

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

**THIRD YEAR EXAMINATION FOR THE AWARD OF DEGREE OF
BACHELOR OF SCIENCE IN BIOMEDICAL SCIENCE AND TECHNOLOGY**

BMET 334: MEDICAL BACTERIOLOGY AND MYCOLOGY

STREAMS: BSC (BMET)

TIME: 2 HOURS

DAY/DATE: MONDAY 03/12/2018

2.30 PM – 4.30 PM

INSTRUCTIONS:

- **Answer Question One and any Two Questions**
- **Do not write on the question paper**

QUESTION ONE (30 MARKS)

- (a) Discuss the use of the following methods in detection and identification of bacteria;
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|-------------------------------------|-----------|
| (i) Methyl red test | [3 marks] |
| (ii) Elek's test | [3 marks] |
| (iii) Ziehl Neelsen staining method | [3 marks] |
- (b) Aflatoxins are potent mycotoxins whose consumption causes illness to both humans and animals. Discuss pathological effect of aflatoxins on human health. [8 marks]
- (c) Give different types of media used to culture fungi and their purposes. [6 marks]
- (d) Describe the structure and chemical composition of Gram-negative cell wall bacteria. [7 marks]

QUESTION TWO (20 MARKS)

- (a) What are mycoses? [2 marks]
- (b) Discuss pathogenesis and virulence of Superficial Mycoses. [7 marks]

- (c) *Candida albicans* are responsible for more mycotic illness and cause great variety of mycoses than any other species of fungi.
- (i) List the diseases and clinical features associated with candidiasis. [5 marks]
- (ii) Explain how candidiasis can be diagnosed and treated. [6 marks]

QUESTION THREE (20 MARKS)

Discuss *Pseudomonas aeruginosa* under the following headings;

- (a) Isolation and identification [6 marks]
- (b) Virulence [6 marks]
- (c) Clinical significance [6 marks]
- (d) Treatment [2 marks]

QUESTION FOUR (20 MARKS)

- (a) List and describe all the disease conditions caused by *Clostridium* species. [12 marks]
- (b) Describe disease conditions caused by *Chlamydia trachomatis*. [8 marks]
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