

BOTA 131

CHUKA



UNIVERSITY

UNIVERSITY EXAMINATIONS

EXAMINATION FOR THE AWARD OF BACHELOR OF SCIENCE
& EDUCATION SCIENCE

BOTA 131: GENERAL MICROBIOLOGY

STREAMS: BOTA

TIME: 2 HOURS

DAY/DATE: MONDAY 20/04/2020

8.30 A.M – 10.30 A.M.

INSTRUCTIONS

- Answer All questions in Section A and any Two in Section B
- Do not write anything on the question paper
- Use illustrations where appropriate to enhance your answer.

SECTION A [30 MARKS]

1. (a) Define the following terms: [3 Marks]
 - i. Coenocytic hyphae
 - ii. Haustoria
 - iii. Plasmogamy
- (b) List any three advantages of dimorphism in fungi. [3 Marks]
2. Name and illustrate the main shapes of bacterial cells. [4 Marks]
3. Using diagrams, illustrate different morphological forms of viruses. [3 Marks]
4. (a) State four functions of the cell membrane and explain how these functions are essential to the growth and persistence of prokaryotes. [4 Marks]

(b) Explain the morphological features protozoa [3 Marks]

5. (a) Following the outbreak of corona virus, outline the concept of containment facility.

[3 Marks]

(b) Discuss any three factors affecting the microbial Growth. [3 Marks]

6. Outline any five distinguishing features between a prokaryotic and a eukaryotic cell.

[5 Marks]

SECTION B [40 MARKS]

7. (a) Discuss the moist heat method of microbial contamination control and state the underlying principles involved. [10 Marks]

(b) Describe five types of selective media used in the isolation of microorganism in the laboratory. [10 Marks]

8. Discuss the criteria used for classification of bacteria. [20 Marks]

9. (a) Using illustrations, describe five types of a sexual spores. [10 Marks]

(b) Discuss the economic importance of fungi with examples. [10 Marks]

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