



# CMSA

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**JOHANNESBURG  
ACADEMIC OFFICE**

**August 2020**

**THE COLLEGE OF PHYSICIANS OF SOUTH AFRICA**

**SPECIAL REGULATIONS**

**FOR THE FS 2020 MODIFIED CLINICAL/PRACTICAL/ORAL EXAMINATIONS**

**FOR THE POST-SPECIALISATION**

**SUB-SPECIALTY CERTIFICATE**

**IN**

**CLINICAL HAEMATOLOGY**

**Cert Clin Haematology(SA) Phys**

**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 Physician

**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 Physician
- 2.2 certification of having completed at least eighteen months as a subspecialty trainee in accredited specialist department(s) /division(s) / unit(s) of clinical haematology, registered and approved by the Health Professions Council of South Africa.
- 2.3 a written report/written reports from the head/s of the institution/s in which he or she trained.
- 2.4 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 Physicians for a once off extension.

**3.0 SYLLABUS AND TRAINING**

See Appendix A

**4.0 FORMAT AND CONDUCT OF THE EXAMINATION**

See Appendix B

**August 2020**

## APPENDIX A

### 1.0 SYLLABUS AND TRAINING

This document details the curricula set by the ad hoc committee of the South African Society for Haematology (SASH) as the standard of training required for persons wishing to register as clinical haematologists. The curricula are based on the recommendations of the International Society of Haematology.

#### 1.1 What is a clinical haematologist ?

The Medical and Dental Professional Board of the Health Professions Council of South Africa created the new subspecialty of clinical haematology in response to SASH's request to unify the laboratory and clinical aspects of haematology. A paediatrician or physician can enter the subspecialty by training in mainly laboratory haematology for two years and passing the appropriate examinations. A haematological pathologist can enter the subspecialty of clinical haematology after training in paediatric or adult haematology for two years and passing the appropriate examinations. The sequence of training is not relevant.

##### 1.1.1 Clinical haematologists with the primary speciality of Internal Medicine

Such a person should restrict himself/herself to treating adults mainly with haematological disorders and can also perform laboratory investigations on his/her patients within the scope of his/her training.

#### 1.2 Syllabus to be covered in the laboratory component (minimum one year)

- Collection of blood samples, their transport and storage
- Morphology of blood cells and marrow aspirates and biopsies, including cytochemistry and immunological techniques
- Tests for iron status
- Haemoglobin electrophoresis with measurement of foetal haemoglobin, haemoglobin A<sub>2</sub> and detection of abnormal bands
- Blood cell counting and sizing
- Erythrocyte sedimentation rates and plasma viscosity
- Erythrocyte osmotic fragility, auto haemolysis and detection of paroxysmal nocturnal haemoglobinuria (PNH)
- Erythrocyte enzyme determinations
- Haemostasis: bleeding time, platelet function
- Coagulation factor studies: prothrombin time, partial thromboplastin time, individual factor assays, inhibitor assays, tests for thrombophilia
- Control of anticoagulant and thrombolytic therapy
- Use of radionuclides for blood volume, red cell mass, erythrokinetics, vitamin B<sub>12</sub> folate and ferritin measurement
- Identification of blood group antigens and antibodies
- Compatibility testing for blood transfusion
- Investigation of transfusion reactions
- Autoimmune antibody testing on erythrocytes
- Autoimmune antibody testing on erythrocytes
- Paraprotein investigations
- Basic flow cytometry (immunophenotyping)
- Basic molecular biology (as applied in haematology)
- Procedures performed in an emergency laboratory
- Laboratory management: resource allocation, budget control, audit and quality assurance, establishment of normal ranges and data management by computers
- Laboratory safety

**1.3 Syllabus for the clinical component (one year)****1.3.1 Spectrum of haematological diseases**

- Deficiency anaemias
- Disorders of haemoglobin structure
- Haemolytic anaemias
- Aplastic anaemia
- Haematological malignancies: leukaemias and lymphomas (all aspects of management, including bone marrow transplantation)
- Congenital and acquired bleeding disorders
- Thromboembolic disorders and anticoagulation
- Transfusion medicine
- Haematological problems associated with perinatal care; intensive care; renal medicine, organ transplantation, orthopaedic and vascular surgery. Liaison with a wide variety of departments is encouraged

**1.3.2 Knowledge and practice of clinical haematology**

It is expected that completion of the curriculum will result in demonstrable competence at consultant level in the following areas. Paediatricians will concentrate on paediatric conditions and patients, while physicians will concentrate on adult conditions and patients.

**1.3.2.1 Clinical contact with the patient**

This will require the trainee to be able to take a history and perform a clinical examination of a patient with a haematological disorder

**1.3.2.2 Diagnostic evaluation**

This will require that the trainee will be able to clinically evaluate the spectrum of haematological disorders mentioned under 1.3.1. He/she must be able to order the appropriate diagnostic investigations for any given haematological disorder

**1.3.2.3 Therapeutic decision making**

This will firstly require the correct interpretation of the history, clinical signs, and diagnostic investigations. Secondly it will involve therapeutic decision making in the light of the patient's situation

**1.3.2.4 Knowledge of haematological diseases**

This will require a thorough knowledge of all aspects, including epidemiology, aetiology, pathogenesis, pathology, clinical features and management of all conditions mentioned in Appendix A

**1.3.2.5 Understand the pharmacology of drugs and used in haematological diseases**

This will require knowledge of drugs used to treat deficiency anaemias, immunosuppressive drugs, cytostatic drugs, biological products used in haematological diseases, antithrombotic drugs and drugs used to treat haemorrhagic diatheses

**1.3.2.6 Knowledge of the use of blood products in haematological disorders**

This will require knowledge of transfusion medicine and the rational use of blood products and components in the whole spectrum of haematological conditions. It will also require the ability to advise other discipline on the rational use of blood products

**1.3.2.7 Haematological emergencies**

Special emphasis needs to be placed on haematological emergencies like autoimmune haemolytic anaemia, leucostasis, haemophilia and other haemorrhagic diatheses

**1.3.2.8 Appreciate the role of patient education and staff management in haematological conditions**

This will require knowledge of patient education in haematological conditions and the concept of team approach to patient management

**1.3.2.9 Liaison with other disciplines**

This will require knowledge of the application of other medical specialities in the management of haematological conditions. Example of these include surgery, radiation oncology, intensive care and infectious disease services

1.3.3 **Special skills**1.3.3.1 **Bone marrow aspiration and biopsy**

The trainee will be required to be competent at aspirating bone marrow and performing bone marrow trephine biopsies

1.3.3.2 **Safe handling of cytotoxic drugs**

The trainee will be required to be competent at safely preparing and administering cytotoxic drugs

1.3.3.3 **Apheresis**

The trainee will be required to be able to manage the various forms of apheresis (in adults)

1.3.3.4 **Bone marrow and peripheral stem cell transplantation**

These procedures are not available at all centres. The trainee must have had a year's experience in these techniques before performing them independently. This is in line with the guidelines of the European Bone Marrow Transplantation Society. The candidate is expected to have an adequate knowledge of this procedure as it is examinable

1.3.3.5 **Counselling and communication skills**

The trainee should maintain good ethical standards with an empathetic approach to patients and their families. The trainee should be able to counsel patients, their families and staff

**APPENDIX B****1.0 CONDUCT OF THE FINAL EXAMINATION –  
EFFECTIVE FOR FIRST SEMESTER EXAMINATION 2020****1.1 Evaluation of Competence**

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

- a) an appraisal by the Educational Supervisor
- b) an examination under the auspices of the Colleges of Medicine of South Africa.

The examination will comprise a written paper, clinical cases, laboratory practical examination and an oral examination, which may cover any aspects of clinical haematology outlined in the curriculum and which may be taken after a minimum training period of 18 months.

1.1.2 There will be at least 2 examiners for each examination, of whom at least 1 will be a registered clinical haematologist

1.1.3 Upon award of the Certificate, the trainee may apply to the Health Professions Council of South Africa for subspecialty registration.

**2.0 CMSA EXAMINATION**

The final examination consists of:

2.1 A written paper.

2.2 A modified clinical/practical/oral examination will be conducted in the form of a practical (microscope-based) Assessment of Competence (AoC), three written online examinations and two Zoom-based Structured Oral Examinations.

2.2.1 Candidates will engage in an Assessment of Competence (Paper 1) at the venues listed on the timetable. Format of the AoC:

- Each candidate will review the morphology on 10 glass slides and answer questions that are specific to each slide.
- Duration of examination: 150 minutes in total (and an additional 40 minutes allowed for typing).
- Candidates will answer using electronic online examination scripts with typed text responses.

2.2.2 Candidates will engage in three written online examinations at the venues listed on the timetable. Format of the written examinations:

- Duration of each examination: 2 hours (additional 30 minutes allowed for typing per examination).
- Content of each examination:
  - Paper 2: Flow cytometry, cytogenetics and molecular genetics
  - Paper 3: Coagulation
  - Paper 4: Special haematology and blood transfusion
- PowerPoint slides will be used to present the examination material.
- The examination material may include case histories and test results, still images, photos and diagrams.
- Candidates will answer using electronic online examination scripts, with typed text responses.

2.2.3 Format of the Structured Oral Examinations:

- Number of stations: 5, which included 4 paper case-based stations and 1 oral/verbal station (viva).
- Duration of stations: 30 minutes each.
- The examination material may include case histories and test results, still images, photos, diagrams and radiology imaging.

**2.3 WEIGHTING OF THE EXAMINATION FOR THE CERT CLIN HAEMATOLOGY(SA)**

- Written Paper (50%)
- Clinical/practical/oral Examination (50%)

50% of the mark will be obtained from the written examination. The remaining 50% will be derived from the modified clinical/practical/oral examination. The modified clinical/practical/oral examination (100% divided by 2 to get 50%), will comprise the following: i) Practical/Laboratory Assessment of Competence and three written examinations which collectively contribute 45%, ii) Case-based SOE which contributes 45% and a iii) topic-based SOE which contributes 10%. Each of the 3 components of the modified clinical/practical/oral examination needs to be passed independently with a subminimum mark of 50%. A score of 50% or more overall will be deemed a pass score.

### **3.0 ACCREDITATION AND REGISTRATION OF TRAINING CENTRE**

Approval and registration of clinical haematology training units/centres/divisions will be considered jointly by the Health Professions Council of South Africa, the South African Society for Haematology and the SA Society of Clinical Haematology.

The following aspects will be considered in the evaluation of a training centre:

- a) qualifications of the Educational Supervisor, who should be a registered clinical haematologist;
- b) the case load and spectrum of haematological cases managed and
- c) the spectrum of haematological laboratory investigations offered