



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

21 February 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)

- 1 Write short notes on
 - a) Clinical diagnosis and management of diphtheria. (10)
 - b) Investigation and management of *Staphylococcus aureus* bacteraemia. (10)[20]

- 2 You have been approached by the local laboratory co-ordinator following a number of complaints about rejected specimens in the microbiology laboratory. Discuss your response to this issue, focusing on
 - a) Reasons for rejection. (5)
 - b) The role of electronic gate keeping as a form of demand management. (5)
 - c) The role of the microbiologist in reducing the rate of specimen rejection. (10)[20]

- 3 Discuss the laboratory diagnosis of anaerobic infections. [20]

- 4 Write short notes on
 - a) Susceptibility testing of moulds. (10)
 - b) Advantages and limitations of multi-disease diagnostic platforms in the laboratory. (10)[20]

- 5 Biofilms are a feature of many bacterial infections
 - a) Describe the formation and composition of biofilms. (8)
 - b) Explain why antibiotics are frequently ineffective in eradicating biofilms. (7)
 - c) Briefly discuss new concepts in the management of biofilms. (5)[20]



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Paper 2

22 February 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)

- 1 a) Discuss your approach to the containment of a rabies outbreak in South Africa. (10)
b) An adult male patient is admitted to a hospital ophthalmology service with keratitis. It is clinically suspicious of *Acanthamoeba*. Provide advice to the clinician regarding;
i) Appropriate specimens and available tests for laboratory diagnosis. (5)
ii) Management of *Acanthamoeba* keratitis. (5)
[20]
- 2 Discuss the pathogenesis of diarrhoeal disease using diarrheagenic *E.coli* pathotypes/strains as a prototype. [20]
- 3 Describe (using appropriate examples) the different categories of notifiable medical conditions and discuss the role and responsibility of the microbiology laboratory in the notification process. [20]
- 4 Write short notes on the pathogenesis and clinical manifestations of
a) *Toxoplasma gondii*. (10)
b) Measles. (10)
[20]
- 5 a) Describe the key requirements for the safe operation and running of a BSL-3 laboratory. (10)
b) Outline the mechanisms employed by *Mycobacterium tuberculosis* to evade the host immune system. (10)
[20]