

Plot No. 2, Knowledge Park-III, Greater Noida (U.P.)–201306

POST GRADUATE DIPLOMA IN MANAGEMENT (2020 -22)
MID TERM EXAMINATIONS (TERM -IV)
Academic Session- 2021-22

Subject Name : **Total Quality Management**
Sub. Code: **PGO-07**

Time: **01.30 hrs**
Max Marks: 20

Note:

- 1. Writing anything except Roll Number on question paper will be deemed as an act of indulging in unfair means and action shall be taken as per rules.**
- 2. All questions are compulsory in Section A, B & C. Section A carries 1 Case Study of 8 marks. Section B carries 3 questions of 2 marks each and Section C carries 2 questions of 3 marks each.**

SECTION – A

04+04 = 08 Marks

Q. 1: Case Study:

The Galvin Manufacturing Corporation later renamed Motorola, Inc, began operations on September 25, 1928, in a small section of a rented building at 847 Harrison Street in Chicago. At that time the company had five employees. Now in its sixty-second year, Motorola is ranked among America's 150 largest industrial corporations with close to 98,000 employees worldwide and sales approaching \$8 billion. In 1988, Motorola received one of the first Malcolm Baldrige National Quality Awards. No single article can address all the elements in Motorola's corporate quality system or explain in detail how to set up a quality system that will win the Baldrige Award. Instead, some of the elements of quality control of manufacturing operations within the semiconductor products sector will be examined. The secret to Motorola's success in quality control is a focused effort in three major areas-- material control, in process control and arid containment. Within each major area are several key items that should be addressed to achieve success.

Material Control, Motorola stresses to all vendors that percent AQL (acceptable quality losses) is unacceptable and that their defective units are measured in parts per million. Moreover, Motorola's goal is to reduce the number of its vendors by an average of about 50% each year. Only those vendors that meet its expectations for superior quality will be retained or added to its vendor base. Motorola has substantially improved as its vendors have improved their quality. Each vendor should indicate its Cpk performance (process capability index, which accounts for no centered process averages). Vendors should have an acceptable Cpk and a program to achieve a Cpk of 2. The vendor rating system measures vendors on the quality of product delivered and the timeliness of those deliveries. Vendors with higher ratings get more business and poor vendors are dropped. Most vendors now receive a monthly or quarterly rating of their performance. Special programs are provided to individual vendors as needed, including training for service vendors. For example, a seminar for a travel industry vendor demonstrated how the principles of Six-Sigma Quality could be applied to that business.

The best way to address material control is through a vendor certification program. Motorola's program consists of five phases: Agree on key parameter measurements and work on having supplies correlate with these measurements. Demonstrate consistency on key parameters. Once products correlate with measurements then Motorola will continue to inspect incoming products and review measurements for correlation for an indefinite period of time, depending on volume and

Plot No. 2, Knowledge Park-III, Greater Noida (U.P.)–201306

how long it takes to have confidence in the quality of incoming products. Institute Statistical Process Control (SPC) on critical processes to achieve preliminary certification. In this phase, agree to certain critical processes on which SPC is to be implemented. When review of SPC shows that the critical processes are under control, preliminary certification can be granted. Develop and approve a never-ending improvement plan and grant full certification. In this phase, the vendor is expected to develop and share its plan for ongoing process cost and yield improvements. Once this plan is approved, the vendor is granted full certification. Maintain an ongoing partnership. Review common goals on a quarterly basis. Long-term contracts and preferred vendor status are granted in this phase.

Motorola uses two tools to establish in-process controls-- SPC and process audits. During the last four years, more than \$170 million has been invested in training people and improving their skills. Virtually all U.S. personnel are being trained in quality. For example, from 1986 to 1988, more than 10,000 technical personnel were trained in SPC and design for manufacturing techniques More than 50,000 people are being trained in the concepts of Six Sigma (such as the use of SPC in all work, including no manufacturing tasks).

Questions:

(A) Discuss specific auditing tasks in operator and process control that could be beneficial to companies.

(B) Analyze the above case and describe how the philosophy of never-ending improvement is incorporated in the company.

SECTION – B

02×03 = 06 Marks

Q. 2: Mention the dimensions of quality and explain with suitable example.

Q. 3: Discuss the component of Manufacturing Quality and Service Quality.

Q. 4: Mention the components of Quality Management System (QMS).

SECTION – C

03×02 = 06 Marks

Q.5. Discuss the basic concept of Total Quality Management with example to support your answer.

Q. 6. Discuss the eight principles of quality management with suitable example.

Mapping of Questions with Course Learning Outcome

COs	Question Number(s)	Total Marks Allocated to the CO
CO1	2,3,4,6	09
CO2	1A, 5	7
CO3	1 B,	4
CO4		
CO5		

Note: Font: Times New Roman, Font size: 12.