



**JOHANNESBURG  
ACADEMIC OFFICE**

# CMSA

The Colleges of Medicine of South Africa NPC  
Nonprofit Company (Reg. No. 1955/00003/08)  
Nonprofit Organisation (Reg No 009-874 NPO)  
27 Rhodes Ave, PARKTOWN WEST 2193  
Private Bag X23, BRAAMFONTEIN 2017  
Tel: +27 11 726-7037/8/9  
Fax: +27 11 726-4036

General: [admin@cmsa-jhb.co.za](mailto:admin@cmsa-jhb.co.za)  
Academic Registrar: [alv@cmsa-jhb.co.za](mailto:alv@cmsa-jhb.co.za)  
Website: [www.collegemedsa.ac.za](http://www.collegemedsa.ac.za)

**February 2016**

**THE COLLEGE OF PAEDIATRICIANS OF SOUTH AFRICA**

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

**FOR ADMISSION TO THE EXAMINATION FOR THE  
POST-SPECIALISATION**

**SUB-SPECIALTY CERTIFICATE**

**IN**

**ENDOCRINOLOGY AND METABOLISM**

**Cert Endocrinology and Metabolism(SA)**

**1.0 ELIGIBILITY TO TAKE THE EXAMINATION**

In order to be eligible to enter for this examination, the candidate:-

- 1.1 must comply with the requirements for registration as a medical practitioner, as prescribed by the Medical, Dental and Supplementary Health Services Act.
- 1.2 must be registered as a specialist Paediatrician

**2.0 ADMISSION TO THE EXAMINATION**

(to be read in conjunction with the Instructions)

The following are the requirements for admission to the examination:

- 2.1 registration as a specialist Paediatrician
- 2.2 certification of having completed at least 18 months as a subspecialty trainee in an accredited subspecialty unit in a teaching hospital, registered and approved by the Health Professions Council of South Africa
- 2.3 submission of a written report from the head of the institution/programme in which he or she trained indicating satisfactory completion of all training requirements
- 2.4 submission of a satisfactorily completed logbook
- 2.5 presentation or acceptance for presentation of an original first author research poster or paper at a local or international congress OR submission or acceptance for publication of an original first or co-authored manuscript in a peer reviewed journal.
- 2.6 Training is valid for a period of three years from the date of completion in a numbered subspecialty training post. Candidates who do not successfully complete the subspecialty examination within the period must motivate with support from their HOD to the College of Paediatricians for a once off extension.

**3.0 SYLLABUS AND TRAINING**

See Appendix A

**4.0 FORMAT AND CONDUCT OF THE EXAMINATION**

See Appendix B

**5.0 LOGBOOK**

See Appendix C

**6.0 RECOMMENDED READING:**

See Appendix D

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

### **SYLLABUS**

#### **1.0 Emergencies:**

- Hypoglycaemic coma
- Diabetes-related comas
- Thyrotoxic crisis and myxoedema coma
- Hyper- and hypocalcaemic crisis
- Addisonian crisis
- Hypopituitary crisis
- Hyper- and hyponatraemia
- Hyper- and hypokalaemia
- Management of the newborn infant with disorders of sexual differentiation

#### **2.0 Diabetes Mellitus:**

- Diagnosis
- Aetio-pathogenesis
- Epidemiology
- Clinical manifestations
- Complications
- Therapy
- Intercurrent states, eg surgery
- Rare genetic syndromes of insulin resistance

#### **3.0 Hypoglycaemia:**

- Investigation and management of hypoglycaemia in the neonate and young child
- Congenital hyperinsulinism
- Metabolic disorders
- Other syndromes

#### **Other pancreatic endocrine pancreatic disorders (gastrinoma etc)**

#### **4.0 Lipid disorders:**

- Inherited dyslipidaemias:
  - Hypertriglyceridaemia
  - Hypercholesterolaemia

#### **5.0 Thyroid disorders:**

- Graves' disease
- Graves' ophthalmopathy
- Thyroiditis
- Primary thyroid neoplasms
- Goitrous hypothyroidism
- Iodine deficiency disorders
- Thyroid hormone homeostasis in non thyroidal illness
- Congenital hypothyroidism
- Screening for congenital hypothyroidism

**6.0 Pituitary disorders:**

- Prolactinoma
- Craniopharyngioma
- Cushing's disease
- Glycoprotein-secreting adenomas
- "Non-secretory" adenomas
- Hypopituitarism
- Panhypopituitarism
- Hypernatraemic syndromes
- Hypernatraemic syndromes (ADH, etc)

**7.0 Adrenal disorders:**

- Adrenal glucocorticoid and mineralocorticoid hyper- and hypofunction
- Congenital adrenal hyperplasias
- Pharmacological use of glucocorticoids
- Pheochromocytoma
- Premature adrenarche

**8.0 Parathyroid disorders:**

- Hyper- and hypoparathyroidism
- Syndromes (pseudohypoparathyroidism)

**9.0 Metabolic Bone disease:**

- Primary and secondary osteoporosis
- Rickets and osteomalacia
- Osteogenesis imperfecta
- Abnormalities of vitamin D metabolism

**10.0 Endocrine Hypertension:**

- Endocrine participation in essential hypertension
- Renin-angiotensin hypertension
- Mineralocorticoid-induced hypertension
- Endocrine/metabolic sequelae of therapy

**11.0 Growth and Pubertal disorders:**

- Short stature
- Growth failure
- Tall stature
- Delayed puberty
- Precocious puberty/pseudo puberty

**12.0 Disorders of sexual differentiation:**

- Virilisation and feminisation
- Intersex
- True hermaphroditism

**13.0 Ovarian disorders:**

- PCOS/hirsutism
- Hormone replacement therapy
- Induction of puberty

**14.0 Testicular disorders:**

- Hypogonadism
- Androgen resistance
- Androgen replacement therapy
- Induction of puberty

**15.0 Nutritional disorders:**

- Obesity
- Anorexia nervosa

**16.0 Endocrine disorders in systemic diseases:****17.0 Multi-endocrine disorders:**

- MEN syndromes
- Polyglandular syndromes
- Disorders of vasodilator hormones
- “APUD” syndromes

**18.0 Breast disorders:**

- Galactorrhoea
- Gynaecomastia

**19.0 Endocrine Oncology:**

- Endocrine consequences of childhood malignancy:
  - primary disorders
  - secondary effects (surgery, irradiation, chemotherapy)
- Para-neoplastic endocrine and metabolic manifestations
- Thyroid cancer
- Cerebral tumours

**20.0 Other:**

- Epidemiology of common endocrine and metabolic conditions
- Age-related changes in endocrine function
- Endocrine/metabolic affects of drugs

**APPENDIX B****1.0 FORMAT AND CONDUCT OF THE EXAMINATION****1.1 Evaluation of Competence**

1.1.1 Evaluation of overall competence of the trainee will be based on:

- a) an appraisal by the Head of Unit/Division/Department of the institution where training was undertaken
- b) an examination under the auspices of the Colleges of Medicine of South Africa (CMSA).

**2.0 PORTFOLIO**

- 2.1 A portfolio/logbook is a mandatory requirement for entry to the examination.
- 2.2 The portfolio for the sub-specialty is attached (Appendix C).
- 2.3 The portfolio includes six-monthly formative assessments (as a minimum) made by the supervisor/divisional head, which is signed by both candidate and trainer. These assessments should, however, be kept confidential and should not be submitted to the CMSA.
- 2.4 Each candidate will be expected to submit their portfolio/logbook to the CMSA by 15 January or 15 June of each year (for the relevant March or August examination).
- 2.5 Portfolios are viewed by the HOD and satisfactory performance must be indicated in their letter to the CMSA

**3.0 EXAMINATION CONVENORS**

- 3.1 A list of potential convenors will be requested from appropriate individuals, group or society at the College of Paediatricians' (hereafter referred to as the "College") discretion.
- 3.2 The College will select convenors for each examination.
- 3.3 In the case of a convenor from each examining centre not being represented on the convenors' list submitted by a group or society, the College Council may at its discretion appoint a convenor from another centre for a particular examination.

**4.0 CONVENOR RESPONSIBILITIES****The Convenor will:**

- 4.1 Recommend an examiner's panel from the approved list of examiners supplied by the College.
- 4.2 Be sensitive to the following issues in selecting examiners:
  - 4.2.1 Rotation of examiners (representation from different centres)
  - 4.2.2 Exposure of junior sub-specialists (new examiners)
  - 4.2.3 Representation from different centres in South Africa (must have representation from three different centres, except in exceptional circumstances)
  - 4.2.4 The CMSA's transformation goals.
- 4.3 Forward the recommended examiners' panel to the College for approval
- 4.4 Recommend a moderator for the examination to the College.
- 4.5 Forward a copy of the draft written paper to the College for review by the moderator.
- 4.6 Submit a written report to the College Council after each examination outlining the conduct of the examination, marks achieved, success rates, problems identified and recommendations for future examinations. This report will also be sent to the Head of each training centre and the CMSA Examinations office.

**5.0 EXAMINER SELECTION**

- 5.1 Examiners will be appointed by the College following recommendation by the convenor.
- 5.2 A Certificate examiner must be registered with the Health Professional Council of South Africa (HPCSA) as a sub-specialist, and should be at least two years post his or her certification examination or registration as a sub-specialist.
- 5.3 Use of a non-specialist examiner or one from an allied subspecialty must be motivated for in writing to the College.
- 5.4 The examination panel will consist of three examiners, including the convenor. This number of examiners is considered fair to the needs of the candidate and the CMSA.

- 5.5 Any request to alter the examiner numbers for an individual examination must be motivated in writing to the College.
- 5.6 The written and oral/OSCE examinations will be conducted by the same set of examiners.
- 5.7 An examiner will not necessarily be excluded if he/she is the trainer/supervisor of the candidate.
- 5.8 Ideally, no more than one examiner will be chosen from any single centre in South Africa for each examination.
- 5.9 The selection of Certificate examiners will be independent of the FC Paed(SA) Part II examiner selection process.
- 5.10 Whenever possible the same examiner should not be involved in a Certificate examination and a FC Paed(SA) Part II examination simultaneously.
- 5.11 The CMSA Academic Office will be responsible for notifying examiners about their selection for an individual examination.

## **6.0 MODERATORS**

- 6.1 In order to adhere to CMSA standards and for quality assurance, a process of 'moderation' of each examination is considered necessary.
- 6.2 A moderator shall be appointed by the College for the Certificate examination. This individual will ideally be a senior member of the sub-specialty.
- 6.3 Prior to the conduct of the written examination, the moderator will check that the examination questions and marking memorandum reflect a fair spread of the curriculum (reliability), match the curriculum (validity), and that the mark allocation of the questions is fair and appropriate.
- 6.4 The moderator will complete a report and return this to the College and the CMSA at the end of each examination. The College will formally review the report.

## **7.0 STRUCTURE OF THE EXAMINATION**

- 7.1 The Certificate examination has two components:
- a) A written component
  - b) A oral/OSCE/OSPE/clinical component.
- 7.2 Each of the two components contributes 50% to the overall mark
- 7.3 The pass mark for the overall exam is 50%.
- 7.4 A sub-minimum pass mark of 50% is expected for each of the two (written and the oral/OSCE/clinical) components of the examination.
- 7.5 There is no sub-minima for individual papers, questions or sub-sections of the OSCE/oral/clinical examination.

## **8.0 EXAMINATION CENTRE**

- 8.1 Ideally the centre/region hosting the FC Paed(SA) Part II examination will be the host centre for each Certificate examination.
- 8.2 The Convenor of the examination will preferably, but not necessarily, originate from that centre/region.
- 8.3 Exceptions may be granted where there is no suitable Convenor based at that centre/region or the sole candidate in an examination is from the host centre.

## **9.0 WRITTEN EXAMINATION**

- 9.1 Certificate examinations will comprise of two three-hour written papers.  
Paper I will consist of 4 long questions or scenarios (may contain sub-parts), worth 25 marks each (each examiner shall submit 2 such questions to the Convenor).  
Paper II will consist of 10-12 short questions, worth 10 marks each (each examiner to submit 5 such questions to the Convenor).
- 9.2 A marking memorandum – a basic outline to the expected answer - will be provided, by each examiner at the time of question acceptance, including an indication of the allocation of marks for each section/part answer.
- 9.3 The language of written papers will follow College recommendations.

**10.0 CLINICAL / ORAL / OSCE EXAMINATIONS**

- 10.1 This examination will last NO LONGER THAN 3 hours (the recommended duration is 1–3 hours).
- 10.2 If the examination is longer than 1½ hours the candidate must be given a 15-minute break with refreshments.
- 10.3 This examination will consist of 5 ‘stations’ and/or 3–5 ‘clinical scenarios’. (Ideally, this examination should contain at least 5 ‘stations’ and/or 3–5 ‘clinical scenarios’).
- 10.4 The examination will be structured, balanced and similar for each candidate.
- 10.5 The language of the oral/OSCE/clinical examinations will follow College recommendations.

**11.0 TIMING OF ORAL/OSCE/CLINICAL EXAMINATIONS**

- 11.1 The examination will be held in the same week as the FC Paed(SA) Part II clinical examination.
- 11.2 Exceptions will be by written motivation to the College.

**12.0 RESPONSIBILITY OF THE COLLEGE IN THE EXAMINATION PROCESS**

- 12.1 Selection of Convenors, examiners, and moderators.
- 12.2 Monitoring of the conduct of each Certificate examination.
- 12.3 Reviewing all aspects of each examination on completion.
- 12.4 Tracking performance and success rates in individual examinations.

**13.0 APPEALS PROCESS**

- 13.1 The CMSA has an appeals process that will be followed.



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

**METABOLIC ANATOMICAL AND PATHOLOGICAL ASSESSMENT**

- 1.0 Radiology, CT Scanning and MR Imaging of pituitary, thyroid, adrenal and gonadal tissues
- 2.0 Radioisotope assessment of thyroid, adrenal, APUD tissues, skeleton
- 3.0 Radiological assessment of biological age
- 4.0 Radiological assessment of bone density, bone densitometry
- 5.0 Radiological and ultrasonographic assessment of macrovascular disease
- 6.0 FNA of the thyroid gland
- 7.0 Selective transvenous sampling of hormones

**A P P E N D I X D****1.0 RECOMMENDED READING:****1.1 Books:**

It is recommended that trainees should read a modern but relatively short and manageable textbook of Endocrinology in the first 3-6 months of training (eg Greenspan and Baxter: Basic and Clinical Endocrinology; Lavin: Manual of Endocrinology and Metabolism – updated every 2-3 years).

Modern reference textbooks on Endocrinology, Metabolism and Diabetes should be readily available (eg de Groot: Endocrinology; Williams Textbook of Endocrinology).

For Paediatricians: eg Bertrand, Rappoport, Sizonenko – Paediatric Endocrinology

**1.2 Journals:**

A range of general medical and endocrinology and diabetes journals are essential reading. Suggested journals include:

- Journal of Clinical Endocrinology and Metabolism
- Endocrine Reviews
- Clinical Endocrinology
- Diabetes Care
- Diabetic Medicine
- Diabetologia
- Journal of Paediatric Endocrinology and Metabolism