



UNIVERSITI KUALA LUMPUR
MALAYSIAN INSTITUTE OF MARINE ENGINEERING TECHNOLOGY

FINAL EXAMINATION
SEPTEMBER 2016 SEMESTER

COURSE CODE : LGB 20503
COURSE NAME : QUALITY MANAGEMENT
PROGRAMME NAME : BACHELOR DEGREE(BMO, BNASB, BMEE)
(FOR MPU: PROGRAMME LEVEL)
DATE : 19 JANUARY 2017
TIME : 09.00 AM – 12.00 AM
DURATION : 3 HOURS

INSTRUCTIONS TO CANDIDATES

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.

THERE ARE 6 PAGES OF QUESTIONS, INCLUDING THIS PAGE.

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 freedom from deficiencies. In this sense, the meaning of quality is oriented to costs, and higher quality usually "costs less."

List four (4) of the benefits enable companies to achieve with higher quality that freedom from deficiencies.

(4 marks)

- (b) Quality principles have evolved over time. **Inspection** refers to those activities designed to detect or find nonconformance existing in already completed products and services. **Quality Control (QC)** goes beyond inspection.

State two (2) of the main activities (tenets) of a quality control system.

(4 marks)

- (c) Quality principles have evolved over time. Up until the advent of mass production, **artisans** completed individual products and inspected the quality of their own work or that of an apprentice before providing the product to the customer. If the customer experienced any dissatisfaction with the product, he or she dealt directly with the artisan.

Explain the quality principle of '**Inspection**' that has evolved after the **Artisan**.

(12 marks)

Question 2

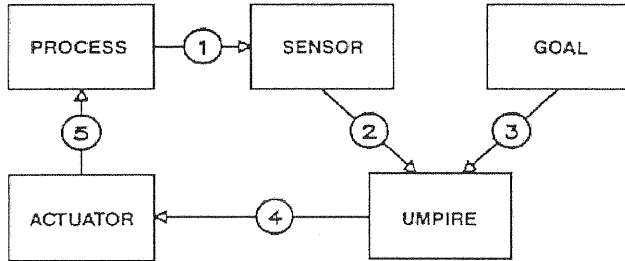
- (a) In the history of modern society, organizations have rather universally demonstrated a consistent failure to produce the goods and services that unerringly delight their customers. Quality planning provides the process, methods, tools, and techniques for closing each of the components of quality gaps and thereby ensuring that the final quality gap is at a minimum.

Determine at a high level the basic steps of quality planning.

(12 marks)

- (b) Quality control is one of the three basic quality managerial processes through which quality can be managed.

Describe Quality control that takes place by the use of the feedback loop as illustrated in figure below:



(8 marks)

SECTION B (Total: 60 marks)

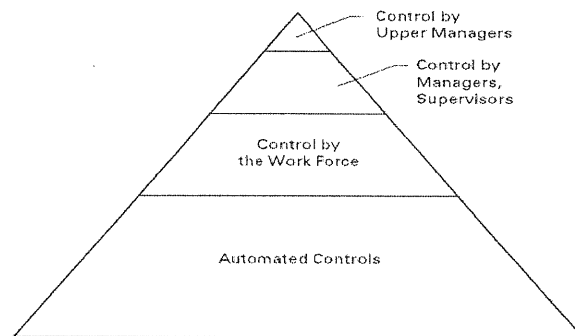
INSTRUCTION: Answer only THREE questions.

Please use the answer booklet provided.

Question 3

- (a) A study in one small company employing about 350 people found that there were over a billion things to be controlled. There is no possibility for upper managers to control huge numbers of control subjects. Instead, they divide up the work of control, using a plan of delegation somewhat as depicted in below figure.

Outline the division of work, responsibility and control established in a typical company as in the figure.



(12 marks)

- (b) Quality improvement is the third process of the Juran trilogy's quality managerial processes. The annual rate of quality improvement determines which companies emerge as quality leaders.

With the aid of a simple figure, **illustrate** a typical two contrasting rates of improvement of company A and company B and the impact on quality leadership.

(8 marks)

Question 4

- (a) As used here, "improvement" means "the organized creation of beneficial change; the attainment of unprecedented levels of performance." A synonym is "breakthrough." One of the basic concepts of quality improvement states that improvement distinguished from control.

With the aid of a Juran trilogy diagram **examine** how improvement differs from control.

(12 marks)

- (b) The lessons learned during the 1980s and 1990s include a major finding: Personal participation by upper managers is indispensable to getting a high rate of annual quality improvement. This finding suggests that advocates for quality initiatives should take positive steps to convince the upper managers of the merits of annual quality improvement.

Below table is '*Awareness: Proof of the Need*' as one of the means to convince the upper manager and to secure upper management approval and participation in annual quality improvement.

Illustrate the means in accordance to the depicted table.

TABLE 5.1 Suppliers to a Major Customer

Model number	1980	1981	1982	1983
1	G	G	R	R
2	R	R	R	R
3	G	G	G	R
4	T	R	R	R

(8 marks)

Question 5

- (a) 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.

(12 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.

Describe the objectives of benchmarking.

(8 marks)

Question 6

- (a) TQM means that the organization's culture is defined by and supports the constant attainment of customer satisfaction through an integrated system of tools, techniques, and training. This involves the continuous improvement of organizational processes, resulting in high quality products and services.

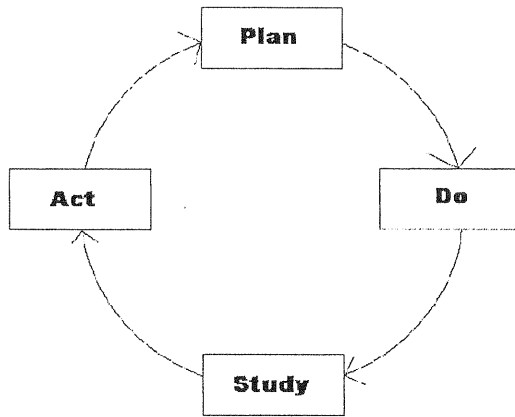
Explain the following fundamental concepts of quality management:

- i. Customer focus
- ii. Continuous improvement
- iii. Value of every associates

(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, which is important for process improvement. The key to any process improvement program is the PDSA cycle described by Walter Shewart as depicted in the figure below.

Describe the steps involved in the process improvement program based on the PDSA cycle below.



(8 marks)

END OF EXAMINATION PAPER