INDIAN INSTITUTE OF MATERIALS MANAGEMENT
Post Graduate Diploma in Materials Management

Paper – 18.e
TOTAL QUALITY MANAGEMENT

Date: 15.12.2009   Max Marks: 100
Time: 2.00pm to 5.00pm   Duration: 3 hours

Instructions:

1. The question paper is in three parts.
2. Part A is compulsory. Each question carries one mark
3. In part B answers 3 questions out of 5. Each question carries 16 marks.
4. Part C is a case study with sub questions and it is compulsory.

PART A

Q.1. State true or false.   **Marks: 08**

a) Total Quality Management is an enhancement to the traditional way of doing business.
b) Training is essential for effective team.
c) Concurrent engineering is an organizational tool that facilities disintegration.
d) TQM efforts starts at the top management.
e) ISO was founded in 1965 in Geneva.
f) The quality policy is a guide for every one in the Organization.
g) Scatter diagram used to evaluate quality of product.
h) Quality and reliability are not depending on each other.

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

a) Maslow developed first popular --------- theory.
b)Satisfaction of customer is nothing but--------
c) Performance involves fitness for-------.
d)----------- diagrams are constructed in a brainstorming type of atmosphere. –
e) Total quality cost index = ---------------/ direct labour cost
f) Poka meaning inadvertent ---------- and Yokeru meaning to prevent.
g) One of the basic concept of the ------------philosophy is continuous improvement.
h) The ability of a sampling plan to discriminate is described by its --------------curve.

Q.3   Expand the following: **Marks: 08.**

a) ISO
b) LCA
c) EMS
d) CQWC
e) SQC
f) QFD
g) JIT
h) CII

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Q.4   Match A and B   **Marks:08**

A	**B**
1) Fitness for use	Human discretion
2) Poka Yoka	Quality
3) ISO 9000	Quality Center
4) APQC	Series of Standard
5) Cause and Effect Diagram	Relation between quantity data
6) Scatter diagram	Brain Storming
7) JURAN	Analytical Technique
8) FMEA	Quality improvement Process

PART B

Q.5   What is Jurans quality trilogy? How do you compare and contrast Juran's approach
with W.Edwards Demings approach to total quality?   **Marks: 16**

Q.6   a) What is total quality? What is TQC?   **Marks: 08**
b) Describe the organization structure for TQM implementation.   **Marks: 08**

Q.7   a) What is supply chain management? Explain the process   **Marks: 08**
b) What is JIT purchasing?   **Marks: 08**
Q.8   a) What is the important of TQM implementation in Indian organization?
Marks: 08
b) What is ISO 9000 and what are the benefits?   **Marks: 08**

Q.9   Write short notes.   **Marks: 4 x 4 =16**

1) Scatter Diagram

2) Pareto Analysis

3) Customer Satisfaction

4) Quality is fitness to use

CARCOM: THE TQM INITIATIVE

'Carcom' is a supplier of automotive safety components employing around 700 staff which is located on two sites in Northern Ireland. The company was originally American owned but after a joint venture with Japanese partner in the late 1980s, it was eventually bought out by the latter.

The quality initiative began in 1988-89 with a five-year plan based on the Kaizen philosophy, this concept having been picked up from the Japanese partner. This was driven by senior management in response to what they saw as increasing customer demand and operating considerations. The achievement of ISO 9001 registration in 1990 brought together processes carried out by departments which had previously been undertaken in isolation. The company is now focusing on Kaizen with the principles of improvement, customer delight, systems focus and participation. A range of quality management tools and techniques are used. A TQM steering committee is responsible for overall direction but there is also a further steering committee to oversee implementation of the Quality Improvement Teams (QITs) as well as a full time coordinator. There are teams of shop floor operators based on natural workgroups, and these tend to focus on product problems and environmental issues (such as working conditions). In contrast, Kaizen teams focus on process improvements (for example, die change) and problem-solving workgroups are established in response to specific customer concerns (for example, warranty claims).Senior managers stress that a long-term approach is now being taken which is in contrast to some of the programmers in the early 1980s. These former piecemeal initiatives included quality circles which had been characterized by considerable changes in personnel , with a number of champions having moved on leaving behind a flagging initiative in contrast, the company is now taking time to get the processes right and providing a central focus through quality for change. Cultural change is the aim but it is recognized that only incremental progress can be achieved and that a supportive attitude is required from management Thus, QIT members are given extensive training and are encouraged to tackle problems which give early success and build teamwork, rather than put pressure on teams to deliver immediately on big issues.

The Impact of the TQM Initiative: While it is still early days, the initiative is already felt to have had a major impact. The management structure has been reduced by one layer, shop floor layout has been improved, and scrap rates, stock, work-in-progress and inspection times have been reduced, so too have the numbers of inspectors, whose role is now seen as one of analysts. Employee response to these changes has generally been positive, and the company has spent considerable effort in relating 'quality' directly to employees' work, particularly through the use of measures which are displayed adjacent to the workstation and maintained by staff themselves. The unions were assured that there would not be job losses as a result of Kaizen, although they continue to have concerns about this and also raise the issue of payment for changes in job roles - particulate in relation to SpC. The company has adopted an open information policy to foster greater trust at the workplace, and business-related issues are given greater prominence at the joint works committee meetings. Management also believe that the quality initiative has led to a reduction in union influences although this was not an original objective.

The Strategic Nature of the Human Resource Function: The human resource function has emerged from welfare to a more strategic role in recent years. This has been assisted by an MD who is regarded as a 'people's person' claiming that 'you can't divorce people from quality,' and by the appointment of a personnel director to the boated together with a new industrial relations manager. This has broadened the role of human resources and enhanced its status The appointment of a training manager was significant, since under the previous regime little off-the-job training was conducted. Training budgets have actually increased in volume and monetary terms despite the company's recently recorded trading losses. Recruitment and selection are becoming more sophisticated as the company wish to identify team workers.

The links between human resources and quality were made explicitly by the MD : "We cannot separate HR from TQM, and without HR the QIP will not work effectively." In addition to the issues mentioned above, the function was also seen as being important in building the people aspect into the strategic quality planning process addressing the problem of absenteeism, and supporting line management by helping to change employee attitudes/organizational culture. In addition, the function has provided appropriate training programmers for quality, in which there has been considerable investment in time and resources, it has counseled the mentors to the QIT, and ensured that managers communicate with staff by providing advice on the best means of doing this. Quality principles are also being developed in relation to the human resource function, with specific targets being set (for example, for absenteeism) as well as more general aims (for example, on training).

Q.10   Marks: 4 x 5 = 20

(a) Analyze the links between TQM and HRM with reference both to this case study and more generally.

(b) What does the case study demonstrate about the contribution a personnel/HRM function can make to the development of TQM in an organization?

(c) How might the principles of TQM be applied to a personnel function?

(d) What general implications does TQM have for industrial relations?