

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
MBA – SEMESTER 3– • EXAMINATION – WINTER 2016

Subject Code: 2830008

Date: 02/01/2017

Subject Name: Quality Management (QM)

Time: 02:30 pm to 05:30 pm

Total Marks: 70

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

Q – 1 (A) Select the most appropriate answer for the following multiple choice questions:

6

- (1) Fishbone diagram was advocated by
 - a) Taguchi
 - b) Kaoru Ishikawa
 - c) Joseph Juran
 - d) Edward Deming
- (2) Kaizen in simple language means
 - a) Continuous improvement
 - b) Breakthrough improvement
 - c) Quality
 - d) All of the above
- (3) Breakthrough improvement is possible with
 - a) Innovation and Invention
 - b) Kaizen
 - c) Six Sigma
 - d) None of these
- (4) According to Deming, Quality problems are
 - a) Due to management
 - b) Due to machine
 - c) Due to material
 - d) Due to method
- (5) DMADV is the principle for implementing
 - a) ISO
 - b) Kaizen
 - c) TQM
 - d) Six-Sigma
- (6) From the following, which is not the quality improvement tool?
 - a) The Pareto Chart
 - b) Histogram
 - c) Leadership
 - d) Control charts

- Q – 1 (B)** Briefly explain the following terms: **4**
- 1) Check sheet as a quality improvement tool
 - 2) Pareto Chart
 - 3) Quality Assurance
 - 4) ISO series
- Q – 1 (C)** Briefly discuss various dimensions of service quality. **4**
- Q – 2 (A)** Rainbow pens are the manufacturer of ball point pens of a specific category. Workers in the production department are not satisfied with the behaviour and work of their supervisor. Worker approached the production manager and suggested him to follow Gemba Kaizen for the improvement of the work of the department. According to you, How can Gemba Kaizen practice in this case? **7**
- Q – 2 (B)** According to continuous improvement system, muda, muri and mura are three kinds of wastages. Discuss briefly. As a manager, how can you deal with these wastages? **7**
- OR**
- Q – 2 (B)** Cost is associated with quality. Discuss various costs associated with achieving good quality and poor quality. **7**
- Q – 3 (A)** What is the role of “Poka-yoke” concept in quality management of a monoblock pump manufacturing organization? Discuss with example. **7**
- Q – 3 (B)** Discuss various core concepts of TQM. **7**
- OR**
- Q – 3 (A)** Depict your understanding for DMAIC approach for implementing Six-Sigma. **7**
- Q – 3 (B)** A small service organization wants to go for ISO 9001:2015 certificate. If you will be hired by the company to perform this task, what may be your course of action? **7**
- Q – 4 (A)** What is the role of benchmarking in quality improvement? Discuss any two types of benchmarking with example. **7**
- Q – 4 (B)** Discuss various phases of implementation of Business Process Reengineering in projects. **7**
- OR**
- Q – 4 (A)** TQM and BPR are closely related with each other. Discuss similarities and differences between TQM and BPR. **7**
- Q – 4 (B)** What do you understand by non-conformities in quality audit? What are the most common non-conformities found in audit process? **7**

Q – 5 **CASE OF QUALITY AT ABC COMPANY** **14**

ABC company recently discovered that the costs due to shipment of defective items had risen to an alarming level. To correct the situation, they decided to implement a quality assurance program. Previously, all inspection was done by workers on their own work. Because of the lack of formal education in quality assurance for the present employees and managers, it was decided to form a team of recent college graduates for quality assurance programs (QAP).

The team which was formed was given the responsibility of reducing the percentage of defective items being produced to half of the present level in one month.

Problems, however, began to crop up immediately. Conflicts arose between the inspectors of the QAP and the workers. Some of the older employees felt they

were being insulted whenever a quality problem was traced to their work. This resentment often resulted in their work deteriorating further instead of improving. Other workers believed they were being insulted whenever a quality problem was traced to their work. This resentment often resulted in their work being wrongly accused of shoddy workmanship. Some even accused the inspectors of actually making defects in their work so that they could claim they had found a problem spot (defect) and hence, look good in the eyes of the QAP manager.

Monitoring reports after the first month showed that the quality level had actually worsened. Management felt that perhaps they had introduced the quality assurance program improperly.

Summarize the case and answer the following Questions:

(a) What errors do you feel the ABC company made in the implementation of QAP?

(b) What remedial actions would you take to improve the present situation?

OR

Q – 5

ADVANCED LASER TECHNOLOGY INC.

14

Preeti and her husband have a small, highly successful firm that serves a narrow niche of medical applications of laser technologies. The firm has only four customers, but each is a leading player in the emerging medical-electronics technology markets. Each firm has told Preeti that it is pleased with her product, service and ability to provide leading edge technology.

Preeti's problem begins in the form of a memo from one of her major customers who has just decided to seek ISO 9000 certification to effectively compete international markets. Preeti understands this logic of her customer. As part of the ISO 9000 certification process, the customer expects each of his key suppliers to become ISO 9000 certified. What little Preeti knows about ISO 9000 certification is that this new requirement would pose enormous problems for Advances Laser Technology which has only five employees including Preeti and her engineer husband. How will Advance Laser Technology INC., be able to document all that it did. It seems to be a catch 22 situation. If Preeti and her husband divert their attention to document all the 20 aspects of section 4 of ISO 9000, then the firm risks losing its competitive edge in this fast changing technological field. If LAT hires a consultant to help with this certification process, it risks diverting both management attention and critical cash resources to the certification process. As she reflects on this dilemma, Preeti wonders "How does this add value to ALT?"

Summarize the case and answer the following Questions:

1. What would you recommend to Preeti?

2. According to you, what is the role of customer in ISO 9000 series?
