



UNIVERSITY OF JAFFNA, SRI LANKA

SECOND EXAMINATION FOR MEDICAL DEGREES (PART 1) March - 2015

Microbiology - Paper II

Date: 23.03.2015

Time allowed: 2 hours

Answer all **four** questions.

- 1) A 15 year old girl developed pain, swelling, redness and tenderness on her left elbow which lasted for 2 days. When this was improving, she developed pain and swelling on her right knee joint followed by the left. When questioned, she said that she had throat pain two weeks earlier.
 - 1.1. What is the most probable clinical diagnosis? (10marks)
 - 1.2 Name the causative organism for this clinical condition. (10marks)
 - 1.3 Discuss briefly the use of microbiological tests in the diagnosis of this illness. (20marks)
 - 1.4 Describe briefly the pathogenesis of this illness. (20marks)
 - 1.5 Discuss the use of antibiotics in this patient. (40marks)

- 2) A 61 year old diabetic patient was admitted to the hospital with uncontrolled diabetes. On the third day of admission she developed fever in the hospital. After the Microbiology report was received, she was given Vancomycin.
 - 2.1 What is hospital acquired infection? (15marks)
 - 2.2 Name three possible organisms for which vancomycin was given to this patient. (15marks)
 - 2.3 Discuss the possible ways by which this patient would have got these infections. (30marks)
 - 2.4 Describe various preventive measures for hospital acquired infection. (40marks)

- 3) A 39 year old man with the history of cigarette smoking for more than 10 years was admitted to the Teaching Hospital, Jaffna with sudden onset of high fever, malaise, aches and pain and cough for 3 days. On examination, he was conscious and alert. His temperature was 39.3°C, pulse rate 105/min, and blood pressure 112/70mmHg. The attending medical officer suspected this patient to have influenza.
- 3.1 Name two differential diagnoses other than influenza in this patient. (10marks)
- 3.2 Describe briefly the mode of transmission of influenza virus. (20marks)
- 3.3 Using the terms 'Antigenic drift' and 'Antigenic shift', explain how annual flu and influenza pandemic occur. (40marks)
- 3.4 Discuss the preventive measures of influenza. (30marks)
4. A mother brought her 3 months old bottle fed baby to the outpatient unit with the complaint of curd like white patch on his tongue. She said when she tried to remove it, there was bleeding underneath.
- 4.1 Name the most probable fungus that causes this lesion. (10marks)
- 4.2 Describe the predisposing factors for infection in any patient caused by the fungus you mentioned in 4.1. (30marks)
- 4.3 Name two tests available in routine microbiology laboratories to confirm this fungus. (20marks)
- 4.4 Discuss the antifungals used in the treatment of both systemic and local infections of the fungus you mentioned in 4.1. (40marks)