



Candidate Number

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**OPHTHALMIC BASIC SCIENCE EXAMINATIONS
ANATOMY
15 June 2007**

Duration of paper:

3 hours

Total Marks: 120

Total No. of questions:

26 (Sections A and B)

- ◆ Candidates must attempt all questions
- ◆ If you cross out an area of your own writing, it will not be considered by the examiners
- ◆ Please write legibly

SECTION A

- ◆ Write your answers in the spaces provided using LEGIBLE writing, use diagrams and point form where appropriate
- ◆ All twenty questions should be attempted.
- ◆ Each question is worth 3 marks.

Question 1

Name the 10 (ten) layers in an ordinary 'light microscopic' histologic section of the human retina.

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Question 2

List the anatomical features which account for the blood-retina barrier.

Question 3

List the features which account for the outer limiting membrane of the retina.

Question 4

With reference to the measurements of the adult human retina, state the approximate:

diameter of the optic disc: _____

diameter of the macula lutea: _____

distance of the ora serrata from the temporal limbus: _____

Question 5

With reference to the measurements of the adult human cornea, state the approximate:

i) central corneal thickness: _____

ii) horizontal corneal diameter: _____

iii) radius of curvature of the anterior surface of the cornea: _____

Question 6

Describe the histology of the epithelium of the conjunctival fornices.

Question 7

State the actions of the superior oblique muscle.

Question 8

Define the origin and the branches of nasociliary nerve

Question 9

List the anatomical structures which pass through the superior orbital fissure outside of the annulus of Zinn (common tendinous ring).

Question 10

Name three structures which traverse the foramen ovale.

Question 11

Name the bones which form the boundaries of the inferior orbital fissure.

Question 12

State the structures within the orbit which are innervated by postganglionic fibres of the superior cervical sympathetic ganglion

Question 13

State the sensory distribution of the infratrochlear nerve.

Question 14

For purposes of description, the optic nerve may be divided into four parts. Name the parts of the optic nerve and the approximate length of each part.

Question 15

Which layers/laminae of the lateral geniculate body receive axons of retinal ganglion cells from the contralateral optic nerve?

Question 16

What is the blood supply of the Optic Radiation (geniculocalcarine tracts)?

Question 17

An object of visual interest is seen by the macula lutea of the right eye, in the left inferior quadrant of the field of vision. Where specifically, within the primary visual cortex (area 17) is this topographically represented?

Question 18

State where the following cranial nerves leave the surface of the brainstem:

- i) Oculomotor (III) nerve
- ii) Trochlear (IV) nerve
- iii) Abducent (VI) nerve

i) _____

ii) _____

iii) _____

Question 19

State four cranial nerve nuclei which are connected through the medial longitudinal fasciculus.

Question 20

Of the inferior oblique muscle, state:

- i) the origin
- ii) the insertion and
- iii) the innervation

i) _____

ii) _____

iii) _____

END OF PAPER: SECTION A

OPHTHALMIC BASIC SCIENCE EXAMINATIONS
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SECTION B

- ◆ This section contains six (6) short essays
 - ◆ Each question is worth 10 marks
 - ◆ Candidates must attempt all questions
 - ◆ Make sure to put your candidate number on the top of each page
 - ◆ Start a new page for each question
 - ◆ Do not write on the reverse of any answer booklet page
 - ◆ Write your answers in the answer booklet using LEGIBLE writing
 - ◆ Labelled diagrams and common abbreviations may be used where appropriate
 - ◆ If you cross out an area of your own writing, it will not be considered by the examiners
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Question 1

Describe the blood supply of the retina.

Question 2

Describe the anatomy of the corneo-iridial angle of the anterior chamber.

Question 3

Give an account of the anatomy of the levator palpebrae superioris muscle.

Question 4

Discuss the anatomical neural pathways involved in the accommodation reflex.

Question 5

Outline the anatomy of the lateral wall of the nose. Include in your description the site of drainage into the nose of the paranasal sinuses.

Question 6

Describe the microscopic anatomy of the photoreceptors of the neural retina. Include in your description the relationship of the photoreceptors to other cells of the retina.

END OF PAPER: SECTION B