

120



(Knowledge for Development)

KIBABII UNIVERSITY
UNIVERSITY EXAMINATIONS
2017/2018 ACADEMIC YEAR

FIRST YEAR 2ND SEMESTER
MAIN EXAMINATIONS

**FOR THE DEGREE OF BACHELOR OF SCIENCE IN BIOLOGY,
BACHELOR OF SCIENCE IN BIORESOURCE MANAGEMENT,
BACHELOR OF EDUCATION SCIENCE AND BACHELOR
AGRICULTURE EDUCATION AND EXTENSION**

COURSE CODE: SBT 122

COURSE TITLE: GENERAL MICROBIOLOGY

DATE: WEDNESDAY 8TH August, 2018.

TIME: 9:00 – 11:00 a.m.

INSTRUCTIONS TO CANDIDATES

Answer Question one (1) and any other two (2) Questions. Question one is compulsory and carries 30 marks, the other Questions carry 20 marks each.

TIME: 2 Hours

This paper consists of 2 printed pages. Please Turn Over



KIBU observes ZERO tolerance to examination cheating

1 a) Explain the contribution made by the following scientists to the current Microbiology.

(i) Antony Van Leeuwenhoek (1.5) marks)

(ii) Robert Koch (1.5marks)

b) Explain the three main shapes or forms of bacteria (3 marks)

c) Explain the mode of transmission and entry of microorganisms into the host (3marks)

d) Explain the procedure for Gram stain (3marks)

e) Explain the main types of viruses (3 marks)

f) Explain briefly the physical control of microorganisms (3marks).

g) Describe the bacterial fimbriae/pili (3 marks)

i) Explain with examples the sources of microorganisms (3 marks)

j) Describe the characteristics of virus (3 marks)

k) Explain the composition of sewage (3 marks)

2 (a) Describe nutritional classification of bacteria basing on, Energy source, Carbon source and both (10 Marks)

(b) With the aid of a labeled diagram describe the arrangement of bacterial flagella (10 marks)

3 With the aid the diagram, explain atypical bacterial growth curve (20 marks)

4 Explain the 4 of stages of virus multiplication/ reproduction (20 marks)

5 Explain the collection and handling of infectious laboratory specimen (20 marks)