



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

25 March 2014

Paper 2

(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 Discuss the physiological consequences of and responses to a reduction in mean arterial blood pressure. [25]
- 2 Discuss the role of the kidney in the regulation of body fluid balance. Include reference to relevant hormones. [25]
- 3 Discuss the physiology of how a lesion in the mouth is perceived as painful by the brain. [25]
- 4 The MFO-surgeon is often confronted by patients with the problems of Hypo- and Hyperthyroidism. It is therefore important to understand the normal physiology of the thyroid. Discuss the physiology of the thyroid by referring mainly to the thyroid hormone physiology and to a lesser extent, the basic anatomy and pathophysiology. [25]
- 5 Discuss the physiological anticlotting mechanisms in place for circulating blood. [25]
- 6 The combination of implantology, bone transplantation and bone regeneration techniques is now regarded as one of the more important disciplines of MFOS. Discuss bone growth and modelling by referring to the humoral/hormonal factors that affect and regulate bone growth and modelling. [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 Dentistry of South Africa

26 March 2014

Paper 3

(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 74-year-old male presented to his dentist with a firm pale nodule on the tongue. He was diagnosed previously with a malignant plasma cell dyscrasia that presented as a monoclonal gammopathy with an M protein spike on serum electrophoresis.
- a) What is the most likely diagnosis of the nodule on the tongue? (2)
 - b) How would you categorise the protein involved in the condition diagnosed? (1)
 - c) Classify in detail the different forms of this protein, stating the specific nature of the protein and its related chemicals and giving specific examples of the associated diseases. (20)
 - d) What histochemical stain would you use to confirm the diagnosis in a)? Explain. (2)
- [25]
- 2
- a) Classify infective endocarditis and differentiate between the different forms. (4)
 - b) Briefly elaborate on the causes of infective endocarditis. (6)
 - c) Describe the morphological features and target sites of vegetations of infective endocarditis. (4)
 - d) List the possible complications of infective endocarditis. (5)
 - e) In addition to septic embolism, listing an example of each, what are the other types of embolism? (6)
- [25]
- 3 A 75-year-old lady was diagnosed with breast carcinoma 5 years previously. She now presents with multiple secondary malignant deposits in the pulmonary parenchyma and bronchi.
- a) Discuss in the detail the sequential processes involved in the invasion and spread of the breast carcinoma to the lungs. (20)
 - b) What is the typical form/pathway of dissemination of a carcinoma and of a sarcoma? (2)
 - c) What do you understand by the term 'sentinel lymph node'? Explain its significance. (3)
- [25]
- 4 Discuss cutaneous wound healing and the factors that influence this process. [25]
- 5 Discuss the cellular events of acute inflammation. [25]

- 6 Write short notes on
- a) Granulomatous inflammation. (5)
 - b) Ehlers - Danlos Syndrome. (5)
 - c) Type I Hypersensitivity. (5)
 - d) Apoptosis. (5)
 - e) Fatty change (Steatosis). (5)
- [25]