



**JOHANNESBURG  
ACADEMIC OFFICE**

# CMSA

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**February 2019**

## R E G U L A T I O N S

### FOR ADMISSION TO THE FELLOWSHIP OF THE COLLEGE OF

### DENTISTRY OF SOUTH AFRICA

### FCD(SA) OMP

The examination comprises Part I and Part II : Part II must be passed within six years of passing Part I

#### **PART 1**

#### **1.0 ADMISSION TO THE PART I EXAMINATION**

(to be read in conjunction with the Instructions)

- 1.1 The candidate must be in possession of a qualification which entitles the holder thereof to register as a dentist with the Health Professions Council of South Africa
- 1.2 The CMSA Senate, through its Examinations and Credentials Committee, will review all applications for admission to the examination and may also review the ethical and professional standing of candidates

#### **2.0 SYLLABUS OF THE PART I EXAMINATION**

See notes for the guidance of candidates - Annexure A

#### **3.0 CONDUCT OF THE PART I EXAMINATION**

Three written papers in

- 3.1 anatomy, embryology, histology and oral biology (one written paper of 3 hours' duration)
- 3.2 physiology (one written paper of 3 hours' duration)
- 3.3 principles of pathology including microbiology (one written paper of 3 hours' duration)
- 3.4 If a candidate is unsuccessful in either one of the Part I subjects, credit will be given for the passed subject(s) (minimum of 50%), and he/she will be able to re-write the failed subject(s). This exemption is only valid for two examination periods. If the candidate is again unsuccessful with one or two of these subjects, the entire examination will have to be taken at the next attempt, with only one (1) extra attempt.

PART II.../

**PART II****4.0 ADMISSION TO THE PART II**

(to be read in conjunction with the Instructions)

A candidate may be admitted to Part II of the examination if he/she produces evidence of having:

- 4.1 passed Part 1 of the examination, or the primary fellowship examination of one of the Colleges with which there is an agreement of reciprocity, or of having completed all examination components of the Master's degree in the corresponding discipline at a South African university
- 4.2 completed not less than three years in an approved full-time training post in oral medicine and periodontics;
- 4.3 Submitted a Portfolio (applicable to Registrars entering into their training on or after 1 January 2010). It is recommended that all candidates entering into their registrar training from 1 January 2019 use the LogBox online portfolio. This is a free service and the app is available in both Apple and Android format. Please register at [www.logbox.co.za](http://www.logbox.co.za).<sup>1</sup>

**5.0 SYLLABUS OF THE PART II EXAMINATION**

See Appendix B

**6.0 CONDUCT OF THE PART II EXAMINATION****6.1 Oral pathology**

- 6.1.1 a written examination of 3 hours
- 6.1.2 a practical examination of approximately 1 hour
- 6.1.3 a *viva voce* examination

**6.2 Oral medicine**

- 6.2.1 a written examination of 3 hours
- 6.2.2 a clinical examination, or an OSCE (objective structured clinical examination) or both, of approximately 1 hour in all
- 6.2.3 a *viva voce* examination

**6.3 Periodontics**

- 6.3.1 a written examination of 3 hours
- 6.3.2 a clinical examination, or an OSCE (objective structured clinical examination) or both, of approximately 1 hour in all
- 6.3.3 a *viva voce* examination

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<sup>1</sup> LogBox recommendation effective for new Registrars – 1 January 2019

5.0 ADMISSION AS A FELLOW

5.1 Only candidates who have completed training in a CMSA recognised registrar post may be awarded a fellowship if successful in the examination.

5.2 Candidates who have written the examination as a prerequisite from the HPCSA for inclusion on the specialist register are not eligible to be awarded a Fellowship but will be sent a letter confirming their success in the examinations

All other candidates will be asked to sign a declaration as below:

I, the undersigned, ..... do solemnly and sincerely declare

that while a member of the CMSA I will at all times do all within my power to promote the objects of the CMSA and uphold the dignity of the CMSA and its members

that I will observe the provisions of the Memorandum and Articles of Association, By-laws, Regulations and Code of Ethics of the CMSA as in force from time to time

that I will obey every lawful summons issued by order of the Senate of the said CMSA, having no reasonable excuse to the contrary

and I make this solemn declaration faithfully promising to adhere to its terms

Signed at ..... this ..... day of

..... 20 .....

Signature .....

Witness .....

(who must be a Founder, Associate Founder, Fellow, Member, Diplomate or Commissioner of Oaths)

7.2 A two-thirds majority of members of the CMSA Senate present at the relevant meeting shall be necessary for the award to any candidate of a Fellowship

7.3 A Fellow shall be entitled to the appropriate form of certificate under the seal of the CMSA

7.4 In the event of a candidate not being awarded the Fellowship (after having passed the examination) the examination fee shall be refunded in full excluding HPCSA candidates who are not entitled to a Fellowship.

7.5 The first annual subscription is due one year after registration (statements are rendered annually)

## APPENDIX A

### FCD(SA) PART I

#### GUIDELINES FOR THE PART I EXAMINATION

#### 1.0 ANATOMY

##### Recommended text book for Anatomy, Embryology, Histology and Oral Biology:

Fundamentals of Anatomy and Physiology

Martini, Nath, Bartholomew

11th Edition

Pearson.<sup>2</sup>

##### 1.1 **Head:** Surface anatomy

Osteology of calvaria, especially base of skull and temporal region; upper mid and lower face, orbit, nasal cavity; mandible; individual bones of the skull

The scalp

Temporomandibular articulation

**Muscles:** of mastication, facial, of tongue, of palate

Contents of orbit

Nasal cavity and paranasal air sinuses

Pterygopalatal fossa, infratemporal fossa

**Structures of the oral cavity:** lips, cheeks, tongue, floor of mouth, palate, teeth, gingivae

Salivary glands

Ear, external and middle

Oropharynx

Blood vessels and nerves

Blood and nerve supplies, lymphatic drainage, relations, variations

Neurocranial contents

Brain stem

Cranial nerves

Major intracranial vessels and sinuses

Radiology anatomy of head

##### 1.2 **Neck:** Surface anatomy

Osteology of cervical vertebrae, hyoid Muscles

Triangles of the neck, and contents

Larynx and trachea

Laryngopharynx and upper oesophagus

Thyroid and parathyroids

Blood vessels and nerves

Blood and nerve supplies, lymphatic drainage, relations

Radiological anatomy

##### 1.3 **Thorax:** Surface anatomy

Thoracic wall

Diaphragm, intercostal muscles and accessory muscles of respiration

Trachea, lungs, pleural cavities

Mediastinum including heart and great vessels, oesophagus

Blood and nerve supplies, lymphatic drainage, relations

Radiological anatomy

#### 2.0 EMBRYOLOGY

##### 2.1 **General knowledge:** Early embryological events

Cardiovascular system

Respiratory system

Gastrointestinal system

2.2.../

<sup>2</sup> Updated recommended reading

- 2.2 **Detailed knowledge:** Development of pharyngeal (branchial) arches  
 Pharyngeal arch derivatives  
**Development of pharyngeal pouches:** middle ear, tonsil thymus, parathyroid, ultimobranchial body  
 Other pharyngeal derivatives especially thyroid  
 Development of face, jaws, oral and nasal cavities and paranasal sinuses, tongue and palate, salivary glands, pharynx  
 Development of blood and nerve supplies and muscles of the face of mastication and of the tongue  
 Development of teeth, including role of ectomesenchyme and determination of crown pattern  
 Development of periodontium  
 Tooth eruption  
 Osteogenesis, cementogenesis, amelogenesis, dentinogenesis  
 Development of temporomandibular joint  
 Development of cranium

### 3.0 HISTOLOGY

- 3.1 **General knowledge:** **Primary tissues:** epithelia, connective tissues and blood, nerve tissue, muscle Skin  
 Cardiovascular system  
 Respiratory tract  
 Endocrine system (especially thyroid, parathyroid, pituitary)  
 Lymphoreticular system

- 3.2 **Detailed knowledge:** **Tooth:** enamel, cementum, dentine, pulp  
**Periodontium:** junctional and sulcular epithelium, gingival fibre system, cementum, periodontal ligament, alveolar bone  
 Cheeks, lips, tongue, floor of mouth, palate  
 Salivary glands  
 Cartilage, bone, sutures  
 Striated muscle

### 4.0 ORAL BIOLOGY

- 4.1 **Basic genetic mechanisms:** nucleic acids, biosynthesis of protein; cell growth, division and control  
 Important development syndromes of head and neck and genetics of inheritance of major developmental abnormalities
- 4.2 **Differentiation and maintenance of tissues:** cell turnover; permanent cells; renewal by duplication, stem cells, pluripotential cells
- 4.3 **Cellular ultrastructure**  
 cell membrane and glycocalyx  
 cilia, flagella, kinetosomes, microvilli and intercellular junctions  
 cytoplasmic compartment, organelles, sites of metabolic activity  
 nuclear compartment, envelope, chromatin and nucleolus  
 cytoskeleton
- 4.4 **Cellular communication**  
 transmembrane transport mechanisms  
 chemical mediators, hormones, neurotransmitters, intracellular and surface receptors (steroids and peptides), target cell adaptation  
 extracellular components: fibres, ground substance, attachment glycoproteins  
 epithelium-mesenchymal interactions

4.5 **Oral epithelium**

keratinocytes  
 non-keratinocytes (“clear cells”)  
 intercellular junctions  
 junctional epithelium and epithelial attachment  
 patterns of epithelial differentiation and maturation  
 permeability  
 epithelium of “specialised” mucosae

Interface between oral epithelium and connective tissue/tooth

4.6 **Connective tissues of the oral mucosa and periodontium**

the cells  
 the fibres  
 the ground substance  
 the blood and lymph vessels  
 the nerves

Regional differences and functions of oral mucosa

Mechanisms of tooth support

Gingival fluid

Ageing of oral tissues

**5.0 PHYSIOLOGY**5.1 **Basic cell functions:**

Cell structure  
 Chemical composition of the body  
 Molecular control mechanisms - DNA and proteins  
 Energy and cellular metabolism  
 Movement of molecules across cell membranes

5.2 **Control systems:**

Neural control mechanisms  
 Hormonal control mechanism  
 Muscle

5.3 **Co-ordinate body functions:**

Circulation and blood  
 Respiration and blood  
 Regulation of water and electrolyte balance  
 Digestion and absorption of food  
 Defence mechanisms: immunology  
 Sensory systems  
 Body movement  
 Consciousness and behaviour

5.4 **Oral physiology:**

Composition and functions of saliva  
 Swallowing and chewing  
 Oral sensation  
 Mineralisation of teeth and ossification  
 Hormonal and dietary influences on oral tissues  
 Growth

## 6.0 PRINCIPLES OF PATHOLOGY INCLUDING MICROBIOLOGY

### Recommended books:

Robbins, Kumar, Cotran (Editors)

Robbins Basic Pathology

7th Edition

Philadelphia, Pa., London, Saunders, 2003.

Rippey JJ. Illustrated lecture notes General Pathology

2nd Edition 1994.<sup>3</sup>

### 6.1 Cell injury and cell death:

- Cell injury and necrosis;
- Apoptosis;
- Sub-cellular responses to cell injury;
- Ionising radiation

### 6.2 Adaptions, intracellular accumulations and cell ageing:

- Cellular adaptations of growth and differentiation;
- Intracellular accumulations;
- Pathologic calcification;
- Hyaline change;
- Cellular ageing;
- Pigments

### 6.3 Inflammation:

- Acute inflammation;
- Chronic inflammation;
- Chemical mediators;
- Morphologic patterns

### 6.4 Infectious diseases:

- Transmission and dissemination of microbes;
- How micro organisms cause disease;
- Immune evasion by microbes;
- Spectrum of inflammatory responses to infection;
- Acute pyogenic infections, wound infections and hospital infections;
- Principles of disinfection and sterilisation;
- Antibacterial chemical agents;
- Opportunistic infections;
- Hepatitis;
- AIDS

### 6.5 Diseases of immunity:

- General features of the immune system;
- Disorders of the immune system (hypersensitivity reactions);
- Autoimmune diseases;
- Immunologic deficiency syndromes;
- Amyloidosis

### 6.6 Genetic disorders:

- Mutations, mendelian disorders;
- Disorders with multifactorial inheritance;
- Cytogenetic disorders;
- Molecular diagnosis;
- Diagnosis of genetic disorders

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<sup>3</sup> Updated recommended reading

- 6.7 **Tissue repair:**
- Control of normal cell growth;
  - Extra cellular matrix and cell-matrix interactions;
  - Repair by connective tissue (fibrosis);
  - Wound healing
- 6.8 **Neoplasia:**
- Characteristics of benign and malignant neoplasms;
  - Epidemiology;
  - Molecular basis of cancer;
  - Biology of tumour growth;
  - Carcinogenic agents and their cellular interactions;
  - Host defence against tumours – tumour immunity;
  - Clinical features of tumours
- 6.9 **Blood vessels:**
- Vascular wall cells and their response to injury;
  - Vascular diseases;
  - Atherosclerosis;
  - Hypertensive vascular disease;
  - Aneurysms and dissection
- 6.10 **Haemodynamic disorders:**
- Oedema;
  - Hyperaemia and congestion;
  - Haemorrhage;
  - Haemostasis and thrombosis;
  - Embolism
  - Infarction;
  - Shock
- 6.11 **The heart:**
- Heart failure ischaemic heart disease;
  - Hypertensive heart disease;
  - Valvular heart disease
- 6.12 **Diabetes:**
- Classification and incidence;
  - Pathogenesis;
  - Morphology;
  - Clinical features;
    - Complications



**A P P E N D I X B**

**FCD(SA) PART II**

**Oral Pathology**

1. This should relate to the requirements for the practise of Oral Medicine and Periodontology
2. The paper will comprise six questions in two sections:

**Section A**

- two core questions which **must** be answered

**Section B**

- two questions orientated towards Oral Medicine and Periodontology
- two questions orientated towards Maxillofacial and Oral Surgery

Of the four questions in Section B the candidate may answer **any two** of his choice