



# TECHNICAL UNIVERSITY OF MOMBASA

FACULTY OF APPLIED AND HEALTH SCIENCES

DEPARTMENT OF PURE & APPLIED SCIENCES

UNIVERSITY EXAMINATION FOR:

DIPLOMA IN ANALYTICAL CHEMISTRY

DAC 14S

ACH 2208 : LABORATORY PRACTICE II

END OF SEMESTER EXAMINATION

**SERIES: APRIL 2016**

**TIME: 2 HOURS**

**DATE:** Pick Date Select Month Pick Year

## 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.**

## Question ONE

- (a) Define the following term;
- (i) Inoculation (2marks)
  - (ii) Immunity . (3marks)
  - (iii) Antigen. (2marks)
  - (iv) Postmortem. (3marks).
  - (v) Radioactive trace. (3marks)
  - (vi) Artificial insemination. (2marks)
- (b) State (i) four forms of culture media. (4marks)
- (ii) Two types of isotope . (2marks)
- (c) List (i) Two types of specific response to antigen. (2marks)
- (ii) Three factors that influence immunity. (3marks)
- (iii) Two ways by which reaction to a pathogen can take place. (2marks)
- (d) Explain the work of each of the two types of specific response to antigen (6marks)

## Question TWO

- (a) Discuss briefly the following types of immunity.
- (i) Natural or innate immunity. (5marks)
  - (ii) Adaptive immunity. (5marks)
- (b) State five functions of a T-cell. (5marks)

## Question THREE

- (a) Discuss briefly
- (i) Autoimmunity (5marks)
  - (ii) Two benefits of postmortem. (4marks)
- (b) Give two reasons for using radioactive traces (4marks)
- (c) Differentiate between stable and unstable isotopes. (2marks)

## Question FOUR

- (a) Explain two types of inbreeding systems. (4marks)
- (b) List three radioactive detection devices that are used in radioactive trace. (3marks)
- (c) State (i) two advantages of Artificial insemination. (2marks)
- (ii) two disadvantages of Artificial insemination. (2marks)
- (d) State four reasons for removing a female from a herd. (4marks)

## Question FIVE

- (a) State two reasons why fractions of both heavier and lighter isotopes are important during isotopic reactions. (4marks)
- (b) Explain the use of stable isotopes in Terrestrial system. (5marks)
- (c) Explain the following types of animal breeding systems.
- (i) Pure breeding. (3marks)
  - (ii) Inbreeding. (3marks)