



UNIVERSITY OF JAFFNA, SRI LANKA
FACULTY OF ALLIED HEALTH SCIENCES
FOURTH YEAR FIRST SEMESTER EXAMINATION IN BScHons (MLS)-2020

MLSCM 4125 CLINICAL MICROBIOLOGY

Date: 10.05.2022

Time: 3 hours

ANSWER ALL SIX QUESTIONS.

1. A stool sample of a 30- year- old patient with diarrhoea is received for routine microbiological diagnosis.
 - 1.1 Name three bacterial pathogens which can be isolated from this specimen. **(10 marks)**
 - 1.2 Briefly describe how to process the above sample in a clinical microbiology laboratory. **(30 marks)**
 - 1.3 Describe how you would identify the bacteria you mentioned in 1.1 in a clinical microbiology laboratory. **(60 marks)**

2. A cerebrospinal fluid sample from a 2-year-old child is received for microbiological investigation
 - 2.1 Name three bacteria which can be isolated from the CSF of this patient **(15 marks)**
 - 2.2 Describe how you would process this sample in a clinical microbiology laboratory **(25 marks)**
 - 2.3 Describe how to identify the pathogens mentioned in 2.1. **(60marks)**

3.
 - 3.1 Name the two disc diffusion methods commonly used in antibiotic susceptibility test. **(05 marks)**
 - 3.2 Write the principle of the disc diffusion method. **(25 marks)**
 - 3.3 Describe how to perform and interpret the two disc diffusion methods you mentioned in 3.1. **(70marks)**

4. A wound swab of a 66 - year -old patient is received for microbiological diagnosis.

4.1 Name the two primary pathogens which could be isolated from the above sample. **(10 marks)**

4.2 Describe how you would process this sample in a clinical microbiology laboratory. **(30 marks)**

4.3 Describe how to identify the pathogens mentioned in 4.1. **(60 marks)**

5. A sputum sample was received from a 60-year- old patient with suspected pneumonia. After overnight incubation, alpha haemolytic colonies were observed on blood agar and there was no growth on MacConkey agar.

5.1 Name the possible bacterial pathogen that can be isolated from this sputum sample. **(10 marks)**

5.2 Mention five instances where you should reject the sputum sample. **(20 marks)**

5.3 Describe how to process sputum samples in clinical microbiology laboratory **(20 marks)**

5.4 Describe the tests you would use in a clinical microbiology laboratory to identify the pathogen mentioned in 5.1 **(50 marks)**

6. Write notes on

6.1 Enriched media **(25 marks)**

6.2 CAMP test **(25 marks)**

6.3 Brain Heart Infusion Broth **(25 marks)**

6.4 Oxidase test **(25 marks)**