



THE COLLEGES OF MEDICINE OF SOUTH AFRICA

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

Intermediate IB Examination for the Fellowship of the  
College of Ophthalmologists of South Africa

20 July 2018

Paper 2

Clinical Optics and Refraction

(3 hours)

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

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- 1 a) Discuss the use of prisms in Ophthalmology under the following headings (10)  
i) The diagnostic use of prisms. (5)  
ii) The use of prisms in instruments. (5)  
b) Write short notes on the applanation tonometer. (5)  
[20]
- 2 a) Discuss how the human eye reduces the following aberrations (10)  
i) Spherical aberration.  
ii) Chromatic aberration.  
iii) Coma.  
iv) Curvature of field. (10)  
b) Discuss the following aspects of laser  
i) Properties of laser light.  
ii) Formation of laser light.  
iii) Methods of making laser pulses shorter and more intense. (10)  
c) Discuss the Prentice rule. (5)  
[25]
- 3 a) Discuss stereoscopic vision and the various tests used to assess this. (10)  
b) Discuss the optics of spherical lens decentration and the implications thereof in intraocular lens implantation. (8)  
[18]
- 4 a) Discuss the optical principles of the Snellen test and the shortcomings of the test. (5)  
b) Discuss the principles of the contrast sensitivity test. (5)  
c) Briefly discuss the principles of keratometry and the optical principles of the two most widely used manual keratometers. (6)  
d) Discuss the methods used to measure corneal thickness. (6)  
[22]



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19 July 2018

Paper 1

Ophthalmic Pathology

(3 hours)

*All questions are 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 Write short notes on the pathology of the following conditions
- a) Optic nerve glioma. (5)
  - b) Optic nerve meningioma. (5)
  - c) Coats disease. (5)
- [15]
- 2
- a) Describe the pathology of toxoplasmosis in the eye. (10)
  - b) Discuss the pathology of squamous cell carcinoma of the conjunctiva. (8)
- [18]
- 3 Discuss the pathology of the following conditions
- a) Thyroid associated orbitopathy. (10)
  - b) Ocular sarcoidosis. (7)
  - c) Solar keratosis. (5)
- [22]
- 4 Use the table as template to compare the following corneal dystrophies [25]

Dystrophy	Corneal layer affected (1)	Distinguishing macroscopic features (2)	Distinguishing microscopic features (1)	Material the lesion consists of (1)
Fuch's dystrophy				
Meesman's dystrophy				
Avellino dystrophy				
Schnyder's dystrophy				
Macular dystrophy				