

Level 6 Diploma in Ophthalmic Dispensing

2023 Syllabus guidance for students

FQE (Final Qualifying Examination)

**Ophthalmic Dispensing Syllabus 2023 guide
to FQE (Final Qualifying Examination).**

The information in this guide is correct at the time of publication. However, this document may be updated periodically to reflect any legislative, policy and/or operational changes.

VERSION: 1.0 - June 2025

VERSION: 1.1 - September 2025

Small amendments to forms used and advice given.

Final Qualifying Examination

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Final Qualifying Examination

Preface

This book is designed to familiarise you with your Final Qualifying Examinations (FQEs). The objectives for each section will be covered in detail, along with hints and tips on the procedures you may wish to use. This guide is intended to complement, but not replace, the valuable practical teaching you will receive from your training institute.

Location and useful information

Exam application process

The exam application forms will be available for completion within your ABDO portal. Please be aware that the deadline for entry is 1 March for the summer session and 1 October for the winter session.

Location of theory exams

All ABDO theory examinations are conducted via an online platform. For those with evidenced exemption from the online examination, the hard copy theory examinations will be undertaken at the ABDO National Resource Centre (NRC), in Birmingham.

Location of practical exams

The practical examinations are held at the ABDO NRC in Birmingham.

We require all candidates to be present at least 30 minutes before their start time, for a full exam sitting, no later than 8.00am; we recommend that you book accommodation as close to the venue as possible.

PLEASE NOTE: There is very limited parking available at the exam venue. Please make sure if travelling by car that you have alternative parking arrangements planned and consider the time it will take you to walk to the NRC if needed.

On entering the building, proceed to the back of the entrance hall to the lift area and continue to the fourth floor where there will be an ABDO representative to welcome you, check your photographic ID, issue you with your examination timetable and direct you to your holding area for the rest of the day.

You will find toilets, a water dispenser and a drinks machine on this floor. For lunch options, a meal deal can be purchased from the NRC at the point of registration; there are also small shops within walking distance if needed.

Please respect that your holding area is close to the examination rooms and we therefore ask for noise to be kept to a minimum, rubbish to be placed in the bins provided, the area kept clear and luggage stored away from exits.

By presenting yourself at the venue, you are deeming yourself fit to sit the examination. However, we do appreciate that unforeseen circumstances can happen on the day and therefore there will be an ABDO representative contact number on your exam letter or you may leave a message with the ABDO Resource Centre – telephone 01217 527 500.

Reasonable adjustments

If you require reasonable adjustments to be made to your exam experience, this must be arranged prior to attending your examination, with supporting evidence. Please contact the examinations department once you have completed the ABDO reasonable adjustments form on the website, providing as much notice as possible, so that the necessary arrangements can be made.



Preparation

What to take with you on the day

- Your ABDO examinations letter
- Photographic ID
- Pen and calculator
- Rulers and facial gauge

In terms of equipment, you will see from the photographs within this guide that fixed and rotating focimeters are provided for each student sitting the examinations in the UK. In terms of rulers and tools, we will endeavour to supply a wide range, but it is recommended to bring your own.

What to wear on the day:

Smart business attire is expected, as you are attending professional assessments and will be seeing real patients.

To achieve the consistency and accuracy of skills required of a dispensing optician, we recommend you practise the acquired skill with a systematic approach on a regular basis in the months leading up to your professional examinations.



Aqueous II building at Aston Cross Business Village



Reception area at the NRC Birmingham

ABDO National Resource Centre

Aqueous II
Aston Cross Business Village
Chester Street
Birmingham
B6 5RQ

Telephone: 01217 527 500

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Sections

The examination is divided into the following sections:

A	Assessment of refractive error	1 hour total
A1. Screening	Obtain accurate history and symptoms to include ocular, medical and lifestyle factors from the patient Demonstrate cover test, motility and pupil reaction Perform a gross field check and external visual examination of the eye and surrounding structure Measure and record the amplitude of accommodation	
A2. Assessment of refractive status	Measure and record unaided vision and visual acuity with given prescription for distance and near. Determine the binocular vision status. Subjectively determine the reading addition for a given working distance and record acuity.	
A3. Formulation of management and viva	Interpret the results of history taking and the examination of the refractive and ocular motor status to inform clinical decision-making and care management plans. Advise the patient on appropriate further tests, including a full internal examination of the eye.	
B	Spectacle dispensing	1 hour total
B1. Dispense a handmade frame	Measure and record details for a handmade, regular bridge frame fitted with single vision lenses	30 mins
B2. Paediatric dispense	Select and fit the most appropriate frame. Measure and record the details for a bifocal or specialist myopia management lens dispense	30 mins

C	Problem solving and prescription analysis	2 hours total
C1.	Progressive lens problem solving Using the patient records, discuss the problems experienced by the patient, verify that the spectacles meet British Standards using a manual focimeter, note the relevance of the previous pair, propose the optical solution/outcome for the patient	30 mins
C2.	Prescription analysis Candidates are required to discuss prescriptions and describe presented lenses. Prescriptions may include single vision, bifocal, trifocal and progressive power lenses as appropriate	30 mins
C3.	Online professional discussion Following successful submission of the portfolio case records, candidates will undertake a one hour online professional discussion based on experiences and decisions made within the submitted case records and the topics as listed in C2	1 hour
D	Abnormal ocular conditions and special optical appliances	1 hour total
D1.	Abnormal ocular conditions Identify pathological ocular conditions from photographs or illustrations combined with given patient records and follow the correct referral procedure where required	20 mins
D2.	Low vision Using patient history, select the most appropriate low vision appliance and note the benefits and limitations of the appliance and the advice given to the patient	20 mins
D3.	Special optical appliances Describe the design features, fitting requirements and advise on use for a range of special optical appliances and sports appliances	20 mins

Final Qualifying Examination

Section A: Assessment of refractive error

Section A: Assessment of refractive error

EXAM DURATION: 1 hour

Objective

To assess the refractive status of the patient and provide a management plan based on the assessment

EQUIPMENT PROVIDED: see *picture opposite*

- Patient prescription and brief history
- Visual testing chart
- RAF rule
- Pen torch
- Occluder
- Budgie stick (or equivalent)
- Trial frame
- Trial lenses
- Flippers
- NV card
- Burton lamp
- Sample visual field plot
- Section 1 answer sheet

Overview

The examination has three distinct sections:

- A1. Screening
- A2. Assessment of refractive status
- A3. Formulation of management plan and VIVA

You will need to complete the screening and measurement and verification of refractive status before completing the management plan.



Method

Part A1 - Screening

1. Review the basic patient records provided, explaining any issues the patient may be having.
2. Introduce yourself to the patient and explain the procedures that you are going to undertake.
3. Discuss and record the full history of the patient including any potential symptoms.
4. Examine the external eyes of the patient and note on the record card.
5. Perform a cover test on the patient to screen for potential heterophorias or heterotropias and note the result on the record card.
6. Perform a motility test on the patient to screen ocular motor issues and note the results on the record card.
7. Assess the pupil responses of the patient and note the result on the record card.
8. Once these tests have been completed and recorded, the assessor will present you with a visual field from the patients prescreening and you will be asked to interpret the result of the field plot.
9. Please note that for steps 3–8, you will be allowed to complete the tests uninterrupted (unless the assessor needs to intervene).

Part A2 - Assessment of refractive status

10. Explain to the patient what is going to take place in this section of the examination.
11. Measure the unaided vision of the patient for distance and near and compare with existing records.
12. Measure the visual acuity of the patient with the current prescription (note that the patient will not have spectacles with them to the current prescription, therefore this will need to be done using trial frame and trial lenses).
13. Compare your findings with the existing records.
14. Should the visual acuity be lower than expected, then assess visual acuity using the pinhole technique, and make a note of the visual acuity on the record card (comparing with the existing records).
15. Measure the amplitude of accommodation of the patient and note the result on the record card.
16. Assess, by whatever means you would normally do in practice, the suitability of the current reading addition for the patient's requirements.
17. Subjectively amend the reading addition for the required working distance for the patient and note this on the patient record card.

Part A3 – Formulation of management plan

18. You will be given the time to look over your notes from sections A1 and A2 to formulate your management plan on the record card. Try to make the management plan as wide-ranging as possible. If you intend to refer onwards, then consider other advice that you would give to the patient.
19. You will be asked to verbally explain your management advice with the assessor – without technical jargon, and in terms the patient would understand.
20. Once this discussion is complete, the assessor will conduct a short viva on the tests conducted, likely outcomes and the management plan..

Marking criteria

You are marked on the following criteria:

- the tests that you conducted.
- the information you noted.
- the methods that you used to gain the patient data.
- the accuracy of your record keeping
- the outcome of your management plan
- the responses given in the viva discussion.

The pass mark for this section is 60%.

A 50% reduction will be applied if any of the associated learning outcomes are not met.

Suggested reading

Clinical Optics and Refraction
Keirl and Christie

Introduction to Visual Optics
Tunnacliffe

Binocular Vision Anomalies
Evan

Clinical Management of Binocular Vision
Scheiman and Wick

Ophthalmic Clinical Procedures
Eperjesi, Bartlett and Dunne

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Section A2: Answer sheet

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Section A

Time Allowed: 60 Minutes



Candidate Number	
------------------	--

Date	
------	--

Patient's Initials/Age		
------------------------	--	--

Occupation	
------------	--

History & Symptoms
Unaided visions:
Cover Test:
Motility:
Pupils:
Visual Fields:
External Examination:
PD:

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Section A3: Answer sheet

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Section A



Refraction

Distance VA:

Pinhole (if required)

Near VA:

WD:

Amplitude of Accommodation:

Determination of Reading Addition:

WD:

Management Plan

**Examiner
Signature**

Date

Final Qualifying Examination

Section A: Revision notes

A large rectangular area filled with a light gray grid pattern, intended for students to write their revision notes. The grid consists of small, uniform squares.

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Section A: Revision notes

A large rectangular area filled with a light gray grid pattern, intended for students to write their revision notes. The grid consists of small, uniform squares.

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Section B: Spectacle dispensing

Section B1: Dispense a handmade frame

EXAM DURATION: 20 minutes measurements
10 minutes discussion

Objective

Measure and record details for a handmade, regular bridge frame fitted with single vision lenses.

EQUIPMENT PROVIDED: see *picture opposite*

- Pupilometer
- Head callipers
- Facial gauge
- Frame ruler
- PD ruler
- Set of measured frame fronts
- Frames to dispense
- A fine-pointed lens marker pen
- Candidate prescription form



Method

1. You will be provided with prescription details for your patient.
2. Discuss any further information required with the patient, e.g. hobbies and occupation, and make your lens choices based on this information.
3. You will have 20 minutes to take the required measurements; your assessor will move away from your desk at this point.
4. Transfer the prescription from the front of the form to the order form on the back, ensuring the correct power is ordered.
5. Add in your required lens details relevant to the occupation, hobbies and prescription.
6. The following measurements will be required for a handmade frame:
 - a. Monocular pupillary distance: from the centre of the right pupil to the centre of the bridge. Right and left measurements required on the front of the form.
 - b. Monocular near centration: measured from the centre of the right pupil to the centre of the bridge while the patient is fixating on an object at the required viewing distance. Right and left measurements required on the front of the form.
 - c. Crest height: the distance in the assumed spectacle plane, between lower limbus point and nasal crest. Right and left measurements required here.

- d. Bridge projection: the horizontal distance between the assumed spectacle plane and the eyelashes in their most protruding position.
 - e. Distance between rims @10mm: the width of the nose in the assumed spectacle plane at 10mm below the nasal crest.
 - f. Distance between rims @15mm: the width of the nose in the assumed spectacle plane at 15mm below the nasal crest.
 - g. Apical radius; the arc of the nasal crest, in the assumed spectacle plane.
 - h. Front to bend: the distance from the assumed spectacle plane to the ear point. Right and left measurements required here.
 - i. Head width: the horizontal distance between the ear points of the head.
 - j. Temple width: The horizontal distance between the temples 25mm behind the plane of the front.
 - k. Angle of side: vertical angle between a normal to the back plane of the front and the line of the side when opened. Right and left measurements required here.
 - l. Frame details: you can copy an existing frame from the selection provided; remember to change the eye size and DBR and related measurements to fit the patient exactly.
7. Always list two measurements where R and L is stated on the answer form and state your answer in mm.
 8. During the last 10 minutes of the section the assessor will ask you questions based on your measurements, how you took them and how they relate to the facial features and frame parameters.

Tips

- You may be instructed to complete B1 and B2 in a different order than demonstrated in this guide, but you will complete both dispensing's by the end of the section.
- Regular bridge frames should maintain contact with the surface of the bridge all the way round.
- Allow 15 minutes to take your measurements and 5 minutes to check all your recorded answers.
- Refer to the PQE student revision guide if you need to refresh your knowledge of the required measurements.

The next two pages show the form you will see in the examination. Following that, we have created a table for you to practise and record the parameters of six patients. We advise that you have your answers checked by your Practice Education Lead (PEL) in practice; you could make a cardboard spectacle front to check the accuracy of your measurements.

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Section B: Answer sheet

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Section B

Spectacle Dispensing Order



Candidate number		Patient	
------------------	--	---------	--

Venue		Date	
-------	--	------	--

	Binocular	Right	Left
Distance Centration Distance			
Near Centration Distance @ 35cm			

RIGHT	SPH	CYL	AXIS	PRISM	BASE	Vertex Distance	LEFT	SPH	CYL	AXIS	PRISM	BASE
	ADD							ADD				

Prescriber's comments:

Occupation	Hobbies	Concerns	Previous lenses dispensed
History:			

RIGHT	SPH	CYL	AXIS	PRISM	BASE	LEFT	SPH	CYL	AXIS	PRISM	BASE	
	ADD						ADD					

LENSES	Type Form and Material		Special instructions	
	Tint/coating		Minimum size uncut	
	Monocular Centration		Decentration	
	R	L	R	L
	Fitting Height OR Segment Top Position		Segment Inset (if applicable)	
	R	L	R	L

FRAMES	Name, type, colour				
	Boxed lens size		DBL	Boxed centre distance	
	Regular bridge frame ONLY:				
	Crest height	Projection	Distance between rims@.....	Apical radius	
		@.....		
	Fixed Pad Bridge Frame ONLY		Frame with pads on arms ONLY:		
	Bridge Width		Distance between pad centres		
	Sides:				
	Length to Bend		Angle of side		Head width
	R	L	R	L	
	Total length of side		Side type		Temple Width
	R	L			

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Section B1: Revision notes

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Section B: Spectacle dispensing

Section B2: Paediatric dispense

EXAM DURATION: 20 minutes measurements
10 minutes discussion

Objective

Select and fit the most appropriate frame, and measure and record the details for a bifocal or myopia management lens dispense to the ABDO paediatric heads.

EQUIPMENT PROVIDED: see *picture opposite*

- Pupilometer
- Head callipers
- Facial gauge
- Frame ruler
- PD ruler
- Set of measured frame fronts
- Frames to dispense
- A fine-pointed lens marker pen
- Candidate prescription form



Method

1. You will be provided with prescription details for your patient.
2. Discuss any further information required with the assessor (for example hobbies) and make your lens choices based on this information.
3. You will have 20 minutes in total to take the required measurements.
4. Transfer the prescription from the front of the form to the order form on the back, ensuring the correct power is ordered.
5. Add in your required lens details relevant to the occupation, hobbies and prescription.
6. Pay particular attention to the seg size shape and fitting of the seg top for your paediatric patient if fitting a bifocal, or specific details for your myopia management lens.
7. Depending on whether you have selected a fixed pad bridge or a metal pads on arms frame, list the frame name, type and colour and fit the frame to the paediatric head.
8. For a fixed pad bridge, measure and record:
 - a. Monocular pupillary distance: from the centre of the right pupil to the centre of the bridge. Right and left measurements required on the front of the form.
 - b. Boxed lens size: the dimensions of the smallest rectangle formed by the horizontal and vertical tangents to the lens shape. Note; add an allowance for the bevel also both horizontal and vertical measurements should be listed here.

- c. Distance between lenses (DBL): the distance between the nearest points of the apexes of the two lenses. Note; subtract an allowance for the bevel.
 - d. Boxed centre distance (BCD): horizontal distance between the two boxed centres (the intersection of horizontal and vertical centre lines of each box).
 - e. Bridge width: minimum distance between the pad surfaces of the frame measured along the bridge width line.
9. For a frame with pads on arms, measure and record:
 - a. Boxed lens size: the dimensions of the smallest rectangle formed by the horizontal and vertical tangents to the lens shape. Note; add an allowance for the bevel and both horizontal and vertical measurements should be listed here.
 - b. Distance between lenses (DBL): the distance between the nearest points of the apexes of the two lenses. Note; subtract an allowance for the bevel.
 - c. Boxed Centre Distance (BCD): horizontal distance between the two boxed centres (the intersection of horizontal and vertical centre lines of each box).
 - d. Distance between pad centres: horizontal distance between the two pad centres.
 10. Always list two measurements where R and L is stated on the answer form and state your answer in mm.
 11. Leave any markings you make on the lenses for the assessor to check.
 12. During the last 10 minutes of the section the assessor will ask you questions based on your measurements, final fitting, consideration of the anatomical development of children's facial features as well as paediatric visual requirements.

Tips

- You may be instructed to complete B1 and B2 in a different order than demonstrated in this guide, but you will complete both dispensings by the end of the section.
- Allow around 15 minutes to take your measurements and 5 minutes to check all your recorded answers.
- Refer to the PQE student revision guide if you need to refresh your knowledge of the required measurements.

The next two pages show the form you will see in the examination. Following that, we have created a table for you to practise and record the parameters for multiple patients. We advise that you have your answers checked by your supervisor in practice.



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Section B2: Answer sheet

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Section B

Spectacle Dispensing Order



Candidate number		Patient	
------------------	--	---------	--

Venue		Date	
-------	--	------	--

	Binocular	Right	Left
Distance Centration Distance			
Near Centration Distance @ 35cm			

RIGHT	SPH	CYL	AXIS	PRISM	BASE	Vertex Distance	LEFT	SPH	CYL	AXIS	PRISM	BASE	
	ADD							ADD					

Prescriber's comments:			
Occupation	Hobbies	Concerns	Previous lenses dispensed
History:			

RIGHT	SPH	CYL	AXIS	PRISM	BASE	LEFT	SPH	CYL	AXIS	PRISM	BASE	
	ADD						ADD					

LENSES	Type Form and Material		Special instructions	
	Tint/coating		Minimum size uncut	
	Monocular Centration		Decentration	
	R	L	R	L
	Fitting Height OR Segment Top Position		Segment Inset (if applicable)	
	R	L	R	L

FRAMES	Name, type, colour				
	Boxed lens size		DBL	Boxed centre distance	
	Regular bridge frame ONLY:				
	Crest height	Projection	Distance between rims	Apical radius	
		@.....		
		@.....		
	Fixed Pad Bridge Frame ONLY		Frame with pads on arms ONLY:		
	Bridge Width		Distance between pad centres		
	Sides:				
	Length to Bend		Angle of side		Head width
	R	L	R	L	
	Total length of side		Side type		Temple Width
R	L				

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Section B2: Revision notes

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Section B2: Revision notes

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Section C: Problem solving and prescription analysis

Section C1: Progressive lens problem solving

EXAM DURATION: 30 minutes

Objective

Ascertain the problems experienced by the patient and review/check the latest spectacles against the patient records note any issues and suggest the appropriate optical solution

EQUIPMENT PROVIDED: see *picture opposite*

- Patient record with current and previous prescriptions/spectacle details
- Patient spectacles
- Fitting templates
- Focimeter
- Pupilometer
- Head callipers
- Vertex distance callipers
- Facial Gauge
- Frame ruler
- PD ruler
- Face-form angle template
- Fine point lens marker pen
- UV torch
- Candidate's answer form

PLEASE NOTE: Any problems will be spectacle related rather than a prescribing issue, and there will be 3 errors in total.

The 30 minutes will be made up of approximately:

20 minutes - checking and verification of spectacles and additional measurements

10 minutes – management plan to resolve issues and viva



Method

1. Your assessor will play the role of the patient. You will be provided with their record containing a short history, including previous spectacles.
2. You will have around 20 minutes to understand the issues, check the latest spectacles, determine the problem(s) and provide the optical solution.
3. Clearly enter your candidate number, the patient name and patient reference number on the recording form.
4. Discuss with the patient the issues/concerns they have when using their most recent prescription and record the information.
5. Note the current prescription on the recording form.
6. Confirm the lens details are correct to the original order:
 - Holding the frames up to the light, locate and confirm the manufacturer's engravings against the order and record the reading addition.
 - Using the fitting templates provided on your desk, find the correct one and mark the distance reference point, the prism reference point, the nasal and temporal engraving points and the near verification point.
 - Note if there are any tints or coatings on the lenses against the order.
 - Set up the eyepiece of the focimeter: rotate the eyepiece to its maximum; ensure the target is out of focus by setting the scale to a high positive value. Now rotate the eyepiece inwards until the graticule is just in focus.

- Then set the power scale to zero. The resulting target and graticule should both be in focus.
 - Starting with the right lens, place into the focimeter at the distance reference zone.
 - Record sphere and cylinder powers and the axis of the right lens.
 - You can record in either plus or minus cyl form but be consistent in recording your cyl form and remain with the same format.
 - Move the lens in the focimeter so that the prism reference point is centred in the viewing platform; note the amount and direction of prism (please note: this will not be one of the parameters requiring amendment).
 - Place the near verification zone in the centre of the viewing platform and verify the engraved reading addition.
 - Repeat for the left lens.
7. Place the spectacles on your frame ruler using the vertical and horizontal scales to set each lens at the geometric centre.
 8. Read the vertical position of the optical centres stating how far above the horizontal centre line in mm (measurements from rim will not be accepted in this section).
 9. Place one optical centre on the zero of the scale and read the exact distance to the second optical centre, to measure the horizontal distance between these two points.
 10. Repeat for the left lens.
 11. Note the frame name, colour, eye size, distance between lenses and angle of side on your answer form.
 12. Compare the resultant appliance to the original order and review the issues the patient is having.
 13. Measure the face form angle of a given frame (please note: this will not be one of the parameters requiring amendment).
 14. Note on your answer form exactly which parameters should be amended and re-ordered for this patient to resolve their problem(s).
 15. Place the given frame onto the patients face and measure the vertex distance of the frame (please note: this will not be one of the parameters requiring amendment).

16. Measure the pantoscopic angle of the frame on the patients face (please note: this will not be one of the parameters requiring amendment).

It will help you to maintain a routine to measure the right lens first and then the left. Also note that the vertical position of the optical centres may vary between the right and left lens in the examination sets.

Tolerances

Sphere and cyl measurements: +/-0.12 dioptre steps
Axis: measure to the nearest degree; do not round up
Vertical centres and optical centre distance: 1 mm

Tips

- Make sure you read the patient information thoroughly before beginning your questions.
- Give yourself around a minute to question the patient on the issues that they are having.
- When checking the existing spectacles, aim for around seven minutes per lens, allowing five minutes to note any errors on the form.
- Ensure all signs are present and record prescriptions to two decimal places, conforming to British Standards.

The next page shows the form you will see in the examination. We advise that you have your answers checked by your PEL in practice; we also recommend, to help you with this revision, practise your spectacle checking on a manual focimeter as this skill can be easily forgotten.

Suggested reading

Ophthalmic Lenses and Dispensing – Chapter 1
 Jalie

Practical Ophthalmic Lenses – Experiment 49
 Jalie and Wray

Spectacle Lenses: Theory and Practice – Chapter 6
 Fowler and Petrie

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Section C: Problem solving and prescription analysis

Section C1

Progressive Lens Problem Solving



Candidate Number:		Patient Ref	
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Patient Discussion Notes

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Frame name and Colour, Eye size and DBL			Leave Blank
Lens Manufacturer & Design			
Sphere	R	L	
Cylinder	R	L	
Axis	R	L	
Addition	R	L	
Monocular Centration Distance	R	L	
Vertical position of fitting point relative to HCL	R	L	
Prism and Base Setting at prism reference point	R	L	
Face form angle			
Vertex Distance			
Pantoscopic Angle			
Total			

Errors details and management		Leave Blank
1		
2		
3		

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Section C: Problem solving and prescription analysis

Section C2: Prescription analysis

EXAM DURATION: 30 minutes

Objective

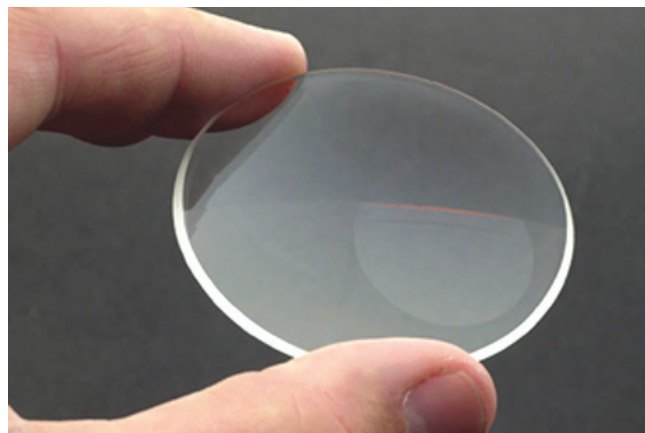
To demonstrate your skills in prescription analysis, lens identification and communication. You will be required to discuss prescriptions and their management.

EQUIPMENT PROVIDED: see picture opposite

- Scrap paper
- Spare pens
- Section C prescription book

Method

1. Take your time to look at each prescription – use a methodical approach such as the four-point plan (below); this will help you practise and put your thoughts into some order.
 - What is the prescription for?
 - Are there any errors or is any information missing?
 - What could be a potential problem?
 - How could you solve the problem?
2. Scrap paper will be provided; you will need to be prepared to:
 - a. calculate near prescriptions and addition powers
 - a. transpose into alternate sph/cyl and cross cyl form
 - c. calculate differential prism
 - d. complete an effectivity calculation.
3. Use the scrap paper to write or draw your answers where required.
4. The examiners will keep any spare paper you use.
5. Consider what form of lens might be appropriate for the prescription.
6. You may be asked to discuss the following topics:
 - a. Advice and/or instructions given to patient
 - b. Patient history
 - c. Discussion on lens types suitable for the prescription
 - d. Fitting and adjustment details
 - e. Prescription details



Tips

- Don't forget to speak to the examiners; they will encourage you, but you need to talk to them to be awarded the associated marks.
- Practice prescription analysis with your PEL and PTS; when you are given a new patient and prescription in store, discuss what information you can gain from the prescription and what the dispensing outcomes might be.
- Your assessor may ask you to do small calculations; use the scrap paper provided to be certain of your answers, calculators are permitted.
- It is perfectly acceptable to tell the assessor if you do not know the answer; they will move you on to something else that can hopefully gain you marks.
- Assessors are looking for clear answers, if you give them a choice of answers in the hope one may be correct, they will ask you to tell them specifically one answer.

Suggested reading

Practical Dispensing – Chapter 10
Griffiths

Spectacle Frames and their Dispensing – Chapter 12
Obstfeld

Final Qualifying Examination



Section C: Problem solving and prescription analysis

C2: Prescription analysis revision records

R	Sph	Cyl	Axis	Prism	Base
Dist	-1.00	+1.00	90		
Add	+3.00	-1.00	180		

L	Sph	Cyl	Axis	Prism	Base
Dist	-1.00	+1.25	90		
Add	+2.75	-1.25	180		

NOTES:

Prescription errors

1

R	Sph	Cyl	Axis	Prism	Base
Dist	+12.00	+2.00	45		
Add	+3.00				

L	Sph	Cyl	Axis	Prism	Base
Dist	+12.00				
Add	+3.00				

NOTES:

2 pairs of bifocals
Vertex distance 14

2

Final Qualifying Examination

Section C: Problem solving and prescription analysis

C2: Prescription analysis revision records

R	Sph	Cyl	Axis	Prism	Base
Dist	-3.00	+0.75	135		
Add	+2.00				

L	Sph	Cyl	Axis	Prism	Base
Dist	-2.75				
Add	+2.00				

NOTES:

(VA's R6/6₁ L6/9)
Non-tol to PPL – patient
photophobic
Enjoys reading

3

R	Sph	Cyl	Axis	Prism	Base
Dist					
Add	+3.00	+0.50	180	1Δ	IN

L	Sph	Cyl	Axis	Prism	Base
Dist					
Add	+3.00	+0.75	180	1Δ	OUT

NOTES:

4

Final Qualifying Examination



Section C: Problem solving and prescription analysis

C2: Prescription analysis revision records

R	Sph	Cyl	Axis	Prism	Base
Dist	+1.75				
Add					

L	Sph	Cyl	Axis	Prism	Base
Dist	+6.00				
Add					

NOTES:

5

R	Sph	Cyl	Axis	Prism	Base
Dist	-18.00	-2.00	20		
Add					

L	Sph	Cyl	Axis	Prism	Base
Dist	-21.00	-2.50	140		
Add					

NOTES:

6

Final Qualifying Examination

Section C2: Revision notes

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Final Qualifying Examination

Section C: Problem solving and prescription analysis

Section C3: Professional discussion

EXAM DURATION: 1 hour

Objective

To demonstrate your skills in prescription analysis, lens identification, communication and your knowledge of the GOC Outcomes for Registration. You will be required to discuss your previously submitted Preliminary Qualifying Period (PQP) case records.

EQUIPMENT REQUIRED:

- Scrap paper
- Calculator
- Spare pens
- The original copies of your submitted PQP case records
- A copy of or access to the GOC Outcomes for Registration for optometrists and dispensing opticians.
- Access to a computer with a working camera and located in a quiet room with no external interruptions.

Method

1. A selection of your case records will be discussed from the 50 you have previously submitted.
2. You should review each of your case records to ensure you are clear on the decisions made in each one.
3. Revise the GOC Outcomes for Registration as listed in Unit 15 of the ABDO syllabus and have an awareness of which case records you believe are a good example of meeting these outcomes.
4. The assessor will be looking for you to highlight how particular patient encounters have helped you meet related outcomes.

5. The cases chosen for discussion can be from ANY of the categories. You may therefore be asked to discuss the following topics:

- a. History and symptoms
- b. Errors and transposition
- c. Determining add powers
- d. Ophthalmic lens materials
- e. Lens description
- f. Effectivity and centration
- g. Best form
- h. Tints and coatings
- i. Legal and ethical matters
- j. Jump and no jump
- k. Progressive lens design
- l. Paediatric dispensing
- m. Complex prescriptions
- n. Occupational dispensing
- o. Sports eyewear dispensing
- p. Gross anisometropia
- q. Prescribed prisms
- r. Personal eye protection
- s. Low vision
- t. Suitable lens types for the prescription
- u. Fitting and adjustment details
- v. Advice and instructions given to patient

Tips

- Don't forget to speak to the assessor, they will encourage you, but you need to talk to them to be awarded the associated marks.
- Discussing your case records with your PEL and PTS; when you are given a new patient and prescription in store, think about the choices that you made and the rationale for doing so.
- Have a clear understanding of the GOC Outcomes for registration for optometrists and dispensing opticians. ***Outcomes for Registration for Dispensing Opticians.***
- Assessors may ask you to do small calculations; you may use scrap paper to be certain of your answers, calculators are permitted.
- Assessors are looking for clear answers; if you give them a choice of answers in the hope one may be correct, they will ask you to tell them specifically one answer.

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Final Qualifying Examination

Section D: Abnormal ocular conditions and special optical appliances

Section D1: Abnormal ocular conditions

EXAM DURATION: 20 minutes

Objective

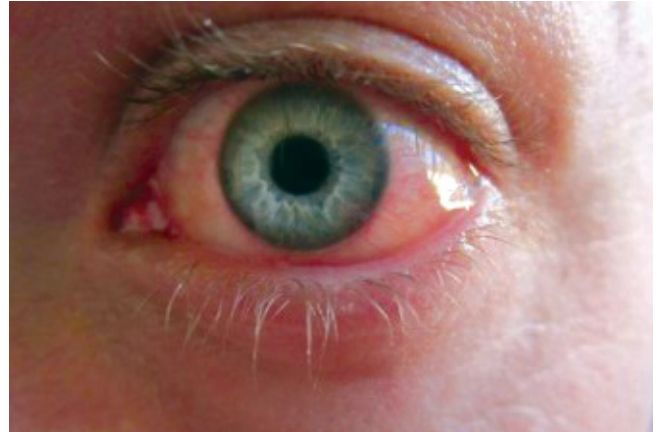
Identify pathological ocular conditions from photographs/illustrations or a description and note signs and expected symptoms.

PROVIDED BY ASSESSOR:

- D1 answer sheet
- Wallet containing three abnormal ocular conditions
As photographs and/or descriptions and associated patient record for each patient/condition

Method

1. Enter your candidate number and wallet set number on the answer form.
2. Select patient case 1 and add the case number to the first column.
3. Take your time to look at the image or read the description: list signs that are specific to the condition rather than a general description of the eye.
4. Four condition specific signs and/or symptoms are required here. Signs might include redness at the lid margin, eyelashes crusty, lacrimation. Symptoms a patient might describe include itchiness, soreness.
5. Note the exact name of the condition you believe the image or description is exhibiting as your tentative diagnosis.
6. List facts regarding the management of the condition you have named.
7. Repeat for cases 2 and 3.
8. One of the three conditions will require immediate/emergency referral. For this patient only, on the second page you will need to write a basic referral letter using the information provided on the patient. Ensure you have added the correct patient details, and think about the relevant ocular information that would be required in the referral.
9. Make sure your answers are legible.



Tips

- When practising this section, aim for 6 minutes per image, allowing 2 minutes to double check your answers.
- Ensure all signs are present and the symptoms match the condition listed.
- Ensure this section is completed in the time allowed as it will be collected before you move to the next station.

The next page shows the form that you will see and complete in the examination.

Final Qualifying Examination



Section D: Abnormal ocular conditions and special optical appliances

Final Qualifying Examination

Section D1 - Pathological Ocular Conditions



Candidate Number:		Date:		Set Number:	
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Patient Reference	1	2	3	Leave Blank
State 4 signs and/or symptoms				
State tentative diagnosis and cause				
Level of Referral				
Management and advice				

Please Turn Over

Final Qualifying Examination

Section D: Abnormal ocular conditions and special optical appliances

Please treat this referral as emergency / urgent / routine

(delete as appropriate)



Patients Details

Date of referral:	Patients Address:
Title:	
Forenames:	
Surname:	
Date of Birth:	Postcode:
Email Address:	NHS Number (if known):
Home Tel:	Work/Mobile Tel:
Referring Practitioner Details	Patients' Current GP Details
Practitioner's Name:	GP's Name:
Practice Address:	GP Practice Address:
Practice Tel:	

Details from the most recent eye examination

Date:	Vision uncorrected	Sph	Cyl	Axis	Prism	Base	VA At test	VA Today	Add	NVA
Right										
Left										
IOP date:		Time:		Right:		mmHg				
Type of Tonometer:				Left:		mmHg				
Visual fields date:				Right:						
Visual fields instrument:				Left:						
Reason(s) for referral: Include signs, symptoms, duration, relevant history and suspected diagnosis as appropriate										

STATEMENT: I confirm consent has been obtained from the patient (guardian) to information being exchanged between the Hospital Eye Service, their General Medical Practitioner and Optometrist or Ophthalmic Medical Practitioner and the content of this referral has been explained. Please note that as a dispensing optician, I have not performed ophthalmoscopy.

Practitioner's signature: _____ Date: _____

Practitioner's qualifications: _____

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Final Qualifying Examination

Section D: Abnormal ocular conditions and special optical appliances

Section D2: Low vision

EXAM DURATION: 20 minutes

Objective

Identify the most appropriate low vision aid from a selection to resolve the issues of three visually impaired patient and discuss its benefits and limitations relative to the patient records as presented.

In addition to this, note non-optical products and services that may be of use to patients who are visually impaired.

EQUIPMENT PROVIDED: *see picture opposite*

- D2 answer sheet
- Three patient descriptions
- Box set containing five low vision aids

Method

1. Clearly enter your candidate number and box set number on the answer form.
2. Start with patient reference 1 and list its number at the top of the first column.
3. Take your time to review the patient details and the visual requirements.
4. Select THE MOST APPROPRIATE low vision device from the box relative to the patient requirements in the case you are reviewing.
5. State three reasons why the device is the most appropriate for that patient.
6. State three limitations of the appliance for the patient.
7. Repeat for patient reference 2 and 3.
8. For patient one only, note four guidance points you would give the patient when advising them to use the appliance.
9. For patient one only, give three examples of non-optical aids and additional services that might benefit the patient in relation to their requirements.



Tips

- When practising this section, aim for 5 minutes to examine each of the appliances to understand their use.
- Spend 1–2 minutes on each patient to look at the visual requirements and select an appropriate aid. This will give you approximately 10 minutes to complete the rest of the required information.
- When listing limitations, try to think about how a patient will use the device.
- Ensure this section is completed in the time allowed as it will be collected before you move to the next station.

The next page shows the form that you will see and complete in the examination.

Final Qualifying Examination



Section D: Abnormal ocular conditions and special optical appliances

Final Qualifying Examination

Section D2



Candidate Number:		Date:		Set Number:	
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Patient Ref	1	2	3	Leave Blank
Appliance Chosen				
Name of Appliance				
State 3 benefits appropriate for the patients visual needs				
State 3 Limitations for the patient				
For patient 1 only Give advice on Use (4 guidance points)				
For patient 1 only suggest State 3 suitable non-optical products or services				
				Total:

Examiner Signature		Date	
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Final Qualifying Examination

Section D: Abnormal ocular conditions and special optical appliances

Section D3: Special optical appliances

EXAM DURATION: 20 minutes

Objective

Identify the special optical appliance and discuss its benefits and limitations to the patient.

EQUIPMENT PROVIDED: see *picture opposite*

- D3 answer sheet
- Box set containing two special optical appliances and three sports appliances

Method

1. Clearly enter your candidate number and box set number on the answer form.
2. Start with appliance A and list its number at the top of the column.
3. Take your time to review the appliance.
4. Note the appliance name.
5. List four special design features that make it suitable for use.
6. List two dispensing/fitting considerations when ordering this appliance.
7. Repeat for appliance B, C, D and E.



Tips

- When practising this section aim for 3 minutes to write your information about each appliance, allowing 5 minutes to check your answers.
- When listing design features, think about their benefits relevant to the requirements of the patient you are dispensing them to.
- Ensure this section is completed in the time allowed as it will be collected before you move to the next station.

The next page shows the form you will see in the examination.

Final Qualifying Examination



Section D: Abnormal ocular conditions and special optical appliances



Final Qualifying Examination Section D3 - Special Optical Appliances

Candidate Number		Date		Set Number	
SOA Reference		Sports Appliance Reference			Leave Blank
Name and use of appliance		Name of Appliance & appropriate sport			
State 4 special design features		State 4 special design features			
State 2 dispensing /fitting requirements		State 2 dispensing and fitting requirements			
Total A				Total B	
Examiner 1 Signature		Examiner 2 Signature		Grand Total	

Final Qualifying Examination

Section D3: Revision notes

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Final Qualifying Examination

References

Ophthalmic Lenses and Dispensing
Jalie

Practical Ophthalmic Lenses
Jalie and Wray

Spectacle Lenses: Theory and Practice
Fowler and Petrie

Practical Dispensing
Griffiths

Spectacle Frames and their Dispensing
Obstfeld

British Standards Extracts

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Please let us know your thoughts on any areas we can improve on for future publications at the email addresses below.

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