



FC Path(SA) Clin

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 - Clinical

22 July 2019



Paper 1

Chemical Pathology

(3 hours)

All questions are to be answered in one book

- 1 Discuss how you would implement a system of internal quality control in the chemistry laboratory of a regional hospital. [25]
- 2 Discuss in detail the role of the chemistry laboratory in assisting with the laboratory investigations and differential diagnosis of a 25-year-old man presenting with acute abdominal pain. [25]
- 3 Describe your approach to setting up a system of critical value reporting for clinical chemistry in a regional hospital. [10]
- 4 Using suitable examples from the laboratory, describe the use of enzymes as reagents in clinical chemistry analysis. [10]
- 5 Describe the principles of "realtime" PCR. [10]
- 6 Discuss the pitfalls of reporting corrected calcium versus ionized calcium. [10]
- 7 Describe how reference intervals for analytes are determined. [10]



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Paper 2

Haematology

(3 hours)

All questions are to be answered in one book

- 1 Discuss the causes of macrocytosis in adults and describe the laboratory tests that you would undertake to establish a definitive diagnosis. [25]
- 2 Write short notes on the investigations and interventions required in order to prevent immune sensitisation in an Rh-negative woman during pregnancy and after the birth of the baby. [10]
- 3 Describe the immunophenotypic criteria for myeloid, B-cell and T-cell lineage specificity in acute leukaemia. [10]
- 4 Discuss the pre-analytical variables that may be associated with errors in tests for haemostasis. [25]
- 5 List the most important early complications that may be associated with blood transfusion. [10]
- 6 Anaemia is an almost invariable manifestation of chronic renal failure. Describe the mechanisms by which anaemia may develop in this condition. [10]
- 7 Describe the laboratory investigations required in order to establish a diagnosis of acute promyelocytic leukaemia. [10]



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24 July 2019



Paper 3

Haematology

(3 hours)

All questions are to be answered in one book

- 1 Discuss the epidemiology, diagnosis, treatment and prevention of pertussis. [20]
- 2 Discuss the laboratory diagnosis of invasive fungal infections. [20]
- 3 Write short notes on the following
 - a) The diagnosis of complicated and severe malaria. (5)
 - b) Treatment options for carbapenem-resistant Enterobacteriaceae. (5)
 - c) The role of bedaquiline in the treatment of tuberculosis. (5)
 - d) Tigecycline in treating hospital acquired infections. (5)[20]
- 4 Several cases of *Candida auris* have recently been identified in the Intensive Care Unit of a hospital your laboratory serves. How would you advise the requesting doctor on control of this outbreak? [10]
- 5 Describe the biosafety levels of a microbiology laboratory. [10]
- 6 Write short notes on the management of latent tuberculosis. [7.5]
- 7 Briefly describe the possible reasons for the significant increase in measles cases in Europe. [5]
- 8 Briefly describe the diagnosis of cytomegalovirus disease in immunocompromised patients. [7.5]