



# TECHNICAL UNIVERSITY OF MOMBASA

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FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF PURE & APPLIED SCIENCES

**UNIVERSITY EXAMINATION FOR:**

DIPLOMA IN FOOD TECHNOLOGY AND QUALITY ASSURANCE

ACH2104: LABORATORY SAFETY AND MANAGEMENT PAPER 1

END OF SEMESTER 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. Attempt question ONE (Compulsory) and any other TWO questions.

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

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## Question ONE

- A Describe laboratory design in reference to;
- |                                 |         |
|---------------------------------|---------|
| i. Walls                        | 1 mark  |
| ii. Doors                       | 1/5mark |
| iii. Floor                      | 1mark   |
| iv. Security                    | 1/5mark |
| v. Windows                      | 1mark   |
| vi. Sinks                       | 1mark   |
| vii. chemical and waste storage | 1mark   |
- B Explain the role of computer in the laboratory. 6marks
- C State any Five (5) general laboratory rules 5marks
- D Explain any two hazards caused by the following in the laboratory
- |              |        |
|--------------|--------|
| i. autoclave | 2marks |
|--------------|--------|

- ii. batteries 2marks
- iii. centrifuge 2marks

- E Explain the application of Isotope in the laboratory 4marks
- F State the precaution to be taken when working with separating funnel 4marks
- G State the advantage of SOPs to the worker in the lab 2marks

**Question TWO**

- A Explain the First Aid procedure for chemical splash in the eye 2marks
- B Outline the key laboratory quality management processes. 2 1/5 marks
- C Define a stable Isotope 2marks
- D Explain how Mwachiro should avoid mechanical hazards in the laboratory 2marks
- E Outline how a scientific report is written 3 1/5marks
- F Explain why laboratory shelves should not be installed above sinks. 3marks

**Question THREE**

- A Describe the design of a laboratory bench top 4marks
- B Describe DRABCD in First Aid 11marks

**Question FOUR**

Describe any ten (10) laboratory glass ware 15marks

**Question FIVE**

- A Outline common laboratory keeping problems that need attention 11marks
- B State and explain the mechanical considerations when designing a laboratory 4marks