



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 Dentistry of South Africa - Prosthodontics

1 February 2018

Paper 2

Physiology

(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) Describe the normal structure of the erythrocyte. (5)
 - b) List functions of erythrocytes. (5)
 - c) Draw and describe an oxygen-haemoglobin dissociation curve and list the important factors affecting the affinity of haemoglobin for O₂. (35)

[45]

- 2 Discuss in detail the development of cellular mediated immunity. [45]

- 3 Write short notes on the following
 - a) Pepsin. (5)
 - b) Hormones secreted by the kidney. (5)
 - c) Mean arterial blood pressure (5)
 - d) Mast cells. (15)
 - e) Referred pain. (15)

[45]

- 4 Calcium is an essential intracellular signalling molecule and also plays a variety of extracellular functions, thus control of calcium is vitally important.
 - a) In which activities is calcium essential? (5)
 - b) Describe the distribution of calcium in plasma. (5)
 - c) Discuss the regulation of blood calcium level. (35)

[45]



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Paper 3

Principles of pathology including microbiology

SECTION B

Answer the following questions in a separate book (or books if more than one is required for the answer), and ensure that the question number and answer correspond.

- 1 Explain the term microbial oncogenesis by using appropriate examples to justify your explanation. [15]
- 2 Explain how you would distinguish between a benign or malignant neck mass on clinical examination. [15]
- 3 With regards to thrombosis, compare and contrast arterial and venous thrombi with reference to the predisposing factors of such conditions. [15]
- 4 Define metaplasia and provide examples of this process to explain your answer. [10]
- 5 Classify the various forms of amyloidosis (amyloid disease) and explain the pathogenesis in each case. [15]



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Paper 3

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SECTION C

Write brief explanatory notes for each of the following questions in a separate book (or books if more than one is required).

- 1 Wound healing by secondary intention. [5]
- 2 The pathogenesis and clinical signs of cystic fibrosis. [5]
- 3 The clinical presentation of septic shock. [5]
- 4 The causes and clinical signs of metastatic calcification. [5]