



**UNIVERSITI KUALA LUMPUR**  
**MALAYSIAN INSTITUTE OF MARINE ENGINEERING TECHNOLOGY**

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**FINAL EXAMINATION**  
**JANUARY 2016 SEMESTER**

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**COURSE CODE** : LGB 20503  
**COURSE NAME** : QUALITY MANAGEMENT  
**PROGRAMME NAME** : BACHELOR DEGREE(BMO, BNASB, BMEE)  
(FOR MPU: PROGRAMME LEVEL)  
**DATE** : 24 MAY 2016  
**TIME** : 08.00 AM – 11.00 AM  
**DURATION** : 3 HOURS

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**INSTRUCTIONS TO CANDIDATES**

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1. Please CAREFULLY read the instructions given in the question paper.
2. This question paper has information printed on both sides of the paper.
3. This question paper consists of TWO (2) sections; Section A and Section B.
4. Answer ALL questions in Section A. For Section B, answer THREE (3) questions only.
5. Please write your answers on the answer booklet provided.
6. Answer all questions in English language ONLY.

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THERE ARE 5 PAGES OF QUESTIONS, INCLUDING THIS PAGE.

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**SECTION A (Total: 40 marks)****INSTRUCTION: Answer ALL questions.****Please use the answer booklet provided.****Question 1**

- (a) There are two meanings of quality with regards to income and costs. One of them "Quality" means those features of products which meet customer needs and thereby provide customer satisfaction. In this sense, the meaning of quality is oriented to income.

List four (4) of the benefits enable companies to achieve with higher quality based on product features that meet customer needs.

(6 marks)

- (b) To attain quality, it should begin by establishing the "vision" for the organization, along with policies and goals. Conversion of goals into results (making quality happen) is then done through managerial processes—sequences of activities that produce the intended results.

With the aid of a Juran's trilogy diagram, explain the quality managerial processes of

- i. Quality Planning,
- ii. Quality Control and
- iii. Quality Improvement.

(14 marks)

**Question 2**

- (a) Based on Juran trilogy, Quality control is one of the three basic managerial processes through which quality can be managed. Quality control takes place by the use of a generic feedback loop of a control system.

With the aid of a sketch of the generic feedback loop outline the basic concept of quality control processes.

(10 marks)

- (b) The first step in mobilizing for quality improvement is to establish the company's quality council (or similar name). The basic responsibility of this council is to launch, coordinate, and "institutionalize" annual quality improvement.

Identify the membership of the Quality Council and three (3) of the major common elements of the quality councils responsibilities.

(10 marks)

**SECTION B (Total: 60 marks)**

**INSTRUCTION: Answer only THREE questions.**

**Please use the answer booklet provided.**

**Question 3**

- (a) (1) **Quality improvement to increase income** may consist of such actions as example: Product development to create new features that provide greater customer satisfaction and hence may increase income; (2) **Quality improvement to reduce deficiencies** that create chronic waste may consist of such actions as example: Increase of the yield of factory processes. The end results in both cases are called "quality improvement." However, the processes used to secure these results are fundamentally different.

**Differentiate** the two (2) processes: (i) Quality Improvement to increase income and (ii) Quality improvement to reduce deficiencies that create chronic waste.

(12 marks)

- (b) A quality improvement project is a chronic problem scheduled for solution. Some projects are derived from the quality goals that are in the company business plan, but most projects are chosen through the nomination and selection process. Each project selected should be accompanied by a written **mission statement** that sets out the intended end result of the project.

**State four (4) of the purposes of Mission Statements.**

(8 marks)

**Question 4**

- (a) Many companies summarize cost of quality or quality costs into four categories: **Internal Failure Costs, External Failure Costs, Appraisal Costs and Prevention Cost**. Under this each main category, it could be further divided into numbers of subcategories costs.

**Differentiate these four (4) categories of cost qualities and provide one (1) example cost for each subcategory.**

(10 marks)

- (b) One of the objectives of conducting quality cost study is to quantify the size of the quality problem in language that will have an impact on upper management.

**Describe the sequences/steps in conducting quality cost study that applies to most organizations.**

(10 marks)

**Question 5**

- (a) The application of a system of processes within an organization, together with the identification and interactions of these processes, and their management to produce the desired outcome, can be referred to as the "process approach".

The model of a process-based quality management system of ISO 9001:2008 illustrates the process linkages presented in Clauses/ Sections 4 to 8.

With the aid of a **sketch** of the ISO 9001:2008 QMS process approach model, **identify** the key elements of this process approach.

(10 marks)

- (b) Benchmarking is an important ingredient in strategic planning and operational improvement. To remain competitive, long-range strategies require organizations to adapt continuously to the changing marketplace.

The 10-steps process for conducting a benchmarking investigation consists of the following five essential phases: **Planning, Analysis, Integration, Action and Maturity**.

**Outline the Planning and Analysis phases of benchmarking.**

(10 marks)

Question 6

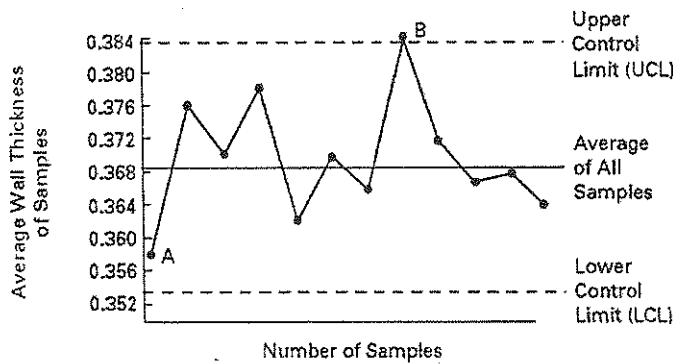
- (a) Total Quality Management can be defined as ‘an organized scientific approach towards continuous improvement of quality involving everyone in the organization covering every function aimed towards total customer satisfaction. The almost universally accepted goals of total quality are lower costs, higher revenues, delighted customers, and empowered employees.

Explain these goals of total quality management.

(12 marks)

- (b) Statistical Process Control is an analytical decision making tool which allows you to see when a process is working correctly and when it is not. Variation is present in any process, deciding when the variation is natural and when it needs correction is the key to quality control.

Examine the control chart as well the performance of the process as depicted in the diagram below.



(8 marks)

END OF EXAMINATION PAPER