



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY
SCHOOL OF BUSINESS AND ECONOMICS
UNIVERSITY EXAMINATION FOR THE DEGREE OF BACHELOR OF BUSINESS
ADMINISTRATION AND EDUCATION ARTS
4TH YEAR 2ND SEMESTER 2024/2025 ACADEMIC YEAR
MAIN CAMPUS

COURSE CODE: BEB 1408

COURSE TITLE: TOTAL QUALITY MANAGEMENT

EXAM VENUE: LAB 3 & 4

EXAM DATE: 17/04/2025

EXAM SESSION: 9.00 – 11.00 AM

TIME: 2 HOURS

INSTRUCTIONS

- 1. Answer Question 1 (Compulsory) and ANY other two questions**
- 2. Candidates are advised not to write on the question paper**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room**

QUESTION ONE

- a) Jaramogi Oginga Odinga University of Science and Technology recently received its ISO 9001:2008 re-certification, coupled with the unveiling of ISO 9001:2015 Quality Management Systems Standard Certification. Explain the importance of this to the employees, clients and the management. (10 marks)
- b) Discuss five criticisms that has been levelled against Total Quality Management. (10 marks)
- c) Explain how an organization can use quality as an asset for excellence in a competitive Business environment (10 marks)

QUESTION TWO

- a) Critically discuss Deming's theory in relation to management decisions in a firm (10 marks)
- b) Employee commitment is an integral requirement in ensuring quality service delivery in an organization. How would you assist your organization gain the commitment of its employees to deliver quality services to its clientele? (10 marks)

QUESTION THREE

- a) A manufacturing company produces smartphones and is focused on minimizing the defect rate in the battery life of the devices. The target battery life is **12 hours**, but the actual battery life varies slightly due to production variation. The company measures the battery life of 100 randomly selected smartphones from each production batch and finds that the average battery life is **12.5 hours** with a standard deviation of **0.8 hours**. To assess the loss to society and the company based on variations from the target battery life, the company uses **Taguchi's Loss Function**.

NB: The company estimates the constant $K=100$ based on historical data

Task 1:

Using Taguchi's Loss Function, calculate the loss for the average battery life of the batch ($y=12.5$ hours). (5 marks)

Task 2:

Now, suppose the company wants to reduce the deviation from the target battery life to **0.1 hours** (i.e., improve the process to get closer to the target of 12 hours). Using Taguchi's Loss Function, calculate the reduction in loss compared to part **a**, and explain the significance of this reduction in terms of quality improvement. (10 marks)

- (b) Benchmarking is a reference or measurement standard against which to measure present performance. However, it has its drawbacks, discuss the drawbacks of benchmarking. (5 marks)

QUESTION FOUR

- a) Explain Five (5) basic ways in which an organization can demonstrate its ability in Quality Planning Processes. (10 marks)
- b) Discuss how a student of Business and Education would use Juran's Trilogy for process of improvement (10 marks)

QUESTION FIVE

- (a) Define the term cost of quality, then discuss preventive cost and its effect on an organization of the 21st century. (10 marks)
- (b) Is there one fit TQM model that Coca cola company and Delmonte company can apply to achieve quality in their organization? Justify your answer (10 marks)