

**W1-2-60-1-6**

## JOMO KENYATTA UNIVERSITY OF AGRICULTURE AND TECHNOLOGY

**UNIVERSITY EXAMINATIONS 2018/2019**

**YEAR 1 SEMESTER 1 EXAMINATIONS FOR THE DEGREE OF BACHELOR OF SCIENCE IN PUBLIC HEALTH**

**AFS 2201: MICROBIOLOGY I**

**DATE: AUGUST 2019 TIME: 2 HOURS**

**INSTRUCTIONS: ANSWER ALL QUESTIONS IN SECTION A AND ANY OTHER ONE QUESTION IN SECTION B:**

**SECTION A: 48 MARKS**

1) Describe the various beneficial uses of microbes (6 marks)

2) With the aid of a diagram explain:-

i) Woese-fox 3 domain system (3 marks)

ii) Traditional Whittaker 5 kingdom system (3 marks)

3) Describe the various contributions of the following scientists in microbiology:-

i) Lovis Pasteur (2 marks)

ii) Robert Koch (2 marks)

iii) Joseph Lister (2 marks)

4) With the aid of a diagram explain the uses of various parts of a compound microscope

(6 marks)

5) Describe the various stages of growth of a microorganisms (6 marks)

6) Describe the various factors that can be used in the identification of different types of bacteria

(6 marks)

7) Briefly explain the major groups of fungi (6 marks)

8) Explain:-

i) Physical agents used in the control of microorganism (3 marks)

ii) Chemical agents used in the control of microorganism (3 marks)

**SECTION B: (22 MARKS)**

9i) Discuss the physiological and biological properties of viruses (11 marks)

ii) Discuss the replication cycle of HIV virus (11 marks)

10i) Discuss the Epidemiology, diagnosis, control and treatment of important human mycoplasma infections (11 marks)

ii) Discuss the isolation and identification of yeast (11 marks)

11i) Discuss the various ways that one can use to determine the development of drug resistance in the laboratory (11 marks)

ii) Discuss the various habitats that microorganism grow (11 marks)