

# Level 6 Certificate in Contact Lens Practice



## Unit 1 – Ocular Anatomy, Physiology and Related Pathology

Principal Examiner:  
Lindsey Dunning FBDO CL

**Summer 2023**  
**Duration: 2 hours**

**Candidate Number:**

**Date:**

  /   /  

**Seating Location:**

Answer **four** questions only.

Please tick below the numbers of the questions attempted:

1	<input type="checkbox"/>	2	<input type="checkbox"/>	3	<input type="checkbox"/>	4	<input type="checkbox"/>	5	<input type="checkbox"/>
---	--------------------------	---	--------------------------	---	--------------------------	---	--------------------------	---	--------------------------

Number of Supplementary Sheets used (if any), including graph paper.

### For office use only

Question number	1	2	3	4	5	Total		
						Overall	%	
Marks								
Moderated								
Borderline (57%-62%)	Please tick the box to acknowledge that this is a borderline result and confirm that the marks have been checked in terms of allocation and addition.						<input type="checkbox"/>	

Examiner's Signature	<input type="text"/>
-------------------------	----------------------

Moderator's Signature	<input type="text"/>
--------------------------	----------------------

This booklet is the property of the ABDO and **must not be removed** by the candidate from the examination room.

This page  
has been  
left blank

**Question 1**

**Write** brief notes on the following. In each case, consider the possible causes, signs, symptoms, management and any implications for contact lens wear:

- |    |                               |                   |
|----|-------------------------------|-------------------|
| a) | Pinguecula                    | <b>(25 marks)</b> |
| b) | Basal Cell Carcinoma          | <b>(25 marks)</b> |
| c) | Bacterial Conjunctivitis      | <b>(25 marks)</b> |
| d) | Contact lens Peripheral ulcer | <b>(25 marks)</b> |

---

**Q1a) Pinguecula** **(25 marks)**

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

**Q1b) Basal Cell Carcinoma** **(25 marks)**

---

---

---

---

---

---



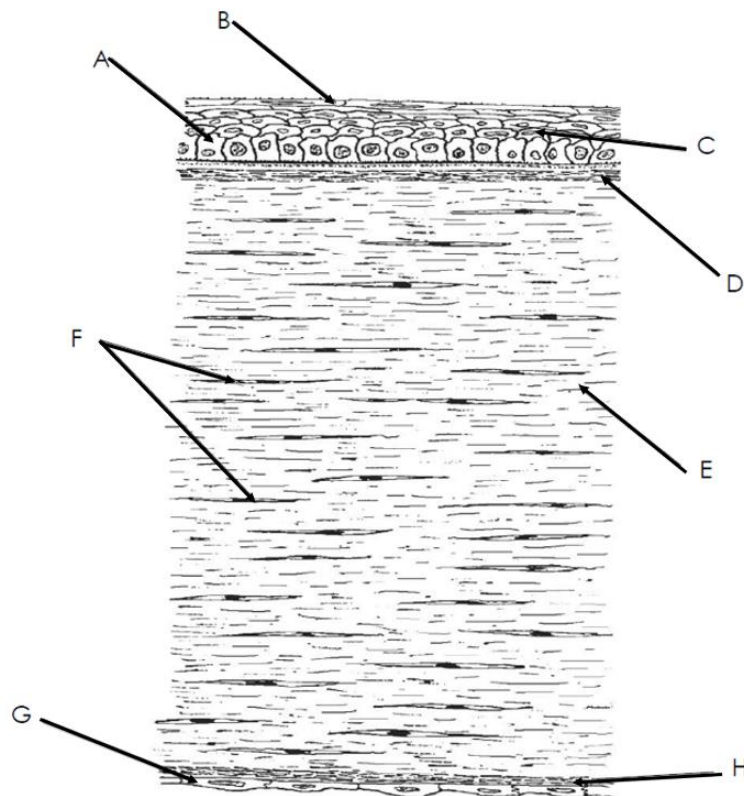




**Question 2**

- a) **Name** the structures A to H shown on the diagram of the corneal epithelium below. **(24 marks)**
- b) **Discuss** the signs and symptoms of keratoconus. **What** are the risk factors for developing this condition? **(36 marks)**
- c) **Discuss** the supply of oxygen to the cornea and **describe** how this is affected by contact lens wear. **(30 marks)**
- d) **List** the functions of the corneal endothelium. **(10 marks)**

**Q2a)** **Name** the structures A to H shown on the diagram of the corneal epithelium below. **(24 marks)**



<b>A</b>	
<b>B</b>	
<b>C</b>	
<b>D</b>	
<b>E</b>	
<b>F</b>	
<b>G</b>	
<b>H</b>	





**Q2c) Discuss** the supply of oxygen to the cornea and **describe** how this is affected by contact lens wear. **(30 marks)**

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

**Q2d) List** the functions of the corneal endothelium. **(10 marks)**

---

---

---

---

---

---

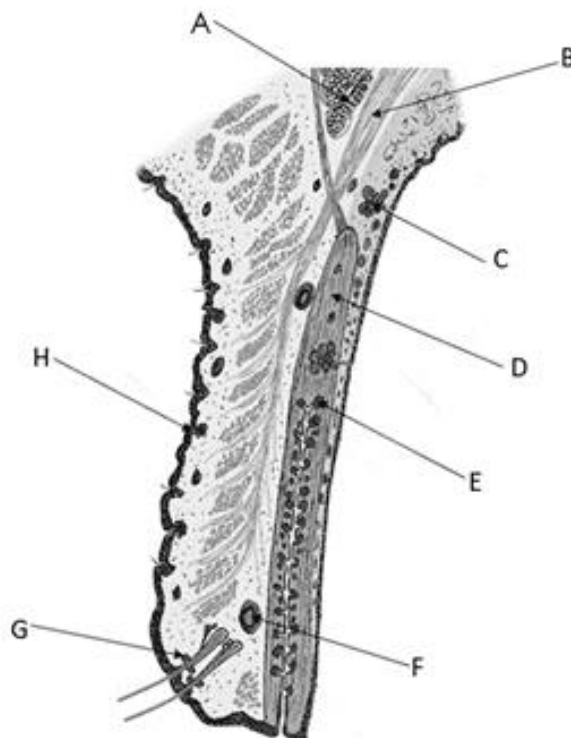
---



**Question 3**

- a) **Name** the structures A to H shown on the diagram of the eyelid below. **(24 marks)**
- b) **Use** a table to detail each muscle found in the upper eyelid including its name, type (i.e. smooth / skeletal), function and nerve supply. **(48 marks)**
- c) **Discuss** the signs, symptoms and management of an external hordeolum. **(28 marks)**

**Q3a) Name** the structures A to H shown on the diagram of the eyelid below. **(24 marks)**



<b>A</b>	
<b>B</b>	
<b>C</b>	
<b>D</b>	
<b>E</b>	
<b>F</b>	
<b>G</b>	
<b>H</b>	

**Q3b) Use** a table to detail each muscle found in the upper eyelid including its name, type (i.e. smooth / skeletal), function and nerve supply.

**(48 marks)**

<b>Muscle</b>	<b>Muscle type</b>	<b>Function</b>	<b>Nerve supply</b>

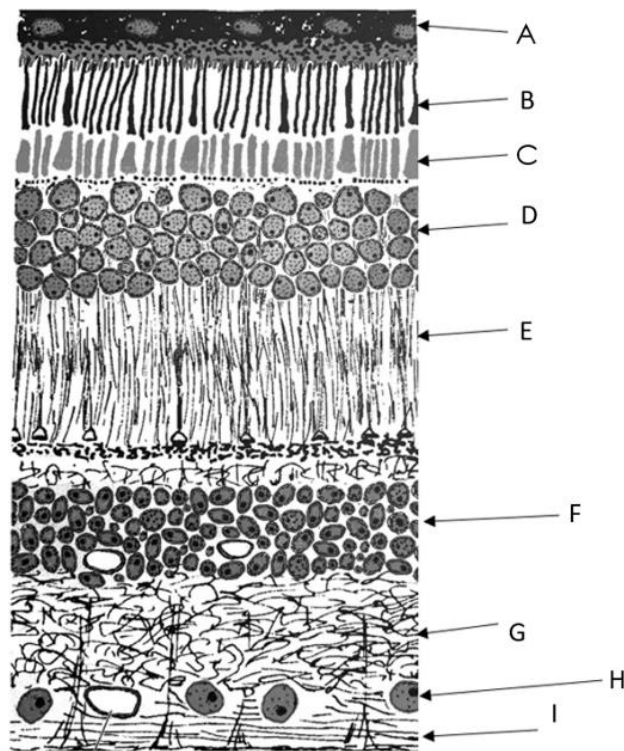




**Question 4**

- a) **Name** the structures A-I of the retinal structures on the diagram below. **(27 marks)**
- b) **Describe** the structure of the macula. **Explain** how its specialised structure produces maximum visual acuity. **(40 marks)**
- c) **List 6** risk factors for retinal detachment. **(18 marks)**
- d) **What** symptoms will a patient with retinal detachment present. **(15 marks)**

**Q4a)** **Name** the structures A-I of the retinal structures on the diagram below. **(27 marks)**



<b>A</b>	
<b>B</b>	
<b>C</b>	
<b>D</b>	
<b>E</b>	
<b>F</b>	
<b>G</b>	
<b>H</b>	
<b>I</b>	





**Q4c) List 6** risk factors for retinal detachment.

**(18 marks)**

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

**Q4d) What** symptoms will a patient with retinal detachment present?

**(15 marks)**

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---



**Question 5**

- a) **Describe five** functions performed by the pre-corneal tear film. **Name** the layer(s) responsible for each particular function you have listed. **(40 marks)**
- b) **Describe** the clinical presentation of aqueous deficient dry eye a CL wearer and management options. **(25 marks)**
- c) **Describe** a simple method for checking the patency of the lacrimal drainage system and **what** pathology would you suspect if a blockage was found? **(20 marks)**
- d) **Label** the structures A-E of the lacrimal gland and drainage system. **(15 marks)**

---

**Q5a) Describe five** functions performed by the pre-corneal tear film. **Name** the layer(s) responsible for each particular function you have listed. **(40 marks)**

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

**Q5b) Describe** the clinical presentation of aqueous deficient dry eye  
a CL wearer and management options. **(25 marks)**

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

**Q5c) Describe** a simple method for checking the patency of the  
lacrimal drainage system and **what** pathology would you  
suspect if a blockage was found? **(20 marks)**

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

---

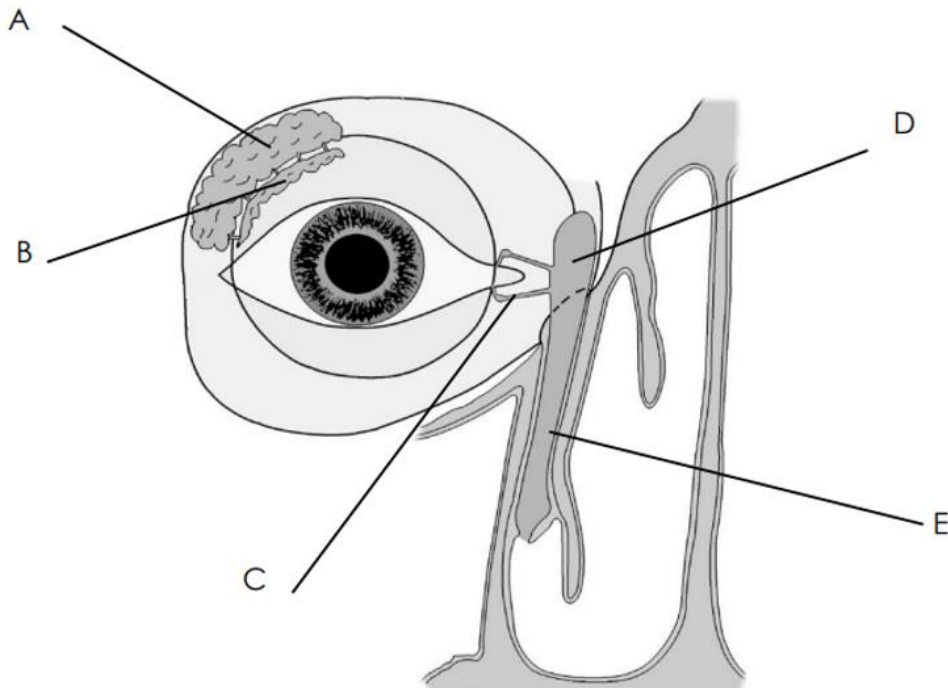
---

---

---

**Q5d) Name** the structures A-E of the lacrimal gland and drainage system.

**(15 marks)**



<b>A</b>	
<b>B</b>	
<b>C</b>	
<b>D</b>	
<b>E</b>	



This page  
has been  
left blank



**DO NOT TURN THIS PAPER OVER UNTIL ADVISED TO DO SO BY THE INVIGILATOR**

**Important Instructions to Candidates**

Please read carefully and follow these instructions when told to do so by the Examiner/Invigilator.

1. You will be given 5 minutes at the beginning of the examination to read through the questions.
2. **Please enter your candidate number and date in the boxes on the front cover of this booklet.**
3. Please **DO NOT write your name** on the booklet. Candidates must remain anonymous for marking purposes.
4. Candidates must answer questions legibly, using blue/black ink or ball-point pen. *Pencil may be used for graphs and diagrams only.*
5. Candidates please note, the examination paper has been designed for you to answer the stated number of questions within the allotted time.
6. Candidates must read each question carefully and make sure that you know what you have to do before starting your answer.
7. Candidates must write the answer to each question in the space provided. Additional paper may be used if necessary but you must show your Candidate Number and question number(s) clearly at the top of each page.
8. **Please do not write in the margins.**
9. Any extra pages used should be securely fastened together using a treasury tag. This includes any diagrams, additional graph paper or any continuation paper.
10. Candidates are advised to carefully cross out any work not intended to be marked by the Examiner.
11. For all calculation questions, please work to at least 4 decimal places.
12. Please do not tear out any part of this booklet. All work must be handed in.

**Important Information for Candidates**

1. Answer **four** questions only.
2. Answer all parts for each question.
3. Separate graph paper has been provided. *Please read point 9 above.*
4. Where relevant, the marks awarded for each part of a question are given in brackets, e.g. **(10 marks)**.
5.   These symbols indicate that a diagram/calculation is required or a diagram needs annotating.
6. This entire document consists of 24 pages. Any blank pages are indicated.

**When told to do so by the Invigilator, you may turn the paper over and begin.**