UNIVERSITY OF JAFFNA, SRI LANKA

BACHELOR OF SCIENCE IN MEDICAL LABORATORY SCIENCES

FOURTH YEAR FIRST SEMESTER EXAMINATION –SEPTEMBER 2018

MLSCM 4125 CLINICAL MICROBIOLOGY

Date: 21.09.2018 **Time: 3 hours**

ANSWER ALL SIX QUESTIONS.

1. A pus sample of a 63 year old man is received for Microbiological diagnosis.

1.1 Name two primary pathogens which can be isolated from this specimen. (10 marks)

1.2 Name five other possible pathogens that can be isolated from the above specimen. (10 marks)

1.3 Briefly describe how to process the above sample in a clinical microbiology laboratory. (30 marks)

1.4 Describe how you would identify the bacteria you mentioned in 1.1 in a clinical microbiology laboratory. (50 marks)

2.

2.1 Give the principle of disc diffusion methods used in antibiotic susceptibility test. (20 marks)

2.2 Describe how to perform Kirby- Bauer (CLSI) method used in antibiotic susceptibility test. (40 marks)

2.3 Write on minimum inhibitory concentration (MIC). (40 marks)

3. Write notes on

3.1 anaerobic bacterial culture and identification. (50 marks)

3.2 rejecting clinical specimen in a routine microbiology laboratory. (50 marks)

4. Midstream urine specimen from a 30 year old female patient is received for microbiological investigation.

4.1 Name four common bacteria including gram positive and negative bacteria that cause urinary tract infections. (10 marks)

4.2 Describe how to process the above specimen. (30 marks)

4.3 Describe briefly how you would identify a gram positive and a negative bacteria you mentioned in 4.1. (60 marks)

5. A cerebrospinal fluid sample from a three years old child is received for microbiological investigation.

5.1 Name three bacteria which can be isolated from this specimen. (15 marks)

5.2 Describe how you would process this sample. (25 marks)

5.3 Describe how to identify the pathogens mentioned in 5.1. (60 marks)

6. An inoculated blood culture bottle is received from a patient with suspected typhoid fever.

6.1 Name four possible contaminants that can be isolated from blood sample. (10 marks)

6.2 Describe how to process the blood sample in a manual blood culture bottle. (50 marks)

6.3 Describe how to identify the pathogen for typhoid fever in a clinical microbiology laboratory. (40 marks)

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