

POSTGRADUATE INSTITUTE OF MEDICINE
UNIVERSITY OF COLOMBO

MD (MEDICAL MICROBIOLOGY) EXAMINATION – DECEMBER 2023

Date:- 21st December 2023

Time:- 9.00 a.m. - 12.00 noon

PAPER I

Answer all five (05) questions.

Answer each question in a separate book.

1. Surgical site infection is one of the most common healthcare-associated infections.

1.1. Briefly describe the pre-operative interventions that are recommended for preventing surgical site infections. (25 marks)

1.2. Outline the factors to be considered when deciding on the need and choice of antibiotic/s for surgical prophylaxis. (25 marks)

1.3. One of the surgeons in the general hospital you are working, complains that there is a recent increase in surgical site infections in his unit.

Discuss how you would approach this situation as the consultant microbiologist of the hospital. (50 marks)

2. Genomic testing and analysis are becoming increasingly accessible as a tool to support the diagnosis and management of infections.

Discuss the various potential uses of genomics in routine and specialised testing in infectious diseases, including the challenges of service delivery. (100 marks)

3. A 30-year-old woman who is 22 weeks in her pregnancy, visits the local obstetrics clinic claiming that her 3-year-old son has been exposed to a child with fever and a rash the day before, in his pre-school. It was claimed that there were two other students with similar symptoms. The obstetrics team seeks your advice in managing this exposure.

Discuss how you would manage this situation as the consultant microbiologist. (100 marks)

4. A 27-year-old woman who was on chemotherapy for acute lymphocytic leukaemia, presented to the out-patient department with pain, fever, unilateral facial swelling and ptosis of the same side for two days duration. She had undergone a tooth extraction four days ago.
- 4.1. State the fungal diseases likely to be associated with this clinical condition. (20 marks)
- 4.2. Name the most likely aetiological agent/s of the disease/s you mentioned in 4.1. (20 marks)
- 4.3. Discuss the laboratory diagnosis and management of this patient. (60 marks)
- 5.
- 5.1. Briefly describe the role of the immune system in protection against pathogens. (40 marks)
- 5.2. Discuss acquired conditions that may disrupt this balance. (60 marks)