

UNIVERSITY OF JAFFNA, SRI LANKA

SECOND EXAMINATION FOR MEDICAL DEGREES PART 1 (2nd)

November - 2013

Microbiology Paper II

Date: 27.11.2013

Time allowed: 2 hours

Answer all **four** questions

1. 1.1 Name four viruses that cause gastroenteritis. (10marks)
 - 1.2 Mention three bacteria that are responsible for blood and mucous diarrhoea. (15marks)
 - 1.3 Describe briefly the source and pathogenesis of staphylococcal food poisoning. (30marks)
 - 1.4 Discuss the measures that should be taken to prevent diarrheal illnesses. (45marks)
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2. A 46 year old gentleman was admitted to the medical ward with cough of 3 ½ months duration associated with loss of weight and loss of appetite. He did not have any other underlying illnesses. On physical examination he was emaciated. Crepitations were heard over the right upper zone on auscultation of the back of the chest.
 - 2.1 What is the most common bacteria that causes the above mentioned clinical picture in Sri Lanka? (05marks)
 - 2.2 Name the most important specimen that is used to diagnose the disease caused by the bacteria you mentioned in 2.1. (05marks)
 - 2.3 Describe the specimen collection method, **both** from ward patients and out patients for the specimen you mentioned in 2.2. (30marks)
 - 2.4 Name two important **microbiological** tests that could be done to diagnose this **illness** in this patient. (20marks)
 - 2.5 Describe briefly the pathogenesis of this infection in this patient. (40marks)

3. A 63 yr old lady was admitted to the Jaffna Teaching Hospital with a history of headache, fever, generalised weakness and difficulty in sleeping of three days duration. She also had difficulty in drinking for one day. Her daughter mentioned that the patient was bitten by a stray dog three weeks before. She did not get any treatment for the dog bite.

The patient looked anxious on admission. She choked when she tried to drink water and she could not tolerate staying under the fan.

Two days after admission she became agitated, developed difficulty in breathing and was hallucinating. She died on the 4th day of admission in spite of all the supportive care given.

3.1 What is the most probable causative organism? (05marks)

3.2 Describe briefly the **mode of transmission** and **pathogenesis** of the illness caused by the organism you mentioned in 3.1 (30marks)

3.3 Name three specimens that could be used to confirm the infection you mentioned in 3.1 (15marks)

3.4 Discuss the preventive measures for the infection you mentioned in 3.1 (50marks)

4. A 31 year old young mother is visiting the dermatology clinic with a history of itching on both fingers and toe webs of three weeks duration. On examination the local skin was red and macerated. Skin scrapings were sent for microscopic examination.

4.1 What are the two most common fungi that cause this illness? (10marks)

4.2 Of the fungi you mentioned in 4.1, name one that is capable of causing systemic infection. (02marks)

4.3 Name four **other** sites where the organism you mentioned in 4.2 could cause infection. (08marks)

4.4 Discuss the risk factors that could predispose to the infection you mentioned in 4.2. (35marks)

4.5 Write notes on 'Antifungal agents'. (45marks)