



**UNIVERSITY OF JAFFNA, SRI LANKA**  
**FACULTY OF ALLIED HEALTH SCIENCES**  
**SECOND YEAR FIRST SEMESTER EXAMINATION IN**  
**BACHELOR OF SCIENCE (HONS) IN MEDICAL LABORATORY SCIENCES- 2019**  
**MLSMM 2136 MEDICAL MICROBIOLOGY**

**PAPER II**

**Date: 19.11.2021**

**Time: 2 hours**

1.
  - 1.1 Explain the underlying principles of each biochemical test mentioned below and give two bacteria which give positive reaction for them.
    - 1.1.1 Oxidase test (30 Marks)
    - 1.1.2 Indole test (30 Marks)
  - 1.2 Differential medium used in a microbiology laboratory. (40 Marks)
  
2. State the causative agent and describe the microbiological diagnosis and prevention of the following diseases
  - 2.1 Tuberculosis (50 Marks)
  - 2.2 Syphilis (50 Marks)
  
3.
  - 3.1 List the virulence factors of *Streptococcus pyogenes*. (20 Marks)
  - 3.2 Briefly describe the clinical sequelae of post *Streptococcus pyogenes* infection (50 Marks)
  - 3.3 Describe the laboratory test used to differentiate the *Staphylococcus aureus* from *Staphylococcus epidermidis* (30 Marks)
  
4. Briefly describe the laboratory diagnosis and prevention of the following infectious diseases
  - 4.1 Cholera (50 Marks)
  - 4.2 Scrub typhus (50 Marks)

5.

5.1 Explain the principle used in moist heat sterilization method. (30 Marks)

5.2 Briefly describe the sterilization method used in the preparation of culture media. (40 Marks)

5.3 Write briefly on chemical disinfectants. (30 Marks)

6.

6.1 Describe the structure of a bacterial cell. (60 Marks)

6.2 Compare and contrast the cell wall of gram positive and gram negative bacteria. (40 Marks)

7.

7.1 Name two gram negative cocci. (20 Marks)

7.2 Name the diseases caused by each bacteria you mentioned in 7.1. (20 Marks)

7.3 State two specimens used to diagnose each infection mentioned in 7.2. (20 Marks)

7.4 Enumerate the prevention and control of *Campylobacter jejuni* infection. (40 Marks)

8.

8.1. Briefly describe two different disc diffusion methods of antibiotic susceptibility test (ABST) used in a microbiology laboratory. (70 Marks)

8.2 Briefly write on Minimum Inhibitory Concentration (MIC). (30 Marks)