



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2016/2017

SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE
ENVIRONMENTAL HEALTH AND BACHELOR OF SCIENCE POPULATION HEALTH

HEH 104: BASICS IN ENVIRONMENTAL MICROBIOLOGY

DATE: Monday, 8th May, 2017

TIME: 8.00 a.m. - 10.00 a.m.

INSTRUCTIONS:

SECTION A:

Answer **ALL** questions. [maximum - 20 marks]

SECTION A:

1. a) Give examples of members of the domain Archaea (3 marks)
b) Name three appendages found in prokaryotic cells and state the function of each (6 marks)
c) State and explain the steps in pathogenesis (5 marks)
d) State two functions of the cytoskeleton in eukaryotic cells (2 marks)
e) Distinguish between Mycoses and Mycotoxicoses and give a specific example of each (4 marks)

SECTION B:

Answer question **TWO (Compulsory)** and any other **TWO** questions.

2. a) Describe the classification of bacteria cells based on the cell wall shape. Provide specific examples. (12 marks)
b) Describe the four risk groups into which biological specimen used in the Laboratory may be categorized. (8 marks)
3. a) Describe the standard bacterial growth curve. (8 marks)
b) With use of relevant examples, explain the role of microbes in biotechnology, biodegradation and bioremediation. (7 marks)
4. a) Explain the lysogenic cycle in a named virus. (10 marks)
b) Explain the methods used to preserve cultures in the laboratory. (5 marks)
5. a) Describe the process for making a steak plate to obtain pure cultures. (7 marks)
b) Explain the types of culture media that may be constructed based on the principles of selection deferential and enrichment. (8 marks)