



# **MURANG'A UNIVERSITY OF TECHNOLOGY**

## **SCHOOL OF PURE APPLIED AND HEALTH SCIENCES**

DEPARTMENT OF MEDICAL LABORATORY SCIENCES

UNIVERSITY ORDINARY EXAMINATION

2021/2022 ACADEMIC YEAR

**THIRD YEAR FIRST SEMESTER EXAMINATION FOR BACHELOR OF SCIENCE  
IN MEDICAL LABORATORY**

**MML312: BACTERIOLOGY**

**DURATION: 2 HOURS**

### **INSTRUCTIONS TO CANDIDATES:**

1. Answer question one and any other two questions
2. Mobile phones are not allowed in the examination room.
3. You are not allowed to write on this examination question paper.

**QUESTION ONE (30 MARKS)**

- a) Outline properties that bacteria must possess in order to be successful pathogens. 5 mks)
- b) Briefly describe characteristics observed in identification of bacteria. (5mks)
- c) i) State the etiologic agents and tuberculosis. (1 mk)  
ii) Differentiate between TB infection and TB disease. (2 mks)  
iii) Briefly describe laboratory diagnostic approach to TB disease in humans. (2 mks)
- d) i) Briefly describe how 5 pneumonia infections can be differentiated from other streptococcal infection. (3 mks)  
ii) Outline a general overview of diagnostic methods *S. Pneumonia* infections. (2 mks)
- e) Briefly describe *E coli* complications of infection. (5 mks)
- f) Briefly describe *N meningitidis* and outline the Pathogenesis, diagnosis and treatment of infections arising from this bacterium. (5 mks)

**QUESTION TWO (20 MARKS)**

- a) Outline the infection stages of syphilis. (10 mks)
- b) Describe the bacterial diagnostic techniques of syphilis infection. (10 mks)

**QUESTION THREE (20 MARKS)**

- a) Describe the collection and processing of stool specimen. (10 mks)
- b) i) Describe three common investigative test done in a microbiology laboratory (6 mks)  
ii) Mention 4 enteric pathogens that may be found in a stool sample (4 mks)

**QUESTION FOUR (20 MARKS)**

- a) Discuss the control of bacterial infections. (20 mks)