

## OCULAR ANATOMY AND PHYSIOLOGY



**PROGRAM** : OPTOMETRY

**SUBJECT** : **OCULAR ANATOMY**

**CODE** : **OAF03A3**

**DATE** : JUNE EXAMINATION  
29 MAY 2017

**DURATION** : 180 min

**WEIGHT** : 50:50

**TOTAL MARKS** : 100

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**EXAMINER** : DR E.E BRUWER

**MODERATOR** : MR P NKOMOZEPI

**NUMBER OF PAGES** : 3 PAGES

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**INSRCTIONS** : QUESTION PAPERS MUST BE HANDED IN.

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**REQUIREMENTS** : 1 X EXAMINATION SCRIPTS

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# OCULAR ANATOMY AND PHYSIOLOGY

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## **INSTRUCTIONS TO CANDIDATES:**

1. THIS PAPER CONSISTS OF 9 QUESTIONS.
  2. ALL QUESTIONS MUST BE ANSWERED IN AN EXAMINATION SCRIPTS PROVIDED.
  3. THIS QUESTION PAPER MUST BE RETURNED WITH ALL YOUR EXAMINATION ANSWER SCRIPTS.
  4. MARK ALLOCATION: ½ MARK PER FACT UNLESS INDICATED OTHERWISE
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## **QUESTION 1**

Write a short note on the following parts of the conjunctiva:

- 1.1 Bulbar part (5)  
1.2 Palpebral part (9½)

**[14½]**

## **QUESTION 2**

Provide a well annotated sagittal sectional diagram showing the histological structure of the upper eyelid. **[9]**

## **QUESTION 3**

With the aid of a labelled diagram, describe the microscopic anatomy and related function of the lacrimal gland. **[16]**

## **QUESTION 4**

Describe the position, characteristics and functions of the following muscles of the upper eyelid:

- 4.1 Orbicularis oculi (5)  
4.2 Levator palpebral superioris (3)  
4.3 Muller's muscle (2)

**[10]**

## **QUESTION 5**

Describe the embryological development of the lens from the lens vesicle. **[16]**

## **QUESTION 6**

Provide a well annotated schematic diagram showing the origin of motor; parasympathetic and sympathetic fibres of NIII. Include in your answer the distribution of each component and different structures that the fibres pass through. **[9]**

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### **QUESTION 7**

Write a short note on the sensory distribution of each of the following branches of the ophthalmic nerve:

7.1 Supra-orbital	(½)
7.2 Supra-trochlear	(1)
7.3 Lacrimal	(1)
7.4 Long ciliary	(½)
7.5 Short ciliary	(2)
7.6 Infra-trochlear	(1)
	<b>[9]</b>

### **QUESTION 8**

“A pituitary tumor can affect the temporal visual field of the affected individual.”

Describe the anatomical relationship that explains this effect of the pituitary tumor. Include in your answer the description of the prefixed and post fixed optic chiasma. **[11]**

### **QUESTION 9**

Describe the origin, course and relations of the ophthalmic artery. Do not include the branches. **[5½]**

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**TOTAL MARKS: 100**

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