



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

24 February 2020



Paper 1

Chemical Pathology

(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 Describe your approach to the investigation of a 50-year-old male who presents with polyuria. [25]
- 2 Critically discuss the utility of high sensitivity cardiac troponin in the diagnosis of possible/suspected acute myocardial infarction. [25]
- 3 Discuss the concept of biological variability highlighting its utility and significance in the clinical laboratory. [10]
- 4 Discuss markers that can be utilised in the diagnosis and management of acute kidney injury. Include in your answer an approach to the workup of a patient suspected to have acute kidney injury. [10]
- 5 Discuss the principles of nephelometry and turbidimetry. Include in your answer the advantages and disadvantages of this methodology. [10]
- 6 Discuss the biochemical laboratory assessment of vitamin B12 status. Include in your discussion limitations of existing methods. [10]
- 7 Discuss the utility, interpretation and measurement of procalcitonin. [10]



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

25 February 2020



Paper 2

Haematology

(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 You are managing a coagulation laboratory at a tertiary facility in South Africa. Recently, this facility has implemented total laboratory automation (TLA) for 5 tests (prothrombin time, activated partial thromboplastin time, D-dimers, antithrombin and fibrinogen). Discuss which factors you would measure to assess whether the implementation has improved quality in your laboratory. [25]
- 2 A clinician is establishing a clinic in your hospital for thalassaemia patients. He is concerned regarding iron overload in the patients. Discuss the mechanism for iron overload in thalassaemia and how best to investigate it. [25]
- 3 Oncogenic viruses drive the development of many haematological malignancies in South Africa. Write short notes on the haematological malignancies associated with the following viruses
a) Epstein-Barr Virus. (10)
b) Kaposi-sarcoma Herpes Virus (10) [20]
- 4 Blood is a scarce resource in South Africa. Discuss how you would implement a blood utilisation programme to ensure that blood products are used optimally. [10]
- 5 A patient presents with a deep vein thrombosis and a thrombocytopenia. Discuss your differential diagnosis and a short diagnostic management plan. [10]
- 6 Write short notes on genetic prognostication in B-cell acute lymphoblastic leukaemia in children. [10]



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

26 February 2020



Paper 3

Medical Microbiology

(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 Discuss all the factors that you would need to consider if you were tasked to set up a public health laboratory network for the routine surveillance of foodborne pathogens in South Africa. [20]
- 2 Write an essay on the role/s that pathology laboratories can play in supporting antimicrobial stewardship programs. [20]
- 3 Write short notes on
 - a) Parasitic causes of eosinophilia. (10)
 - b) The structure and mechanism of action of cholera enterotoxin. (10)
 - c) Gram-stain variable bacteria and how to deal with gram stain variability in the laboratory. (10)
 - d) Root cause analysis of non-conformances in the laboratory. (10)[40]
- 4 What are the advantages and disadvantages of the syndromic approach for the management of sexually-transmitted infections? [7.5]
- 5 Give an overview of the current guidelines for HIV post-exposure prophylaxis. [12.5]