



FC Ophth(SA) Primary IA

THE COLLEGES OF MEDICINE OF SOUTH AFRICA

Incorporated Association not for gain
Reg No 1955/000003/08

Primary IA Examination for the Fellowship of the
College of Ophthalmologists of South Africa

31 January 2019

Paper 1

Anatomy

(3 hours)

All questions to be answered. Each question to be answered in a separate book (or books if more than one is required for the one answer)

- 1 a) Describe the structure of the lens. (2)
b) Discuss the lens capsule. (2)
c) What is the function of the lens epithelium? (1)
d) When is the rudimentary lens first seen and how is it formed? (5)
[10]
- 2 a) Discuss the oculo-cardiac reflex. (2)
b) Draw a diagram of the autonomic innervation of the lacrimal gland. Please label all aspects. (8)
[10]
- 3 a) Discuss the Sinus Venosus Sclerae (Canal of Schlemm). (10)
b) Draw a diagram of the arterial blood supply of the visual pathways posterior to the globe. (10)
[20]
- 4 a) Tabulate the main anatomic features of the floor of the anterior and posterior cranial fossae. Use the following headings: Feature, Location and Relevance. (10)
b) Tabulate the cranial nerves from 1-7 with the following headings: Name, Components (sensory versus motor), Function and Opening in the skull through which they travel. (10)
[20]



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Paper 2

Physiology

(3 hours)

All questions to be answered. Each question to be answered in a separate book (or books if more than one is required for the one answer)

- 1 Describe the supranuclear control of ocular movements under the following four subsystems:
 - a) Saccadic or fast eye movement subsystems. (5)
 - b) Pursuit or tracking subsystem. (5)
 - c) Vergence subsystem. (5)
 - d) Vestibular subsystem. (5)[20]

- 2
 - a) What are the functions of the tear film? (5)
 - b) Discuss the major physiological roles of the RPE under the following sub-headings:
 - i) Visual pigment regeneration. (5)
 - ii) Phagocytosis of shed photoreceptors. (5)
 - iii) Pigmentation. (5)
 - iv) Retinal adhesion. (5)[25]

- 3
 - a) Discuss the pump mechanisms and ionic transport of the cornea. (10)
 - b) Discuss the immunological privilege of the cornea and the anterior chamber-associated immune deviation (ACAID). (5)[15]