



# CMSA

The Colleges of Medicine of South Africa NPC

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**JOHANNESBURG OFFICE**  
**EXAMINATIONS & CREDENTIALS**

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## **BLUEPRINT FOR FC PATH(SA) ANAT EXAMINATION:**

### **1.0 PART I CURRICULUM (Candidates must pass both the written and practical components)**

- 1.1 Cellular responses to stress and toxic insult; Acute and chronic inflammation; Tissue renewal, repair and regeneration
- 1.2 Haemodynamic disorders, thrombo-embolic disease and shock;
- 1.3 Genetic disorders
- 1.4 Disease of the immune system
- 1.5 Neoplasia
- 1.6 Infectious diseases; Environmental and nutritional diseases; Diseases of infancy and childhood
- 1.7 The heart
- 1.8 Blood vessels; Diseases of white blood cells, lymph nodes, spleen and thymus; Red blood cell and bleeding disorders
- 1.9 The lung
- 1.10 Head and neck
- 1.11 The gastrointestinal tract
- 1.12 Liver and biliary track; The pancreas
- 1.13 The kidney;
- 1.14 The lower urinary tract and male genital system
- 1.15 The female genital tract
- 1.16 The breast
- 1.17 The endocrine system
- 1.18 The skin
- 1.19 Bones, joints and soft tissue tumours
- 1.20 Peripheral nerve and skeletal muscle; The central nervous system; the eye
- 1.21 Normal histology
- 1.22 The principles of the light microscope, including fluorescence microscopy and photomicroscopy, and of the electron microscope; histochemistry, immunohistochemistry and molecular pathology

### **2.0 PART I WRITTEN EXAMINATION BLUEPRINT (Weighting = 50%; Pass mark determined by standard setting procedure)**

A combination of short answer questions, ultra-short answer questions and multiple choice questions totaling 100 marks, in 3 hours, spread across the above areas (1.1-1.22)

#### **2.1 Recommended reading for the Part I will include:**

- Standard texts on Pathology (eg Robbins & Cotran Pathologic Basis of Disease;)
- Standard texts on normal histology (eg: Stevens & Lowe's Human Histology)

**3.0 PART I PRACTICAL EXAMINATION BLUEPRINT (Weighting = 50%, Pass mark determined by standard setting procedure)**

	<b>Congenital</b>	<b>Traumatic</b>	<b>Infective</b>	<b>Inflammatory</b>	<b>Vascular</b>	<b>Metabolic</b>	<b>Neoplastic</b>	<b>Mechanical</b>	<b>Degenerative</b>
CNS	X	X	X	X	X	X	X	X	X
Eye	X	X	X	X	X	X	X	X	X
ENT	X	X	X	X	X	X	X	X	X
Lung	X	X	X	X	X	X	X	X	X
Mediastinum, pleura	X	X	X	X	X	X	X	X	X
Heart, blood vessels	X	X	X	X	X	X	X	X	X
Endocrine	X	X	X	X	X	X	X	X	X
Salivary gland, oral	X	X	X	X	X	X	X	X	X
GIT	X	X	X	X	X	X	X	X	X
Liver, biliary tract	X	X	X	X	X	X	X	X	X
Pancreas	X	X	X	X	X	X	X	X	X
Spleen, thymus, bone marrow	X	X	X	X	X	X	X	X	X
Kidney, lower urinary tract	X	X	X	X	X	X	X	X	X
Male genital tract	X	X	X	X	X	X	X	X	X
Gynaecology	X	X	X	X	X	X	X	X	X
Pregnancy-related	X	X	X	X	X	X	X	X	X
Breast	X	X	X	X	X	X	X	X	X
Skin	X	X	X	X	X	X	X	X	X
Soft tissue	X	X	X	X	X	X	X	X	X
Skeletal muscle, peripheral nerve	X	X	X	X	X	X	X	X	X
Bone, joint	X	X	X	X	X	X	X	X	X
Lymph node	X	X	X	X	X	X	X	X	X

30 H&E-stained histopathology sections (including surgical and autopsy pathology) in 3- 4 hours, to be spread across the above areas.

Each slide will be diagnosable at a morphologic level.

No dual pathologies will be included.

Candidates may be required to type their answers for this practical examination onto a computer, which will then be uploaded electronically to the examiners at the end of the examination

**4.0 PART II CURRICULUM (Candidates must pass each of the 4 components)**

4.1 Laboratory management, including safety issues, accreditation and quality control

4.2 Applied bioethics and legal issues pertinent to Anatomical Pathology

4.3 Autopsy pathology

4.4 Gross techniques in surgical pathology

4.5 Frozen sections and other intraoperative procedures

4.6 Principles of special techniques

- Special stains
- Immunohistochemistry
- Immunofluorescence
- Electron microscopy
- Morphometry
- Cytogenetic analysis

4.5 Molecular pathology

- In-situ hybridization
- Polymerase chain reaction
- Next generation sequencing and related technologies

4.6 Surgical pathology, autopsy pathology and cytopathology, including epidemiology, aetiopathogenesis, clinical features, basic imaging, definitions, classification, grading, staging, morphology, workup of differential diagnosis, complications and basic treatment modalities of diseases

- Skin
  - Dermatoses
  - Tumours and tumour-like conditions
- Oral cavity and oropharynx
- Mandible and maxilla
- Respiratory tract
  - Nasal cavity, paranasal sinuses and nasopharynx
  - Larynx and trachea
  - Lung and pleura
- Mediastinum
- Thyroid gland
- Parathyroid glands
- Gastrointestinal tract
  - Oesophagus
  - Stomach
  - Small bowel
  - Appendix
  - Large bowel
  - Anus
- Major and minor salivary glands
- Liver
  - Non-neoplastic diseases
  - Tumours and tumour-like conditions
- Gallbladder and extrahepatic bile ducts
- Pancreas and ampullary region
- Adrenal gland and other paraganglia
- Urinary tract
  - Kidney, renal pelvis and ureter
    - ❖ Non-neoplastic diseases
    - ❖ Paediatric tumours and tumour-like conditions
    - ❖ Adult tumours and tumour-like condition
  - Bladder

- Male reproductive system
  - Prostate and seminal vesicles
  - Testis
  - Testicular adnexa
  - Penis and scrotum
- Female reproductive system
  - Vulva
  - Vagina
  - Uterine cervix
  - Uterine corpus
  - Fallopian tube
  - Ovary
  - Placenta
- Breast
- Lymph nodes
- Spleen
- Bone marrow
- Bone and joints
- Soft tissues
- Peritoneum, retroperitoneum and related structures
- Cardiovascular system
  - Heart
  - Arteries
  - Veins
  - Lymph vessels
- Central nervous system
- Pituitary gland
- Eye and ocular adnexa
- Ear

**5.0 PART II WRITTEN EXAMINATION BLUEPRINT (Paper 1 and Paper 2 combined weighting = 25%; Combined pass mark determined by standard setting procedure)**

Paper 1 and Paper 2 will each be composed of a combination of short answer questions, ultra-short answer questions and multiple choice questions totaling 100 marks, in 3 hours, spread across areas 4.1 – 4.6 above.

**5.1 Recommended reading for Part II will include:**

- Standard texts of diagnostic surgical pathology (eg Sternberg's Diagnostic Surgical Pathology; Rosai and Ackerman's Surgical Pathology etc)
- Standard text on cytology. (eg Cibas & Ducatman's Cytology)
- Standard texts of specific organ systems and regions. (eg dermatopathology, soft tissue tumours, gynaecological pathology, WHO Blue books etc)
- The relevant recent literature on anatomical pathology, including reviews and seminal articles in the following leading pathology journals, amongst others:
  - *Histopathology*
  - *Human Pathology*
  - *American Journal of Surgical Pathology*
  - *Seminars in Diagnostic Pathology*
  - *Diagnostic Histopathology*
  - *Archives of Pathology & Laboratory Medicine*

**6.0 PART II SURGICAL PATHOLOGY SLIDES EXAMINATION BLUEPRINT (Weighting = 25%; Pass mark determined by standard setting procedure)**

	<b>Congenital</b>	<b>Traumatic</b>	<b>Infective</b>	<b>Inflammatory</b>	<b>Vascular</b>	<b>Metabolic</b>	<b>Neoplastic</b>	<b>Mechanical</b>	<b>Degenerative</b>
CNS	X	X	X	X	X	X	X	X	X
Eye	X	X	X	X	X	X	X	X	X
ENT	X	X	X	X	X	X	X	X	X
Lung	X	X	X	X	X	X	X	X	X
Mediastinum, pleura	X	X	X	X	X	X	X	X	X
Heart, blood vessels	X	X	X	X	X	X	X	X	X
Endocrine	X	X	X	X	X	X	X	X	X
Salivary gland, oral	X	X	X	X	X	X	X	X	X
GIT	X	X	X	X	X	X	X	X	X
Liver, biliary tract	X	X	X	X	X	X	X	X	X
Pancreas	X	X	X	X	X	X	X	X	X
Spleen, thymus, bone marrow	X	X	X	X	X	X	X	X	X
Kidney, lower urinary tract	X	X	X	X	X	X	X	X	X
Male genital tract	X	X	X	X	X	X	X	X	X
Gynaecology	X	X	X	X	X	X	X	X	X
Pregnancy-related	X	X	X	X	X	X	X	X	X
Breast	X	X	X	X	X	X	X	X	X
Skin	X	X	X	X	X	X	X	X	X
Soft tissue	X	X	X	X	X	X	X	X	X
Skeletal muscle, peripheral nerve	X	X	X	X	X	X	X	X	X
Bone, joint	X	X	X	X	X	X	X	X	X
Lymph node	X	X	X	X	X	X	X	X	X

30 H&E-stained histopathology sections (including surgical and autopsy pathology) in 3 - 4 hours, to be spread across the above areas.

Candidates may be required to type their answers for this practical examination onto a computer, which will then be uploaded electronically to the examiners at the end of the examination

**7.0 PART II CYTOPATHOLOGY SLIDES EXAMINATION BLUEPRINT (Weighting = 25%; Pass mark determined by standard setting procedure)**

**7.1 Gynaecological cytology**

- Cervical cytology
- Vaginal cytology
- Endometrial cytology

**7.2 General fluids and exfoliative cytology**

- Sputum and bronchial lavage/brushings
- Urine and bladder washings
- Pleural, pericardial and peritoneal fluids/washings
- Cerebrospinal fluid
- Oral, oesophageal and anal canal smears
- Extrahepatic biliary tree brushings
- Nipple discharge smears
- Synovial fluid
- The eye
- Cyst fluids

**7.3 FNA cytology**

- Lung and mediastinum
- Breast
- Thyroid and parathyroid
- Salivary gland
- Lymph nodes
- Liver
- Pancreas
- Kidney, adrenal gland and retroperitoneum
- Ovary
- Testis
- Soft tissue and bone
- Skin

30 Papanicolaou and/or Giemsa stained cytopathology cases, in 3 – 4 hours, to be spread across the above areas. Areas of specific interest will be dotted on the slides when appropriate.

**8.0 PART II OSPE EXAMINATION BLUEPRINT (OSPE 1 and OSPE 2 combined weighting = 25%; Combined pass mark determined by standard setting procedure)**

OSPE 1 and OSPE 2 will each be a 3 – 4 hour examination composed of a number of 10 to 60 minute stations covering content from some of the following areas, amongst others:

- Gross specimens (fixed specimens, photographs or digital images)
- Frozen section slides to diagnose
- Surgical or autopsy histopathology including special investigations (ANY organ system)
- Immunohistochemistry panel selection and interpretation
- Electron photomicrographs
- Molecular pathology (PCR, ISH etc)
- Neuropathology including brain smears and imaging (CT, MR)
- Skeletal muscle and peripheral nerve biopsies including special investigations
- Renal biopsies including special stains and electron micrographs
- Liver biopsies including special investigations
- Brain smears
- Bone biopsies including radiology
- Any other system based pathology eg dermatopathology, cardiac pathology

Some of the stations may take the form of an interactive examination with one or more examiners present.

**JOHANNESBURG**  
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