





## 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 - Oral Medicine and Periodontics

27 June 2019

Paper 2

Physiology

*All questions are to be answered in one book*

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#### SECTION B

- 1 a) A young man has a blood pressure of 130/73 mm Hg. What is his pulse pressure? What is his mean arterial pressure? How did you calculate each of those pressures? (5)  
b) Outline the compensatory mechanisms that maintain blood pressure on rising from the supine to the standing position. (10)  
[15]
- 2 By means of a diagram, illustrate the relationship between the partial pressure of O<sub>2</sub> in blood and the percent saturation of haemoglobin at rest, and the changes produced in this relationship by exercise. [10]
- 3 Describe the non-urinary (hormonal) functions of the kidney. [15]
- 4 Write short descriptive notes on
  - a) Taste. (5)
  - b) Gastric juice. (5)
  - c) ABO blood group system. (5)[15]



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Paper 3

Principles of pathology including microbiology

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### SECTION B

- 1 Discuss thrombosis under the following headings
  - a) Pathogenesis. (6)
  - b) Predisposing factors (Virchow's triad). (9)
  - c) Fate of the thrombus. (5)[20]
  
- 2 A 50-year-old systemically healthy patient sustained a bee sting on his hand 2 hours ago. He now presents with periorbital oedema and stridor
  - a) Name the different types of hypersensitivity reactions. (4)
  - b) Which type of hypersensitivity reaction did this patient suffer? (2)
  - c) Explain the molecular and cellular events that occurs in these types of reactions. (9)[15]
  
- 3 Discuss diabetes mellitus under the following headings
  - a) The differences between the 2 major forms. (7)
  - b) Vascular complications associated with this disease. (8)[15]  
[50]



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### **SECTION C**

Write short notes on

- 1 The causes and complications of metastatic calcification. (5)
  - 2 The aetiology and complications of disseminated intravascular coagulation. (5)
  - 3 Generalised oedema. (5)
  - 4 The role of reactive oxygen species in cell injury. (5)
  - 5 Fatty change. (5)
- [25]