



# TECHNICAL UNIVERSITY OF MOMBASA

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FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF PURE & APPLIED SCIENCES

UNIVERSITY EXAMINATION FOR:

DEGREE

ACH 4301 : QUALITY CONTROL, ASSURANCE AND WASTE

MANAGEMENT

SUPPLEMENTARY/SPECIAL EXAMINATION

**SERIES:** DECEMBER 2016

**TIME:** 2 HOURS

**DATE:** Pick Date Dec 2016

## Instructions to Candidates

You should have the following for this examination

-Answer Booklet, examination pass and student ID

This paper consists of **FIVE** questions. Answer question ONE (Compulsory) and any other TWO questions.

**Do not write on the question paper.**

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## Question ONE

(a). Define the following terms:

(i). Composting (2 marks)

(ii). Record (2 marks)

(iii). Hazardous household wastes (2 marks)

(b). Write the acronyms in full:

(i) ISO (1 mark)

(ii). RM (1 mark)

(ii). GLP (1 mark)

(c). (i). State the quality standards applicable for the following:

- I. Quality management systems and its requirements (1 marks)
- II. General requirements for the competence of testing and calibration laboratories (1 marks)
- III. The performance of a study that ensures the production of reliable results (1 marks)

(ii). State FIVE types of control samples used for quality assurance during internal laboratory control (5 marks)

(d). Outline the following:

- (i). THREE values of quality planning (3 marks)
- (ii). FOUR practical applications of Certified Reference Materials (4 marks)

(e). Explain the role of Good Manufacturing Practices in achieving reliable quality product (6 marks)

### **Question TWO**

- (a). State the FOUR uses of records in the laboratory (4 marks)
- (b). Compare and contrast collaborative study with proficiency testing schemes (8 marks)
- (c). Distinguish between internal quality control and external quality control (8 marks)

### **Question THREE**

- (a). Explain the meaning of special wastes (2 marks)
- (b). Discuss THREE sources of hazardous household wastes and give FOUR appropriate examples of each (18 marks)

### **Question FOUR**

- (a). Distinguish between the terms, 'certification' and 'accreditation' (8 marks)
- (b). State FOUR types of sampling (4 marks)
- (c). Outline the materials' information that must be provided to the procurement department by the quality department in order to ensure quality in the purchasing process (6 marks)
- (d). Define the term, 'sub-sample' (2 marks)

### **Question FIVE**

- (a). Explain the following:
  - (i). The shortcomings of a Shewhart chart (4 marks)
  - (ii). The advantages of the moving average chart (6 marks)

(b). Describe the following:

(i). Quality management system (QMS) (2 marks)

(ii). Quality control (QC) (2 marks)

(iii). Quality assurance (QA) (2 marks)

(c). State the FOUR most important parameters of control used to demonstrate the adequacy of the investigated method (4 marks)