



UNIVERSITY OF JAFFNA, SRI LANKA
FACULTY OF ALLIED HEALTH SCIENCES
SECOND YEAR FIRST SEMESTER EXAMINATION IN BScHons (MLS)-2021
MLSMM 2136 MEDICAL MICROBIOLOGY

PAPER II

Time: 2 hours

Date: 01.03.2023

1. (30 Marks)
 - 1.1 List the clinical manifestations caused by *Streptococcus pyogenes* (20 Marks)
 - 1.2 List five (05) virulence factors of *Staphylococcus aureus* (20 Marks)
 - 1.3 Differentiate the bacteria mentioned in 1.1 and 1.2 based on the microscopic appearance (20 Marks)
 - 1.4 Briefly describe Tube coagulase test (30 Marks)

2. (25 Marks)
 - 2.1 Explain the underlying principle of each biochemical test mentioned below and give two bacteria that give positive for it. (25 Marks)
 - 2.1.1 Indole test (25 Marks)
 - 2.1.2 Urease test (25 Marks)
 - 2.1.3 Methyl red test (MR test) (25 Marks)
 - 2.2 Name four culture media used in the routine clinical microbiology laboratory and briefly describe their uses (25 Marks)

3. (10 Marks)
 - 3.1 Name two gram negative cocci which cause human infections (30 Marks)
 - 3.2 List the infections caused by the bacteria mentioned in 3.1 (30 Marks)
 - 3.3 List the laboratory methods used to identify the bacteria mentioned in 3.1. (30 Marks)
 - 3.4 Name three gram positive bacilli and mention the diseases caused by each of them (30 Marks)



4. Write short notes on,

4.1 Disc diffusion method

(50 Marks)

4.2 Treponema Pallidum Particle Agglutination Test (TPPA)

(50 Marks)

5. Briefly describe the clinical manifestations, mode of transmission and laboratory identification of the following bacteria

5.1 *Pseudomonas aeruginosa*

(50 Marks)

5.2 *Mycobacterium tuberculosis*

(50 Marks)

6.

6.1 List the infections caused by *Salmonella typhi*

(20 Marks)

6.2 Briefly describe the infections mentioned in 6.1

(40 Marks)

6.3 Briefly describe the laboratory tests used to identify *Salmonella typhi*

(40 Marks)

7.

7.1 Describe five virulent factors in a bacterium which facilitate the pathogenesis

(50 Marks)

7.2 List the differences between the cell wall of gram positive and gram negative bacteria

(50 Marks)

8.

8.1 Define sterilization

(10 Marks)

8.2 List the types of heat sterilization methods and describe each method

(60 Marks)

8.3 Briefly describe the uses of autoclaving in a microbiology laboratory

(30 Marks)