



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

1 March 2018

(3 hours)

All questions to be answered.

- 1 Discuss controversies relating to the laboratory diagnosis of *Pneumocystis pneumonia*, under the following headings
 - a) Molecular testing. (9)
 - b) Immunofluorescent testing. (9)
 - c) Culture testing. (2)[20]

- 2
 - a) Discuss the drawbacks of current diagnostic methods used to identify antimicrobial resistance. In addition, highlight newer diagnostic strategies to improve identification of antimicrobial resistance. (15)
 - b) Briefly describe the mechanism of resistance to linezolid. (5)[20]

- 3 With reference to Pregnancy-related listeriosis, write short notes on
 - a) Maternal and Perinatal Outcomes. (10)
 - b) Management. (10)[20]

- 4 Discuss pertussis under the following headings: aetiological agents, pathogenesis, diagnosis, treatment and prevention. [20]

- 5
 - a) Explain the term 'Metagenomics' and its potential application in clinical microbiology and infectious diseases. (8)
 - b) Describe briefly with examples the risk categorisation of notifiable medical conditions in South Africa. (6)
 - c) Write short notes on External Quality Assurance. (6)[20]



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Paper 2

2 March 2018

(3 hours)

All questions to be answered.

- 1
 - a) Critically discuss the Xpert MTB/Rif Ultra assay and discuss its value and implications as a replacement for the Xpert MTB/Rif assay in South Africa. (10)
 - b) Discuss the urine LAM assay under the following headings: principle of test, test performance in different population groups and implications for implementing it in the South African context. (10)
[20]

- 2 Briefly discuss the following
 - a) Imported Malaria. (10)
 - b) Odyssean Malaria. (10)
[20]

- 3
 - a) You have been tasked to design a new microbiology laboratory for a regional hospital. Outline the factors you would consider when planning the design and layout of the new laboratory. (10)
 - b) Briefly discuss the core elements of hospital antibiotic stewardship programs. (10)
[20]

- 4 Write short notes on the following
 - a) Pre-exposure prophylaxis for HIV infection. (6)
 - b) Serological diagnosis of Hepatitis B virus infection. (6)
 - c) Zika virus infection. (8)
[20]

- 5 Discuss the approach to management of infections due to Carbapenem - resistant Enterobacteriaceae in the South African context. [20]