



FC Path(SA) Micro

## THE COLLEGES OF MEDICINE OF SOUTH AFRICA

Incorporated Association not for gain  
Reg No 1955/000003/08

### Examination for the Fellowship of the College of Pathologists of South Africa – Microbiology



Paper 1

25 July 2019

(3 hours)

*All questions are to be answered. Each question to be answered in a separate book (or books if more than one is required for the one answer)*

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- 1 Discuss the four main goals of antimicrobial stewardship and how these may be achieved. [20]
- 2 Discuss the utility of procalcitonin (PCT) as an antimicrobial stewardship strategy. [20]
- 3
  - a) You were consulted for advice by a provincial infection control coordinator who wants to draft a policy on early detection and control of nosocomial transmission of multidrug resistant *Acinetobacter baumannii* complex in the neonatal intensive care unit. Discuss the factors to consider when drafting such a policy. (10)
  - b) Outline the mechanisms of antimicrobial resistance in *Klebsiella pneumoniae*. (10)[20]
- 4 Discuss *C. diphtheriae* under the following headings:
  - a) Reasons for change in age distribution of disease. (4)
  - b) Laboratory diagnosis. (8)
  - c) Treatment and prevention. (8)[20]
- 5 Write short notes on the following:
  - a) Objectives of diagnostic laboratory accreditation and the role of the pathologist in this regard. (10)
  - b) Pathogen-associated molecular patterns (PAMP). (5)
  - c) MHC class II antigen presentation. (5)[20]



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Paper 2

26 July 2019

(3 hours)

All questions are to be answered. Each question to be answered in a separate book (or books if more than one is required for the one answer)

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- 1 Critically discuss the advantages and disadvantages of the laboratory methods/ platforms that are used for the diagnosis of syphilis. [20]
- 2 Discuss current advances in the laboratory diagnosis and management of *Clostridium difficile* infection. [20]
- 3
  - a) Using relevant examples, discuss how microbiology laboratory stewardship may contribute to the provision of cost-effective health-care. (15)
  - b) Write short notes on hydatid disease. (5)[20]
- 4
  - a) Outline the role of serological and molecular markers in the laboratory diagnosis of acute and chronic viral Hepatitis B (HBV) infection. (13)
  - b) Write short notes on the virulence factors of *Bordetella pertussis*. (7)[20]
- 5
  - a) Discuss *Stenotrophomonas maltophilia* under the following headings:
    - i) Pathogenesis and clinical relevance. (5)
    - ii) Laboratory diagnosis. (5)
    - iii) Management. (5)
  - b) Briefly outline the pitfalls of the  $\beta$ -D glucan test for the diagnosis of fungal infections. (5)[20]