



MACHAKOS INSTITUTE OF TECHNOLOGY

MACHAKOS TOWN CAMPUS

SCHOOL OF HEALTH AND APPLIED SCIENCES

CERTIFICATE IN COMMUNITY HEALTH AND DEVELOPMENT

END OF SEMESTER EXAMINATIONS

Jan-April 2021

BASIC MICROBIOLOGY AND PARASITOLOGY

CCH 510

TIME: 2 HOURS

INSTRUCTIONS TO CANDIDATES

1. Answer **ALL** questions in **SECTION A** and **THREE** in **SECTION B**.
2. Any examination **IRREGULARITY** will lead to **DISQUALIFICATION**.
3. Indicate your **FULL ADMISSION NUMBER** in each Answer Sheet used.
4. **DOT NOT** write your **NAME** anywhere on the answer booklet.
5. Cell phones are **NOT** allowed in the examination room.
6. Ensure you have both **SCHOOL ID CARD** and examination card in the examination room.
7. Scientific calculators may be used where appropriate.

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SECTION A (40 MARKS)

1. Define the following microbiological terms:
 - a) Mycology (1mk)
 - b) Parasite (1mk)
 - c) Mesophilic (1mk)
 - d) Microscope (1mk)
 - e) Eukaryote (1mk)
2. State the five classes of microorganisms (5mks)
3. Highlight any five fields of microbiology (5mks)
4. Explain any four causes of food spoilage (8mks)
5. Draw and label a prokaryotic cell (5mks)
6. Give five sterilization methods (5mks)
7. State the order of classification used in Binomial nomenclature (7mks)

SECTION B (60 Marks)

8. (a) Draw and label the microbial growth curve outlining all the phases (10mks)
(b) Explain the growth of microorganisms (10mks)
9. (a) Explain any FIVE factors affecting growth of micro-organisms (10mks)
(b) Name the seven taxonomic units to which organisms are classified (10mks)
10. a. Draw a well labeled diagram of a eukaryotic cell (10mks)
b. Explain the functions of the organelles in a eukaryotic cell. (10mks)
11. (a). Explain any five significance of microorganisms to humans (10mks)
(b) Discuss how parasites can be prevented and eliminated (10mks)
12. (a) Explain the intrinsic parameters of food that affect microbial growth (10mks)
(b). Explain the classification of bacteria based on shape (10mks)