JARAMONG OGINGA ODINGA UNIVERSITY OF SCIENCE AN TECHNOLOGY

UNIVERSITY EXAMINATION CERTIFICATE IN COMMUNITY HEALTH AND DEVELOPMENT

SCHOOL OF HEALTH SCIENCES

1st YEAR 2nd SECOND SEMINISTER 2019 ACADEMIC YEAR

NAMBALE CAMPUS

COURSE CODE: HCD 1121

COURSE TITLE: BASIC MICROBIOLOGY

DATE: 12/08/19 **EXAM SESSION: 9.00 – 10.30AM**

TIME: 1 1/2 Hours

Instructions

1. Answer all questions in section A and any TWO in section B.

2. Candidates must hand in their booklets to invigilator while in the examination room.

SECTION A (30 MARKS)

1. Define the following
(5marks)

a) Chemotherapy

b) DNA

c) Mycoplasma

d) Pure culture

e) Species

2. Differentiate the following
(6marks)

a) Prokaryotic microorganism and Eukaryotic microorganism

b) Abiogenesis and Biogenesis

c) Cilia and Flagella

3.a) Explain various methods of isolating bacteria in pure culture (3marks)

b) Name three important commercial uses of Algae (3 marks)

c) Name types of microscopy
(5marks)

d) Give the functions of the following parts of the microscope (2marks)

i. Nosepiece

ii. Eyepiece

e) Name the steps taken in the process of pasteurization (3marks)

f) What is Tyndalization
(3marks)

SECTION B (40 MARKS)

1.a) Name and explain the lytic cycle stages of bacteriophage
(10marks)

b) Explain the functions of the following bacterial organelles
(10marks)

i. Nuclear material

ii. Cell membrane

iii. Ribosomes

iv. Mesosome

v. Pili

2.With the help of a diagram explain the typical bacterial growth curve phases (20marks)

3. Name and explain the environmental factors required for the successful cultivation of microorganisms
(20marks)

4.Write short notes any FIVE of the following (20marks)

a) Robert Koch's postulates

b) Fungi

c) The role of aquatic microorganisms

d) The process of Gram's stain

e) Viruses

f) Protozoa