

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

THIRD YEAR EXAMINATION FOR THE AWARD OF DEGREE  
OF BACHELOR OF SCIENCE (BIOMEDICAL SCIENCE)

BMED 331: BACTERIOLOGY & MYCOLOGY

STREAMS: BSC (BIOMED) Y3S1

TIME: 2 HOURS

DAY/DATE: WEDNESDAY 06/12/2017

11.30 A.M. – 1.30 P.M.

**INSTRUCTIONS:**

- ANSWER QUESTION ONE AND ANY OTHER 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
- (i) Specific serological test for syphilis [3 marks]
  - (ii) Elek's test [2 marks]
  - (iii) ZiehlNeelsen staining method [3 marks]
- (b) Ergot alkaloids and Aflatoxins are potent mycotoxins whose consumption causes illness to both humans and animals. Discuss their pathological effect on human health. [10 marks]
- (c) Give different types of media used to culture bacteria and their purposes. [6marks]
- (d) Using a suitable diagram, describe different bacteria flagella arrangements.[6 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) Discuss virulence factors associate with *Candida albicans*. [6 marks]

**QUESTION THREE**

Discuss *Staphylococcus aureus* under the following headings;

- (i) Staphylococcal skin infections [6 marks]
- (ii) Laboratory diagnosis [4 marks]
- (iii) Antimicrobial susceptibility [10 marks]

**QUESTION FOUR (20 MARKS)**

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