

## THE COLLEGES OF MEDICINE OF SOUTH AFRICA

Incorporated Association not for gain Reg No 1955/00003/08

## 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)

- 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

- 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)

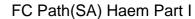
[25]

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

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

[25]

(8)





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### 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) b)	Discuss T cell maturation in the thymus.  Discuss the pathways of energy production in the mature red cell.	(15) (10) [25]
4	a) b)	Write short notes on platelet activation. Write short notes on G-protein coupled receptors.	(15) (10)