



**MANICALAND STATE UNIVERSITY
OF
APPLIED SCIENCES**

**FACULTY OF ENGINEERING, APPLIED SCIENCES &
TECHNOLOGY**

DEPARTMENT OF APPLIED STATISTICS

MODULE: QUALITY MANAGEMENT SYSTEM

CODE: ASTA 226

SESSIONAL EXAMINATIONS

APRIL 2023

DURATION: 3 HOURS

EXAMINER: MR ZVAWANDA I

INSTRUCTIONS

- 1. Answer ALL questions from Section A*
- 2. Answer any **three** questions from Section B*

REQUIREMENTS

*Statistical tables;
Non-programmable scientific calculator*

SECTION A [40 MARKS]

Answer **All** Questions in this Section

A1.

- i) Define Statistical Process Control
- ii) Outline the major tools of Statistical Process Control

[2,8]

A2

- a) Distinguish the following terms
 - i. Quality control and Quality Assurance
 - ii. Quality statement and Quality policy

[5,5]

A3

Explain why the emphasis of an organization should be on Total Quality Management rather than just Product Quality.

[10]

A4

Explain the 'Six Sigma' concept as used in quality management.

[10]

SECTION B [60 MARKS]

*Answer any **THREE** questions in this section*

B5

‘There is no universally accepted definition of the term Quality’. Discuss.

[20]

B6

Discuss the different data analysis tools that are used in quality management and give examples of the areas in which each can be applied

[20]

B7

ISO 9001 is an example of a Quality Management System. By use of an example of an organization in Zimbabwe that is making use of this system, examine how such a system assists in the operations of the organization.

[20]

B8

Nissan is famously associated with 'Kaizen' or continuous quality improvement. Nissan states: 'We will not be restricted by the existing way of doing things. We will continuously seek improvements in all our actions.' Kaizen can be applied everywhere, any time, any place. It can involve the smallest change in everyday working practice as well as a major change in production technology. Typically these improvements are initiated by teams of employees sitting down together and sharing ideas for improvements. Small steady changes are maintained to make sure that they actually work. No improvement is too small. Everyone at Nissan is responsible for thinking about the current way of doing a job and finding a better

way of doing things. Highlight the benefits that the 'Kaizen' concept can bring for Nissan.

[20]

END OF QUESTION PAPER