



THE COLLEGES OF MEDICINE OF SOUTH AFRICA

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

Part I Examination for the Fellowship of the College of Pathologists of South Africa – Haematology



1 February 2018

Paper 1

(3 hours)

All questions are to be answered. Each question is to be answered in a separate book (or books if more than one book is required per question)

1 Abnormalities in the process of RNA splicing have been implicated in a number of haematological disorders. Discuss the mechanisms of RNA splicing and the importance that this has in normal cellular function. [25]

2 Discuss the control of erythropoiesis via cell signalling. [25]

Please answer questions 3a) and 3b) in separate books

- 3 a) Discuss the principles of the fluorescence in situ hybridisation (FISH) technique and explain how it can be used in haematology. (10)
b) Discuss the genetic control of haemoglobin synthesis. (15)
[25]

Please answer questions 4a), 4b) and 4c) in separate books

- 4 Write short notes on
a) The antigens of the ABO system. (8)
b) Innate lymphoid cells. (10)
c) Gamma delta T cells. (7)
[25]



THE COLLEGES OF MEDICINE OF SOUTH AFRICA

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

Part I Examination for the Fellowship of the College of Pathologists of South Africa – Haematology



2 February 2018

Paper 2

(3 hours)

All questions are to be answered. Each question is to be answered in a separate book (or books if more than one book is required per question)

- | | | |
|---|--|------|
| 1 | Discuss endothelial cells as the regulators of vascular haemodynamics. | [25] |
| 2 | Discuss the classical model of haematopoiesis | [25] |
| 3 | a) Discuss T cell maturation in the thymus. | (15) |
| | b) Discuss the pathways of energy production in the mature red cell. | (10) |
| | | [25] |
| 4 | a) Write short notes on platelet activation. | (15) |
| | b) Write short notes on G-protein coupled receptors. | (10) |
| | | [25] |