



UTHM

Universiti Tun Hussein Onn Malaysia

UNIVERSITI TUN HUSSEIN ONN MALAYSIA

**FINAL EXAMINATION
SEMESTER I
SESSION 2013/2014**

COURSE NAME : TOTAL QUALITY MANAGEMENT
COURSE CODE : BPB 20803
PROGRAMME : 3 BPA
EXAMINATION DATE : DECEMBER 2013 / JANUARY 2014
DURATION : 3 HOURS
INSTRUCTION : A) COMPULSARY
B) ANSWER **THREE** QUESTIONS ONLY

THIS QUESTION PAPER CONSISTS OF **FOUR (4)** PAGES

SECTION A

Q1 Headquartered in Texas, ST Microelectronics (STM) ranks among the world's top manufacturers of semiconductor integrated circuits, supplying consumer-electronics, automotive, medical, telecommunications and computer equipment markets. The company's nine-step planning process also gathers complementary information on market and technology trends as well as competitor performance. At the operational level, continuous improvement goals are set to meet or exceed 'best in class' benchmarks. The corporate world wide standard system for example, benchmarks key processing parameters at 14 semiconductor manufacturing plants worldwide to establish best-known levels of industry performance in service, quality and manufacturing. The president himself devotes 30 to 35 weeks a year to visiting customers.

STM views its suppliers as seamless extensions of the company. It develops an annual 'Supplier Quality and Service Plan' which not only sets goals for suppliers, but also specifies how STM will review performance, share data and carry out other responsibilities in the relationship. A key tool is a five-year technology roadmap that is updated every six months. The roadmap effectively integrates anticipated customer requirements, STM's long-term innovation goals and expectations for suppliers. The supplier-management programme earned 'best in class' rating in an independent evaluation of performance in 19 benchmark areas. STM also initiated a programme to promote teaming and employee empowerment, resulting in the redesign of manufacturing work systems and jobs. The aim is to encourage and enable employees to take control of their work. Backed up by extensive training in teaming and problem-solving methods for manufacturing workers and supervisors as coaches, the programme was implemented rapidly and the transformation is complete at all manufacturing sites. Teams determine workflow, assignments, break and vacation so meet production schedules. They also set up and monitor their training and development plans as well as peer reviews that are factored into formal performance reviews and merit increases. Compensation systems are designed to reward cross-training and achievement of skill development objectives. At the same time, a variable incentive plan provides monthly bonuses to teams and individuals who meet production goals.

STM's performance measurement system is supported by state-of-the-art information and communication technology (ICT) network, which permits team-level analysis of progress toward operational targets and helps to ensure fact-based decision-making at all levels of the organizations. The company believes that setting demanding environmental standard helps it improve operational and financial performance. This is illustrated by nearly 20% decline in energy used to manufacture silicon wafers, helping the company meet its goal of continuous reduction.

- (a) Discuss the approach adopted by STM in implementing total quality throughout the organization. (20 marks)
- (b) Discuss the linking factors and the stakeholders involved in the Total Quality Management approach of STM. (20 marks)

SECTION B

- Q2** Benchmarking is a method in which most progressive organisations are interested. It is a practice that organisations have always carried out and it is similar to competitor analysis.
- (a) Identify the concept of benchmarking through its key elements. (5 marks)
 - (b) Explain the link between benchmarking and performance measurement. (5 marks)
 - (c) Discuss a strategy for integrating benchmarking into a Total Quality Management (TQM) approach. (10 marks)
- Q3** Measurement is considered to be at the heart of managing business processes, activities and tasks. In the context of TQM, the expression is ‘if you don’t measure you can’t improve’.
- (a) State the importance of measurement in the context of TQM. (2 marks)
 - (b) Explain the difference between measuring for results and measuring for process improvement. (8 marks)
 - (c) Discuss **FIVE (5)** places where measurement is conducted in quality. (10 marks)
- Q4** Quality management systems such as ISO 9000: 2000 series have been used to improve process management in various organizations. It utilizes an independent third party certification to a standard and the merits of such certification have contributed to continuous improvement in most companies.
- (a) Explain the basic philosophy behind the quality management systems such as ISO 9000: 2000 series. (5 marks)

- (b) Compare the following three models for total quality.
- (i) The Deming Prize in Japan
 - (ii) The Baldrige Award in the USA
 - (iii) The European excellence Award
- (6 marks)
- (c) Discuss the advantages of the environmental quality management system certification as in the ISO 14000 series.
- (9 marks)

Q5

Commitment of the top management is important to establish and drive performance improvement in organizations. Similarly, the employees' commitment is equally important to establish a good reputation for quality of products and services in any organizations.

- (a) Discuss the aspects of leadership that are keys to a successful total quality approach.
- (10 marks)
- (b) Discuss the methods through which the top management gains the commitment of staff to deliver quality services to consumer.
- (10 marks)

-END OF QUESTION-