

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

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

BMED 332: APPLIED MICRIBIOLOGY

STREAMS: BMED Y3S1

TIME: 2 HOURS

DAY/DATE: THURSDAY 7/12/2017

11.30 A.M - 1.30 P.M.

INSTRUCTIONS:

- Answer ALL Questions in Section A and any TWO in Section B

SECTION A: ANSWER ALL QUESTIONS - [30 MARKS]

QUESTION ONE

- (a) Giving examples of each, describe five major groups of micrio-organisms. [5 Marks]
- (b) Briefly describe how bacteria obtain energy. [6 Marks]
- (c) Compare spontaneous generation theory and the Koch's postulates. [6 Marks]
- (d) *Escherichia coli* have a number of characteristics that make it a suitable faecal indicator. Discuss. [5 Marks]
- (e) Discuss three common water microbes. [6 Marks]
- (f) Discuss four methods through which bacterial may be cultivated invitro. [8 Marks]
- (g) Outline four types of microbial communities found in marine environments. [Marks]

SECTION B: ANSWER ANY TWO QUESTIONS

QUESTION TWO [20 MARKS]

- (a) Giving examples discuss three types of bacterial symbiotic relationships. [12 Marks]
- (b) Discuss mirco-organisms found in the soil flora and fauna. [8 Marks]

QUESTION THREE [20 MARKS]

- (a) Discuss microbial product-based inhibition as a method of food preservation. [10 Marks]
- (b) Giving procedures involve, discuss four types of fermented foods. [10 Marks]

QUESTION FOUR: [20 MARKS]

- (a) Biotechnology involves production of microbial products such as antibiotics. Discuss. [10 Marks]
- (b) List and describe factors affecting microbial growth in food. [10 Marks]

.....