



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2010/2011

SECOND SEMESTER EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE IN FOODS,
NUTRITION AND DIETETICS

HFN 203: FOOD MICROBIOLOGY I

DATE: WEDNESDAY, 6TH APRIL 2011

TIME: 11.00 A.M. - 1.00 P.M.

INSTRUCTIONS:

Attempt All Question (70 Marks)

1. Short answer questions (5 marks)
 - a) In the Gram-staining procedure, the decolorizer is _____
 - b) After the primary stain has been added but before the decolorizer has been used, Gram-positive organisms are stained _____ and Gram-negative organisms are stained _____.
 - c) Prokaryotic cells use _____ for locomotion.
 - d) What was Anton van Leeuwenhoek's contribution to microbiology?

2. Define the following terms: (10 marks)
- a) Staphylococci (2 marks)
 - b) Pilli (2 marks)
 - c) Contaminant (2 marks)
 - d) Cytoplasm (2 marks)
 - e) Flagella (2 marks)
3. List the functions of five of the prokaryotic structures listed here: plasma membrane, ribosome, cell wall, capsule, flagella, and nucleoid material. (6 marks)
4. List factors that influence the growth of bacteria. (5 marks)
5. With the help of diagrams briefly explain asexual reproduction fungi. (6 marks)
6. (a) What is the difference between the lytic and lysogenic phage. (4 marks)
- (b) Describe with the aid of diagrams, the five steps involved in the lytic life cycle of bacteriophage. (10 marks)
7. Differentiate between anaerobic and aerobic bacteria giving two examples of each. (5 marks)
8. List two reasons why standard plate count of bacteria does not represent the actual number of bacteria in food. (4 marks)
9. Discuss the major characteristics used in identification and classification of bacteria. (15 marks)