



## THE COLLEGES OF MEDICINE OF SOUTH AFRICA

Incorporated Association not for gain  
Reg No 1955/000003/08

Final Examination for the Fellowship of the  
College of Pathologists of South Africa – Haematology



25 July 2019

Paper 1

Laboratory Practice and Basic Principles

(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)*

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- 1 The term Measurable Residual Disease (MRD) is superior to the term Minimum Residual Disease (MRD). Discuss the statement, demonstrating knowledge of the current best practice, using the following disorders to demonstrate your understanding
  - a) Multiple Myeloma. (10)
  - b) Chronic Lymphocytic leukaemia. (10)[20]
- 2 Considering the shortage of appropriate human leukocyte antigen (HLA) matched non-related donors, an option is often to use an ABO incompatible donor. Discuss the potential complications of ABO incompatible haematopoietic stem cell transplantation. [25]
- 3 “Whole genome sequencing will eventually replace the role of conventional cytogenetic and FISH testing in the diagnostic workup for haematological malignancies.” Critically appraise this statement. [10]
- 4 Discuss the diagnostic approach to a young patient with an apparently unprovoked venous thrombosis. [10]
- 5 Write short notes on Atypical Haemolytic Uraemic Syndrome. [10]
- 6 The direct oral anticoagulant drugs are set to replace conventional warfarin therapy and this will require a reconfiguration of laboratory anticoagulant monitoring with point-of-care, clot-based assays and novel molecular diagnostics. Discuss how you would implement a state-of-the-art anticoagulant monitoring service. [25]



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26 July 2019

Paper 2

Applied Clinical Haematology

(3 hours)

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- 1 Critically appraise the role of the splenectomy in the management of primary immune thrombocytopenia, in the light of novel diagnostic and therapeutic approaches. [25]
  
- 2 Write short notes on the following
  - a) The haematologic effects of deficiencies in fat soluble vitamins. (10)
  - b) Novel non-transfusion based, non-curative therapeutics for thalassaemia. (10)
  - c) Evaluate the role of the liver in iron sensing and iron haemostasis. (10)[30]
  
- 3 In the context myelodysplastic syndromes
  - a) Discuss recent advances in clinical and translational research that will reshape the present therapeutic landscape. In your answer, consider the relevance of the mesenchymal niche. (10)
  - b) Evaluate the role of genetic tests in the diagnosis of myelodysplastic syndrome. (10)[20]
  
- 4 Discuss the emerging field of health-related digital interventions with specific reference to the laboratory value chain. Provide examples of new approaches that may improve laboratory quality and interactions at the clinical laboratory interface that may improve patient management. [25]