

PRIMARY EXAMINATION

**MICROBIOLOGY**

Thursday 7 December 2000

Time allowed: Two hours

---

INSTRUCTIONS TO CANDIDATES

Candidates must answer **all 4 questions**. Candidates should allow one mark per minute. This paper is worth 75% of the total mark for this subject

---

1. Compare and contrast the various types of indicator systems used to monitor the performance of an autoclave in a dental practice. (30 marks)
  
2. From the standpoint of microbiology, compare and contrast in a table a persisting infection in the root canal system of a non-vital tooth, with the subgingival plaque of a progressive periodontal lesion, using the following headings
  - Nature of the pathogens
  - Nature of the host immune response
  - Treatment(30 marks)
  
3. Do either 3A or 3B, not both.
  - A. In the light of the immune response to infection, explain why patients with AIDS develop characteristic oral lesions. (20 marks)OR
  - B. Outline strategies for preventing and treating dental caries, which are based upon the concept of dental caries as a microbial disease. (20 marks)
  
4. Do either 4A or 4B, not both.
  - A. With regard to hepatitis B infection,
    - (i) What laboratory test results would indicate that a patient was a hepatitis B carrier?
    - (ii) List 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. (20 marks)OR
  - B. With regard to disinfectants used in dental practice,
    - (i) Give the name and approximate composition of one product which is used for surface disinfection in your own dental practice
    - (ii) Give a rating for the performance of this product against each of the properties of an ideal surface disinfectant. (20 marks)