



KENYATTA UNIVERSITY

UNIVERSITY EXAMINATIONS 2011/2012

INSTITUTIONAL BASED PROGRAMME (DECEMBER SESSION)

EXAMINATION FOR THE DEGREE OF BACHELOR OF SCIENCE

(ENVIRONMENTAL HEALTH)

HEH 104: INTRODUCTION TO ENVIRONMENTAL MICROBIOLOGY

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DATE: FRIDAY 4TH MAY 2012

TIME: 11.00 A.M. – 1.00 P.M.

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INSTRUCTIONS

SECTION A (20 MARKS)

Answer ALL questions in this section each question account to 4 marks

1. Describe the Structure of the bacterial cell: identify parts of the cell from a drawing, and the function each part. (4 marks)
2. List four major characteristics of viruses that distinguish them from other micro-organisms. (4 marks)
3. Explain dry and moist heat as a method of microbial control. (4 marks)
4. Define microbial biodegradation and outline the different types of micro-organisms used in microbial bio-degradation process. (4 marks)
5. Explain the differences between eukaryotic and prokaryotic cells. Give examples of each type. (4 marks)

SECTION B. (50 MARKS)

Question one is Compulsory (20 marks) and answer any other two questions.

(15 marks)

1. Discuss the sequence of events in the nitrogen cycle and list the names of microbes that play a key role in this cycle? (20 marks)
2. Explain the mutual interactions that exist between environmental micro-organisms . (15 marks)
3. Explain the bacterial growth curve and describe the activities in each phase. (15 marks)
4. Describe the basic steps involved in the replication of animal viruses. (15 marks)