



UNIVERSITY OF JAFFNA, SRI LANKA

SECOND EXAMINATION FOR MEDICAL DEGREES (2nd)

February 2019

Microbiology Paper II

Date: 12. 02. 2019

Time allowed: 2 hours

Answer all four questions.

- 1 A 43-year-old lady was admitted to the Teaching Hospital, Jaffna with a history of high grade fever for 6 days, headache and body aches. There were no rashes or jaundice noted on examination but a painless eschar was noted in the axilla. After empirical treatment with doxycycline, her fever dropped within 48 hours.
 - 1.1 What is the most likely clinical diagnosis? (10 marks)
 - 1.2 Mention the causative agent responsible for the clinical diagnosis given by you in 1.1. (10 marks)
 - 1.3 Describe briefly the source and mode of transmission of the aetiological agent given by you in 1.1. (15 marks)
 - 1.4 Describe the pathogenesis of the disease given by you in 1.1. (20 marks)
 - 1.5 Discuss the microbiological tests to confirm the diagnosis in this patient. (25 marks)
 - 1.6 Describe briefly the prevention of the disease given by you in 1.1. (20 marks)

- 2 2.1 A 52- year-old farmer presented to the dermatology clinic with yellowish white discolouration of distal and lateral ends of nails of all fingers of both hands for the last five months. The patient was treated with an antifungal agent.
 - 2.1.1 What is the most likely clinical diagnosis for the above presentation? (10 marks)
 - 2.1.2 Name three fungal genera that might be responsible for the above lesion. (15 marks)
 - 2.1.3 What are the likely predisposing causes for this infection? (15 marks)
 - 2.1.4 Discuss the antifungal agents used in this patient. (10 marks)

2.2

An 'atopic' boy developed itchy red eyes, sneezing and a runny nose each time after playing in the garden.

2.2.1 State the condition he has developed. (05 marks)

2.2.2 Name the type of hypersensitivity reaction responsible for the above condition. (10 marks)

2.2.3 Describe the pathogenesis of the hypersensitivity reaction he has got. (35 marks)

3 A 58 year old woman, presented with a history of fever associated with chills and rigors of three days duration. She also complained of suprapubic pain and pain during micturition. On examination she was febrile, and there was suprapubic tenderness but no loin tenderness.

3.1 What is the most probable diagnosis in this patient? (10 marks)

3.2 List five common aetiological agents for this condition. (10 marks)

3.3 Discuss the possible risk factors for the condition in this patient. (25 marks)

3.4 Briefly describe how you would arrive at the microbiological diagnosis in this patient. (30 marks)

3.5 Discuss the principles of choosing empirical antibiotic therapy in this patient. (25 marks)

4 A 32 year old man is admitted to the medical ward with a history of nausea and loss of appetite for two weeks. He had returned from Taiwan after a business trip one month back. He does not have jaundice. The abdominal examination reveals hepatomegaly. His physician wants to exclude hepatitis B infection.

4.1 Describe briefly the likely sources and modes of transmission of hepatitis B virus in this patient. (25 marks)

4.2 Describe briefly the sequelae of hepatitis B infection. (20 marks)

4.3 State all the diagnostic viral markers of Hepatitis B infection and briefly describe the clinical role of each. (30 marks)

4.4 Describe how this patient could have been prevented from Hepatitis B infection. (25 marks)