



THE COLLEGES OF MEDICINE OF SOUTH AFRICA

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Examination for the Fellowship of the
College of Pathologists of South Africa - Haematology

5 March 2021



Paper 2

Applied Clinical 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 A 31-year-old female patient presents with a second episode of a deep vein thrombosis in her right leg and a history of previous first trimester miscarriages. She has been initiated on anticoagulation therapy. Discuss Lupus Anticoagulant testing in anticoagulated patients. [10]
- 2 The novel severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), is characterized by a dysregulated immune system and hypercoagulability. Discuss the broad concept of immunothrombosis. In your answer, consider the pathophysiology, diagnostic and clinical management of this condition. [15]
- 3 Relapsed acute myeloid leukaemia is a known clinical challenge. Write short notes on the management of relapsed AML with special reference to the inhibition of FMS-like tyrosine kinase 2 (FLT3). [10]
- 4 The WHO classification of AML incorporates morphology, immunophenotype, molecular and cytogenetic findings. However, a combination of morphology and immunophenotyping can provide valuable clues to the WHO category and molecular abnormalities of AML. Discuss these morphological and immunophenotypic clues to the WHO categories of AML. [15]
- 5 Discuss the novel and experimental targets for the management of the following inherited red cell disorders:
 - a) Homozygous sickle disease. (10)
 - b) Erythropoietic cutaneous protoporphyria. (10)[20]
- 6 Clinical studies have suggested that Aplastic Anaemia is an autoimmune and bone marrow destructive disease. Discuss the immune mediated mechanisms that are related to Aplastic Anaemia pathogenesis. [10]
- 7 Tabulate primary immune deficiencies of the humoral system only, according to the disorder, inheritance pattern, genes affected and clinical features. [10]
- 8 You are the pathologist responsible for validating a new full blood count analyser. Write short notes on how you would establish the uncertainty of measurement for the new analyser. [10]