# Level 6 Certificate in Contact Lens Practice

Unit 1: Ocular Anatomy, Physiology and Related Pathology

Principal Examiner: L Dunning FBDO CL



Winter 2023
Duration: 2 hours

Candidate Numb	er:	Date	e: /			Seat	ing Location:
Answer <b>Four</b> que	stions only	<b>/</b> .					
Please tick belov	v the num	bers of t	he quest	tions atte	empted:		
1	2		3		4		5 🗌
Number of So		tary Shee	ts used (i <sup>.</sup>	f any), ind	cluding gr	aph paper	<b>5</b> .
<u> </u>						Т	otal
Question number	1	2	3	4	5	Overall	%
Marks							
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Borderline (57%-62%)	Please tick result and of allocati	confirm th	nat the mo	•		oorderline cked in term	S
Examiner's				Moder	ator's		
Signature				Signati			

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Write brief notes on the following conditions, in each case describe the causes, signs, symptoms, management, and any implications for contact lens wear.

a)	Squamous cell carcinoma	(25 marks
b)	Meibomian gland dysfunction	(25 marks
c)	Pterygium	(25 marks
d)	Ectropion	
uj	LCITOPIOTI	(25 marks
a)	Squamous cell carcinoma	(25 marks

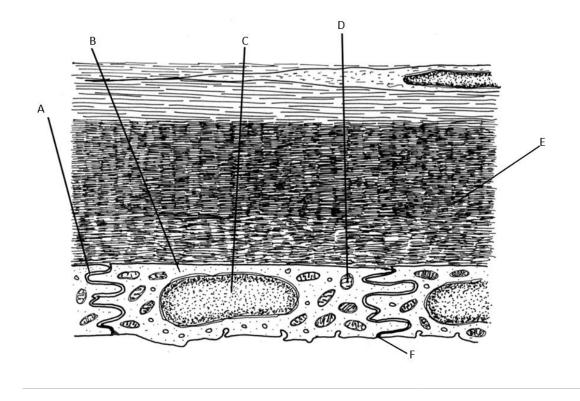
b)	Meibomian gland dysfunction	(25 marks

c)	Pterygium	(25 marks)

d)	Ectropion	(25 marks)

Name the corneal structures A-F a) (18 marks) b) With reference to the anatomy and histology of the corneal nerve supply, explain why the sensitivity of the cornea is high but localisation of a foreign body on the cornea is poor. (28 marks) C) i) Describe four comeal changes that may occur if the cornea becomes hypoxic as a result of contact lens wear. (28 marks) Include the clinical appearance any possible symptoms. ii) Then consider the contact lens selection or management options to reduce the risk of hypoxia. (10 marks) d) Briefly describe the components that comprise the corneal epithelium. Include cell types, cell junctions and the approximate thickness. (16 marks)

a) Name the corneal structures A-F (18 marks)

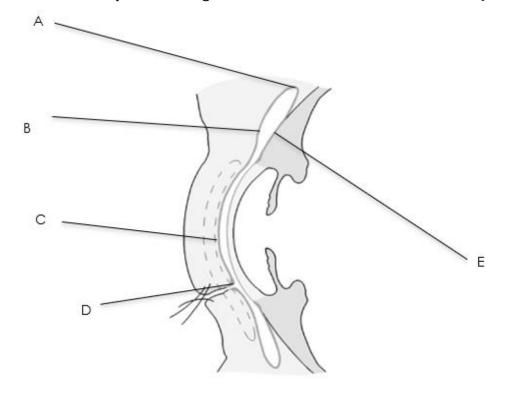


Winter 2023	Contact Lens Unit 1 – Ocular Anatomy, Physiology and Relat
	With reference to the anatomy and histology of the corneal nerve supply, explain why the sensitivity of the cornea is high but localisation of a foreign body on the
(28 mark	cornea is poor.

c)	i) Describe four comeal changes that may occur if the cornea becomes hypoxic as a result of contact lens wear. Include the clinical appearance any possible symptoms.	(28 marks)
c)	ii) Then consider the contact lens selection or management options to reduce the risk of hypoxia.	(10 marks)

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d)	Briefly describe the components that comprise the corneal epithelium. Include cell types, cell junctions and the approximate thickness.	(16 marks

- a) Label the conjunctival regions A-E
   b) Describe the structure of the marginal and fornices of the conjunctiva.
   c) Differentiate between the signs and symptoms of bacterial and viral conjunctivitis.
   d) What advice would be given to a contact lens patient regarding infection control?
   (15 marks)
   (40 marks)
   (35 marks)
   (10 marks)
- a) Label the conjunctival regions A-E (15 marks)



b)	Describe the structure of the marginal and fornices of the conjunctiva.	(40 marks)

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c)	<b>Differentiate</b> between the signs and symptoms of bacterial and viral conjunctivitis.	(35 marks

	Contact Lens Unit 1 – Ocular Anatomy, Physiology and Rela	ted Patholog Winter 202
1/	What advice would be given to a contact lens nationt	
d)	What advice would be given to a contact lens patient regarding infection control?	(10 mar
		•

a) Label the following structures of the corneo- scleral junction A-H

(24 marks)

b) Describe the production of aqueous humour. Include the circulation, drainage of the fluid and state the volume of aqueous that fills the space.

(40 marks)

c) **List** possible presenting symptoms of acute angle closure glaucoma.

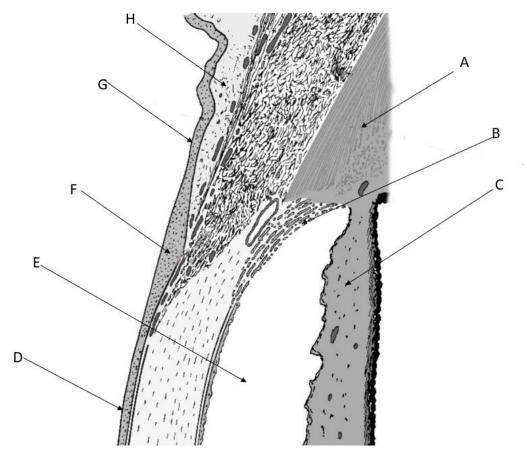
(18 marks)

d) Describe 3 functions of the aqueous humour

(18 marks)

a) Label the following structures of the corneo-scleral junction A-H

(24 marks)



b) Describe the production of aqueous humour. Include the circulation, drainage of the fluid and state the volume of aqueous that fills the space. (40	mar
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`	List possible presenting symptoms of goute angle clesure	
	<b>List</b> possible presenting symptoms of acute angle closure glaucoma.	(18 marl

	Contact Lens Unit 1 – Ocular Anatomy, Physiology and Rele	ated Pathology Winter 2023
d)	Describe 3 functions of the aqueous humour	(18 marks

Ques	tion 5		
a)	Describe the structure, origin and functions of the pre- corneal tear film.	(40 marks (15 marks	
b)	Label the following lacrimal diagram  Describe possible causes, signs and symptoms of dacryoadenitis		
c)		(30 marks	
			d)
a)	Describe the structure, origin and functions of the pre- corneal tear film.	(40 marks	

A	(15 marks

c)	Describe possible causes, signs and symptoms of dacryoadenitis	(30 marks)

	Contact Lens Unit 1 – Ocular Anatomy, Physiology and Rel	lated Pathology Winter 2023
d)	Name 5 medicines that are likely to cause dry eyes	(15 marks)

End of questions for this paper

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### 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. 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. Where relevant, the marks awarded for each part of a question are given in brackets, e.g. (10 marks).
- 4. 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.