

PRIMARY EXAMINATION

MICROBIOLOGY

Tuesday 2 December 2003

Time allowed: Two hours

INSTRUCTIONS TO CANDIDATES

This examination consists of three sections, with a choice of questions in each section. Each question is worth 15 marks, and the total number of marks for the examination is 75. You should allow 24 minutes of working time to answer each 15 marks question. All questions may be answered in the same answer book.

Section A. Answer only ONE question in this section.

1. Describe how chemical and biological indicators are used to monitor the performance of an autoclave in a dental practice. *(15 marks)*
2. Describe the immediate management of a sharps injury sustained by a dental assistant when dis-assembling a local anaesthetic needle used on a human immunodeficiency virus-infected patient. *(15 marks)*

Section B. Answer only TWO question in this section.

3. Explain the nature of the bacteria and the host immune response in a chronic root canal infection associated with a traumatized non-vital tooth, and how the treatment provided for this relates to the aetiology and pathogenesis of the condition. *(15 marks)*
4. Describe how a patient's lifestyle can affect his/her salivary parameters, and thereby influence the oral microflora. What is the relevance of this to dental caries? *(15 marks)*
5. Explain how some agents of infection can evade the normal host immune response. Make specific reference to hepatitis C, tuberculosis and herpes simplex virus in your answer. *(15 marks)*

Section C. Answer only TWO question in this section.

6. With reference to the immune response to infection, explain why patients with AIDS develop characteristic fungal, viral and bacterial oral lesions. *(15 marks)*
7. Outline strategies for preventing dental caries, which are based upon the concept of dental caries as an infectious microbial disease. *(15 marks)*
8. Discuss the factors that may determine the transmission of hepatitis B to a non-immune health care worker who has sustained a contaminated needlestick injury when treating a hepatitis B carrier. *(15 marks)*

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