



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

26 July 2018

(3 hours)

All questions to be answered.

- 1 a) Write short notes on acute viral meningoencephalitis using the following headings:
- i) Aetiology. (5)
 - ii) Laboratory investigations. (5)
 - iii) Management. (2.5)
- b) Discuss how you would manage a varicella-zoster outbreak in a paediatric ward. (7.5)
[20]
- 2 Discuss the pathogens causing infections in haematopoietic stem cell transplantation patients and the use of antimicrobials in the management of febrile neutropaenia. [20]
- 3 Briefly discuss:
- a) The role of rapid molecular diagnostics for the diagnosis of bloodstream infections. (10)
 - b) Stains used for the microscopic diagnosis of parasitic infections. (10)
[20]
- 4 A regional laboratory has just purchased a new automated identification and antimicrobial susceptibility testing system. Provide advice to the technologist on verification of the new instrument. [20]

Please answer questions 5a and 5b in separate booklets

- 5 a) Write short notes on the echinocandins using the following headings
- i) The mode of action. (2)
 - ii) The mechanism of resistance. (2)
 - iii) The spectrum of activity. (6)
- b) Briefly discuss the epidemiology, route/s of infection and the clinical manifestations of dimorphic fungi that occur in South Africa. (10)
[20]



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Paper 2

27 July 2018

(3 hours)

All questions to be answered.

- 1 Focusing on the current South African context, write an essay on the epidemiology and pathogenesis of, as well as the available diagnostic tests for, *Listeria monocytogenes*.
[20]
- 2 Discuss culture-negative endocarditis under the following topics: epidemiology, causative agents and an approach to the laboratory diagnosis. [20]

Please answer questions 3a and 3b in separate booklets

- 3 a) Discuss the pathogenesis, laboratory diagnosis and treatment of necrotising fasciitis. (15)
 - b) Briefly discuss “isolation chip (ichip)” and its role in the field of antibiotic development. (5)
- [20]

Please answer questions 4a, 4b and 4b in separate booklets

- 4 a) Critically discuss the diagnosis of ventilator-associated pneumonia. (10)
 - b) Discuss the use of macrolides as adjunctive therapy for patients with ventilator-associated pneumonia. (5)
 - c) Outline the mode/s of action of each of the following disinfectants:
 - i) Bleach. (1.5)
 - ii) Alcohol. (2)
 - iii) Chlorhexidine. (1.5)
- [20]
- 5 a) Discuss human papilloma virus vaccines and their use in the South African context. (10)
 - b) Tuberculosis is an old disease, to date there is still no effective vaccine to control the pandemic. Describe:
 - i) The challenges. (5)
 - ii) The possible/potential immunogens in the development of TB vaccines. (5)
- [20]