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JOHANNESBURG
ACADEMIC OFFICE

November 2017

THE COLLEGE OF PHYSICIANS 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

CLINICAL HAEMATOLOGY

Cert Clin Haematology(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 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

JOHANNESBURG
November 2017

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 subspeciality 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 subspeciality 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 A₂ 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 B₁₂ folate and ferritin measurement
- Identification of blood group antigens and antibodies
- Compatibility testing for blood transfusion
- Investigation of transfusion reactions
- Autoimmune antibody testing or erythrocytes
- Autoimmune antibody testing or 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 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 Educational Supervisor
- b) an examination under the auspices of the Colleges of Medicine of South Africa, which will be held twice a year.

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 subspeciality registration.

1.2 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

1.3 STRUCTURE OF THE EXAMINATION

1.3.1 The Certificate examination has two components:

- a) A written component
- b) A practical component (containing an oral, clinical and laboratory practical section).

1.3.2 The oral, clinical and laboratory sections contribute 10%, 45% and 45% respectively to the overall mark of the practical component

1.3.3 The pass mark for the overall examination is 50%.

1.3.4. The written and the practical component of the examination will each contribute 50% to the overall mark

1.3.5 A sub-minimum pass mark of 50% is expected for the written paper and each of components of the practical examination (i.e. the oral, clinical and laboratory examinations must each be passed separately).

1.4 Carry over of written examination

A candidate who has been invited to the clinical examination and fails the oral aspect of the examination, shall be allowed to re-do ONLY THE ORAL ASPECT AT THE NEXT EXAMINATION (without re-writing the written aspect of the examination)

The carry-over of the written examination is allowed only once ie for the next examination only. Should the candidate fail the oral examination again, then the candidate must re-write the full examination at their next attempt.

Written examination carry-over applies with immediate effect according to the Colleges of Medicine of South Africa Senate meeting held on the 26 October 2017.

APPENDIX C**BLUEPRINT FOR THE CERTIFICATE IN CLINICAL HAEMATOLOGY
OF THE COLLEGE OF PHYSICIANS 2015**

This blueprint is for both the Certificate in Clinical Haematology of the College of Physicians and the College of Pathologists

1.0 WRITTEN EXAMINATION PAPERS

The candidate must pass the written examination paper in order to proceed to the clinical, practical and oral examinations. The written paper pass mark is the aggregate 50%.

1.1 The written paper will consist of 4 questions worth 25 marks each. Of the 4 questions 3 must be essay questions and one question comprising of sets of 5 or 10 short questions, each worth 2.5 or 5 marks (total 25 marks).

1.2 The paper will examine predominantly basic sciences and applied clinical and laboratory haematology

1.2.1 Coagulation should not comprise more than approximately 25% of the marks allocated

1.2.2 Malignancies should not comprise more than approximately 25% of the marks allocated

1.2.3 General haematology should not comprise more than approximately 25% of the marks allocated

1.2.4 Laboratory quality assurance, blood transfusion and laboratory management should comprise approximately 25% of the marks allocated.

1.2.5 Laboratory technology, diagnostic techniques and instrumentation should not comprise more than 12.5%

1.3 **Clinical and laboratory Haematology - 50% of the exam mark**

Should be able to demonstrate knowledge of aetiology, pathology, pathogenesis, investigation, diagnosis, prognosis and principles of treatment of disorders and diseases in the following areas:

1.3.1 Bleeding disorders

1.3.2 Thrombotic disorders

1.3.3 Platelet disorders

1.3.4 Red cell disorders

1.3.5 White cell disorders

1.3.6 Lymphoid malignancies

1.3.7 Myeloid malignancies

1.3.8 Consultative haematology(including but not limited to infections, surgical , gynaecology, ICU, nephrology, rheumatology, etc)

1.3.9 Principle of Paediatric Haematology

1.3.9.1 While typical paediatric cases should not be included, patients with genetic diseases that are expressed in adults can be included.

1.3.10 Haematological emergencies

1.3.11 Haematological procedures

1.3.12 Blood transfusion

1.3.13 Immunology and immune haematology

1.3.14 Principles of statistics

1.3.15 Laboratory management, quality assurance and accreditation of laboratories

1.3.16 Principles of automation and of instrumentation in Haematology

1.3.17 Molecular diagnosis of diseases.

1.3.18 Flow cytometry

2.0 PRACTICAL EXAMINATION

- 2.1 Must pass all three parts of the practical examination which include laboratory, clinical and oral examinations independently in order to pass the practical.
- 2.2 The standard of the haematology laboratory examination in the Cert Haematology(SA) examination will be equivalent to that of haematology practical component of Clinical Pathology examination
- 2.3 The mark allocation of the laboratory practical is as follows:

2.3.1 Laboratory haematology - 45% of the practical examination

2.3.1.1	Morphology	-	40% of the lab haematology practical
2.3.1.2	Coagulation	-	15% of the lab haematology practical
2.3.1.3	Special haematology	-	10% of the lab haematology practical
2.3.1.4	Flow cytometry	-	10% of the lab haematology practical
2.3.1.5	Molecular pathology	-	15% of the lab haematology practical
2.3.1.6	Cytogenetics	-	5% of the lab haematology practical
2.3.1.7	Blood transfusion	-	5% of the lab haematology practical

- No “wet practical” will be included in the laboratory examination.
- Sections of the practical laboratory examination may be examined alone or combined with other sections in the practical examination.
- The overall pass mark for the laboratory practical is the 50% aggregate mark of all components

3.0 Clinical examination - 45% of the practical examination

The clinical examination will take the following format:

- 3.1 Four short cases (each worth 11.25 marks or 25% of the clinical exam).
 - 3.1.1 Short cases will require presentation of the problem and clinical signs, an approach to a cost effective investigation plan, provision of a differential diagnosis and discussion of the clinical management of the problem. Candidates must answer examiner's questions in a mature way, noting the particular relevance when there are several target systems involved. Candidate may be asked to discuss haematological diagnostic techniques and methods that are relevant to the clinical presentation.

The overall pass mark in the clinical examination shall be an aggregate of all cases which should be 50% and above.

4.0 Oral examination – 10%

- 4.1 The oral examination will be based on any of the above described topics and on issues that may originate in the examination papers.
- 4.2 Clarification on certain responses in the written exam, laboratory answers or clinical cases may be sought, thus graphs and pathology or clinical pictures may again be used as exam material (flow cytometry, cytogenetics, melting curves, etc).
- 4.3 Short clinical or laboratory management issues may be asked.
- 4.4 The pass mark for the oral examination shall be 50% or more