following.

- Analyze all words in TQM.
- Quality in Services.
- Explain all letters in the word QUALITY.
- Factors to be considered when choosing suppliers.
- Check Sheets.

PART – C

Case Study

20 marks

MD Mr. Surya of Surya Automobiles wants to imbibe the culture of Total Quality Management in his organization. He deliberates the issue with his team and come to a conclusion to invite a consultant for helping them in their journey towards TQM. Mr. Rakesh has been given the reigns to take up the job. Mr. Rakesh being a hard core professional understands the requirements quickly and suggests the contributions of various TQM gurus to be implemented for stepping up TQM. Various TQM Gurus he has mentioned are Deming, Ishikawa, Pareto, Shingo and S.R. Udpa. Also he suggests some books and related topic covering TQM.

MD has asked the following questions to the Consultant for clarifying the suggestions given by the consultant towards implementation of TQM philosophy.

10. a. What is the main contribution of Deming and how can the same be implemented in Surya Automobiles to go towards TQM philosophy? 3 marks
- b. What is the main contribution of Ishikawa and how can the same be implemented in Surya Automobiles to go towards TQM philosophy? 3 marks
- c. What is the main contribution of Pareto and how can the same be implemented in Surya Automobiles to go towards TQM philosophy? 3 marks
- d. What is the main contribution of Shingo and how can the same be implemented in Surya Automobiles to go towards TQM philosophy? 3 marks
- e. What is the main contribution of S. R. Udpa and how can the same be implemented in Surya Automobiles to go towards TQM philosophy? 3 marks
- f. Mention the name of the author for the books titled "Quality Control Handbook 1951" and "The 7 Habits of Highly Effective People". 2 marks
- g. Discuss about Kaizen? 3 marks

ANSWER –KEY
INDIAN INSTITUTE OF MATERIALS MANAGEMENT
Post Graduate Diploma in Materials Management
Graduate Diploma in Materials Management

DEC - 2011

Paper – 18(e)
TOTAL QUALITY MANAGEMENT

Date: **XX. 12.2011**
Time: xx.xx xx to xx.xx xx

Max. Marks: **100**
Duration: **3 Hours**

Instructions:

7. The question paper is in three parts A, B & C.
8. Part A is compulsory. Each question carries one mark. Total : 32 Marks
9. In Part B, answer 3 questions out of 5. Each question carries 16 marks. Total : 48 Marks
10. Part C is a case study with sub questions and it is compulsory. It carries 20 marks.
11. Use of calculator is allowed wherever necessary.
12. Graph sheets can be used wherever necessary.

PART - A

Q.1. State True or False Marks: 08

- 9) Slogans demanding quality from everyone are likely to achieve everything. False.
Are not likely
- 10) CED is a true statistical technique. False. Not
- 11) Little 'q' is synonym with New Quality. False. It is with old quality.
- 12) Concentrate on "Prevention of defects" rather than "detection of defects". True
- 13) Quality issues permeate all aspects of business enterprise. True.
- 14) Control charts proposed by
- 15)
- 16) Walter Shewhart were refused by Deming. False. He advocated.
- 17) 3.4ppm is synonyms with six sigma capability. True.
- 18) The OHSAS 18001 specification follows PDCA cycle. False. It is PDC Review Cycle.

Q.2. Fill in the blanks. Marks: 08

8. Higher salaries motivates on short term basis where as taking pride in one's work motivates on long term basis.
9. The three components of Juran Trilogy are planning, control and improvement.
10. Tom Peters developed the concept of Management by wandering around.
11. The ability of a product or service is to meet customer needs.
12. Fact finding means understanding the true state of quality.
13. The Cause and Effect diagram was introduced by Kaoru Ishikawa of Japan and it is also called as Fish Bone diagram.
14. Statistical correlation analysis is used to interpret scatter diagram.

8. Stratification is a technique to present data into different categories to explain abnormality of histograms.

Q.3. Expand the following.

Marks: 08

1. QIT Quality Improvement Teams, 2. PPM Parts Per Million , 3. DFM Design for Manufacturing, 4. PDSA cycle Plan Do Study and Act cycle, 5. ZDDP Zero Defect Day Planning, 6. PDPC Process Decision Programme Chart , 7. QUEST Quality Excellence for Suppliers of Telecommunications, 8. GPNQA Golden Peacock National Quality Award

Q.4. Match A and B

Marks: 08

A	B
1. Suppliers	g. Partners
2. H. F. Dodge	e. Tables for accepting sampling
3. Fool proofing	d. Shigeo Shingo
4. Quality without tears	f. Philip Crosby
5. CEDAC	h. Ryuji Fukuda
6. Bill Conway	a. Deming's disciple
7. Theory Z	b. W.G. Ouchi
8. Steve Jobs	c. Apple I-Pod

PART - B

Answer any 3 questions out of 5 questions from sl.no.5 to 9.

Q.5. Discuss various customer service quality elements?. P107

Q.6.a. Discuss seven management tools which helps in achieving TQM. P139

Q.6.b. Mention the basic steps of building the House of Quality . p175

Q.7.a. What are the benefits one can get from Quality Function Deployment? P174

Q.7.b. Explain various issue before starting a Benchmarking exercise. P192

Q. 8. Prove with various sampling techniques that entire population testing is costly and time consuming. P209

Q.9. Write short notes on any 4 from the following.

a. Analyze all words in TQM. P9

b. Quality in Services. P37

c. Explain all letters in the word QUALITY. P76

d. Factors to be considered when choosing suppliers. P126

e. Check Sheets. P144

PART – C
Case Study

MD Mr. Surya of Surya Automobiles wants to imbibe the culture of Total Quality Management in his organization. He deliberates the issue with his team and come to a conclusion to invite a consultant for helping them in their journey towards TQM. Mr. Rakesh has been given the reigns to take up the job. Mr. Rakesh being a hard core professional understands the requirements quickly and suggests the contributions of various TQM gurus to be implemented for stepping up TQM. Various TQM Gurus he has mentioned are Deming, Ishikawa, Pareto, Shingo and S.R. Udpa. Also he suggests some books and related topic covering TQM.

MD has asked the following questions to the Consultant for clarifying the suggestions given by the consultant towards implementation of TQM philosophy.

10. a. What is the main contribution of Deming and how can the same be implemented in Surya Automobiles to go towards TQM philosophy? 3 marks

10.a. ans. PDCA Deming wheel , 14 points , Deadly disease and sins. P52 to56

10. b. What is the main contribution of Ishikawa and how can the same be implemented in Surya Automobiles to go towards TQM philosophy? 3 marks

10. b. ans. QCC , CWQC , Cause and effect diagram etc. p65/66

10. c. What is the main contribution of Pareto and how can the same be implemented in Surya Automobiles to go towards TQM philosophy? 3 marks

10.c. ans. 80:20 rule , Vital Few Trivial Many , ABC analysis p70/71

10. d. What is the main contribution of Shingo and how can the same be implemented in Surya Automobiles to go towards TQM philosophy? 3 marks

10.d. ans. Zero Quality Control , Poka-yoke p68/69

10. e. What is the main contribution of S. R. Udpa and how can the same be implemented in Surya Automobiles to go towards TQM philosophy? 3 marks

10. e. ans. QCFI , QCs p71

10. f. Mention the name of the author for the books titled “Quality Control Handbook 1951” and “The 7 Habits of Highly Effective People”. 2 marks

10.f. ans. Juran 1951 and Stephen R. Covey

10. g. Discuss about Kaizen? 3 marks

10.g. ans. Continuous improvement , Change for Good , Why-why analysis , 5W-1H analysis , TPM , Small Group Activities , QCs , CFT , Automation , Supplier Relations, JIT , Kanban , Pull strategy etc.
