



MASEHO UNIVERSITY
UNIVERSITY EXAMINATIONS 2013/2014

**THIRD YEAR FIRST SEMESTR EXAMINATIONS FOR THE
DEGREE OF BACHELOR OF SCIENCE IN BIOMEDICAL
SCIENCE AND TECHNOLOGY WITH INFORMATION
TECHNOLOGY
(MAIN CAMPUS)**

PMT 315: MEDICAL BACTERIOLOGY

Date: 18th November, 2013

Time: 11.00 a.m. - 1.00 p.m.

PMT 315: MEDICAL BACTERIOLOGY

Date: _____

Time: _____

INSTRUCTIONS:

SECTION A: Answer **ALL QUESTIONS** from this section (40 marks)

SECTION B: Answer **Question 11 Compulsory** and **ANY 1 QUESTIONS** from this section (30 marks)

SECTION A (40 MARKS). Answer ALL the questions in this section.

1. Explain why pathogens are limited to a single portal of entry during infection. (4 marks)

2. Describe the factors involved in bacterial adhesion during host infection. (4 marks)

3. Why do we interpret positive haemolysis in the complement fixation test to mean negative for the test substance? (4 marks)

4. Explain the general principles in specimen collection? (4 marks)

5. What is the basis of serology and serological testing? (4 marks)

6. Explain similarities between agglutination and precipitation reactions (4 marks)

7. Give a simple description of the structure of peptidoglycan (4 marks)

8. Describe the structure of an endospore and explain its functions (4 marks)

9. Explain the two principle functions of dyes in media for growing bacteria. (4 marks)

10. Give two ways of how bacteria undergo modification for survival. (4 marks)

SECTION B: Answer Question 11 Compulsory and ANY 1 QUESTIONS from this section (30 marks).

11. Discuss the steps you would follow to isolate; cultivate and identify a bacterial pathogen from urine sample. (15 marks)

12. Discuss the process of purified protein derivative (PPD) test. (15 marks)

13. Discuss how you would use serial dilution in enumeration of bacterial colonies. (15 marks)