



Knowledge for Development)

KIBABII UNIVERSITY

UNIVERSITY EXAMINATIONS 2016/2017 ACADEMIC YEAR

SECOND YEAR FIRST SEMESTER SPECIAL/SUPPLEMENTARY EXAMINATIONS

FOR THE DEGREE OF BACHELOR OF SCIENCE IN BIOLOGY

COURSE CODE: SBT 212:

COURSE TITLE: PRINCIPLES OF BACTERIOLOGY

DATE: 14/9/2017

TIME: 11:30 -1:30 P.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

QUESTION 1

- a) **Distinguish between**
- (i) Non-synthetic medium and Synthetic medium (2 marks)
 - (ii) Sterilization and Disinfection (2 marks)
 - (iii) Decontamination and Sanitization (2 marks)
- b) Describe the contribution of the following scientists to bacteriology
- (i) Baden-Baden (3 marks)
 - (ii) Lister Joseph (3 marks)
- c) Explain the principle of moist air sterilization in control of bacteria. (5 marks)
- d) Describe the function of the following architectural region in bacterial cell physiology.
- (i) Appendages (2 marks)
 - (ii) Cytoplasm (2 marks)
 - (iii) Cell membrane (2 marks)
- e. Describe the Koch's postulates of a pure culture. (5 marks)
- f. Explain the effect of oxygen to aerophobic bacteria (2 marks)

QUESTION 2

Using a diagram describe the polar flagella categorization of bacterial cell (20 marks)

QUESTION 3

Describe the classification of bacterial based on biochemical tests and cultural characteristics (20 marks)

QUESTION 4

Discuss gram stain microscopy as a method of bacterial identification. (20 marks)

QUESTION 5

Discuss the cell envelope proper as a structure of bacteria. (20 Marks)