



JARAMOGI OGINGA ODINGA UNIVERSITY OF SCIENCE AND TECHNOLOGY

SCHOOL OF HEALTH SCIENCES

**UNIVERSITY EXAMINATION FOR THE CERTIFICATE IN COMMUNITY
HEALTH AND DEVELOPMENT**

1ST YEAR 2ND SEMESTER 2022/2023 ACADEMIC YEAR

MAIN/KISUMU CAMPUS

COURSE CODE: HCD 1121

COURSE TITLE: BASIC MICROBIOLOGY

EXAM VENUE: STREAM: Cert. Comm. Health & Dev

DATE: 05/12/2022 EXAM SESSION: 9.00-10.30AM

TIME: 1.30 HOURS

Instructions:

- 1. Answer all the questions in Section A and 2 questions in Section B.**
- 2. Candidates are advised not to write on the question paper.**
- 3. Candidates must hand in their answer booklets to the invigilator while in the examination room.**

SECTION A

1. List the medical importance of bacteria. (3mks)
2. State 3 modes of disease transmission. (3mks)
3. List 3 classifications of mycosis. (3mks)
4. Differentiate between definitive host and intermediate host.(3mks)
5. Explain the economic importance of micro-organisms. (3mks)
6. Describe any 3 agents used in the control of bacteria. (3mks)
7. State 3 uses of sterilization. (3mks)
8. State types of microorganisms and giving examples in each case. (3mks)
9. Define the following terms: (3mks)
 - i. Pathogenicity
 - ii. Virulence
 - iii. Pathogen
10. Write short notes on;
 - i. Louis Pasteur
 - ii. Robert Koch
 - iii. Robert Hook

SECTION B

1. Explain the various modes of disease transmission. **(20mks)**
2. Briefly describe the differences between virus and bacteria. **(20mks)**
3. Describe the various microbes that are normally found on or within the human body and give their beneficial roles in the body. **(20mks)**

4. Sterilization is the process by which an article, surface, or medium is freed of all living microorganisms either in the vegetation or in the spore state. Vividly discuss the various methods of sterilization under:

a) Physical methods.

b) Chemical methods.

(20mks)

HCD 1121: BASIC MICROBIOLOGY 42 HRS

Course Purpose

The course unit is intended to provide the trainees with basic knowledge and understanding in micro-organisms of medical importance

Expected Learning Outcomes

At the end of the course unit, the trainee should be able to: -

- i. Explain the concept of microbiology and staining
- ii. Classify micro-organisms
- iii. Explain the relationship and adaptation between man and micro-organisms
- iv. Apply safety procedures used when dealing with micro-organisms in the field.
- v. Explain the economic importance of micro-organisms

Course Content

1. **Introduction:** Basic concept of microbiology; Stains and germ theory of disease.
2. **Classification of micro-organisms:** Bacteria; Viruses; Fungus.
3. **Infectious disease:** Bacterial; Viral; Fungal.
4. **Safety procedures:** Personal hygiene; Protective clothing and safety cabinets; Sterilization and disinfection.
5. **Economic importance of micro-organisms:** Food borne illness; Environment biodegradation; Industries; Biological control of pest and disease; Vaccine and antibiotic production.

Assessment and Examinations

Type weight

Continues Assessment Tests 40%

Examinations 60%