



Technical University of Mombasa

Faculty of Applied and Health Sciences

DEPARTMENT OF **PURE AND APPLIED SCIENCES**

DIPLOMA IN TECHNOLOGY IN INDUSTRIAL MICROBIOLOGY AND
BIOTECHNOLOGY
(DIMBT 11M)

AML 2202: IMMUNOLOGICAL TECHNIQUES

SPECIAL/SUPPLEMENTARY: EXAMINATIONS

SERIES: OCTOBER 2013

TIME: 2 HOURS

INSTRUCTIONS:

You should have the following for this paper

- *Answer booklet*

This paper consists of **FIVE** questions.

Answer Question **ONE (compulsory)** and any other **TWO** questions

This paper consists of 2 PRINTED pages

Question ONE

- a) Define the following terms
 - (i) Agar (2marks)
 - (ii) Molecules (2marks)
- b) Describe immunoassays citing examples (2marks)
- c) State TWO advantages of Radio Immuno Assay (2marks)
- d) State the general principles of immunochemical techniques (3marks)
- e) State factors influencing precipitation (4marks)
- f) Outline FIVE advantages of enzyme immunoassay methods (5marks)
- g) State TWO applications of Radial immunodiffusion (2marks)
- h) List THREE techniques for isolation and characterization of Antigens (3marks)
- i) Explain the principle of precipitation (5marks)

Question TWO

Discuss immunoelectrophoresis (15marks)

Question THREE

Discuss the application of Monoclonal Antibodies (15marks)

Question FOUR

Describe the following types of Enzyme Immuno Assay (EIA)

- (i) Competitive EIA for Antigen (5marks)
- (ii) “Immunoenzymometric” assay for Antigen (5marks)
- (iii) EIA for Antibody (5marks)

Question FIVE

- a) Briefly explain the difference between direct tag assays and indirect tag assays (7marks)
- b) Briefly explain the principle of immune complex formation (8marks)