Guidance for students

FQE Revision guide

In conjunction with the 2015 Level 6
Diploma in Ophthalmic Dispensing Syllabus

Association of British Dispensing Opticians

ABDO Final Qualifying Examination

Contents

Final Qualifying Examination

Preface

This book is designed to familiarise yourself with your Final Qualifying Examinations (FQE). 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 can be downloaded from the examinations website. Please be aware that the deadline for entry is 1st March for the summer session and 1st October for the winter session. The closing date for submission of tracking sheets and final declaration will be 31st May for the summer session and 20th December for the winter session.

Location of Theory Exams
The location of the theoretical exams is the The Doug Ellis Sports Centre, 150 Wellhead Lane Perry Barr, Birmingham B42 2SY. The Doug Ellis Sports Centre can be contacted via 0845 267 1192.

Please note this is a separate venue to the practical examinations at Aston Cross Business Village.

Location of Practical Exams
The practical examinations are held in the Aqueous II building at Aston Cross Business Village, Chester Street, Birmingham, B6 3RQ.

We require all candidates to be present at least 30 mins before their start time; we would recommend that you book accommodation as close to the venue as possible.

PLEASE NOTE: The nearest parking for the venue is Aston train station which is approximately 10 min walk from the venue. For the majority of students, you will need to be at the venue by 08.00am.

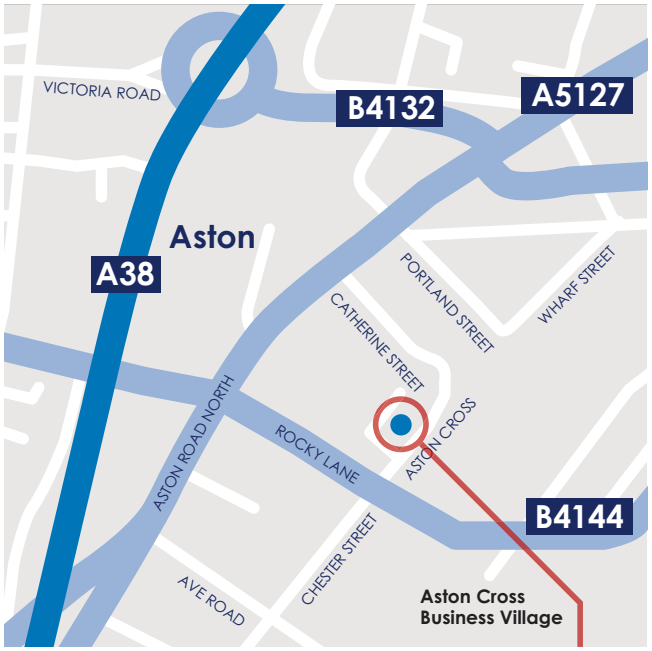
On entering the building proceed to the back of the entrance hall to the lift area and continue to the fourth floor where an ABDO representative will be there to welcome you, check your photographic ID, issue you with your examination timetable and direct you to your holding area for the rest of the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

You will find toilets, a water dispenser and a drinks and snacks machine on this floor. For lunch options, there is a sandwich shop within walking distance in the business park where you will be able to purchase fresh lunches or if you prefer, please bring your own.

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 (luggage left in this open area is at your own risk).

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.

If you require reasonable adjustments to be made to your exam experience, please contact the exams department and complete the form on the website with as much notice as possible, so that the specified arrangements can be made.



Aqueous II building at Aston Cross Business Village

Reception area at the NRC Birmingham

Preparation

What to take with you on the day:

- Your ABDO examinations letter
- Photographic ID
- Portfolio containing 51 case records
- A soft copy of the compete portfolio on a memory stick
- Pen and calculator if required

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 endeavor to supply a wide range, but you are permitted to bring your own if preferred.

What to wear on the day:
You will be seeing real patients so we expect smart business attire to be worn, as you would in a real practice.

The practical skills of a dispensing optician can be taught with relative ease, to achieve the consistency and accuracy required we recommend you practice the acquired skill with a systematic approach on a regular basis in the months leading up to your professional examinations.

Final Qualifying Examination

Sections

The examination is divided into the following sections:

A Lenses and manual skills — **1 hour total**

A1. Spectacle checking — **15 mins**
Check a pair of spectacle frames glazed with bifocal lenses against a written order and note the nature of the errors found.

A2. Spectacle duplication — **15 mins**
to record the required measurements in order for a pair of spectacles glazed with progressive power lenses to be duplicated.

A3. Manual skills task — **30 mins**
To demonstrate their ability to manipulate and repair spectacle frames performing three of the following tasks.

Task one will be either:

- Replace faulty components on a compression plug rimless mount
- Remove a broken nylon cord, replace and re-fit the lens

Tasks two and three will be any of the following:

- Spring in lenses and set up frame
- Shorten a metal side by cutting and re-bending
- Increase the angle of let-back on a spectacle frame by filing
- Adjust a metal eye rim to accommodate high plus lenses or lenses made with a high plus front curvature

B Spectacle Dispensing — **1 hour 30 mins total**

B1. Dispense handmade frame — **30 mins**
Measure and record details for a handmade, regular bridge frame fitted with single vision lenses.

B2. Paediatric dispense — **30 mins**
Select and fit the most appropriate frame. Measure and record the details for a bifocal dispense.

B3. Bespoke progressive dispense — **30 mins**
Select and fit the most appropriate frame, measure and record details for bespoke progressive lenses for a frame with pads on arms.

C Prescription analysis — 1 hour 30 mins total

Candidates will be required to demonstrate at finals level, their ability to discuss prescriptions and describe presented lenses during three separate viva examinations each lasting a total of 30 minutes Case record prescriptions may include the following topics for single vision, bifocal, trifocal and progressive power lenses as appropriate.

- Advice and/or instructions given to patient
- Complex prescriptions
- Contact lens legalities
- Discussion on lens types suitable for the prescription
- Fitting and adjustment details
- Gross anisometropia
- Low vision
- Occupational dispensing
- Paediatric (including pre-school) dispensing
- Patient history
- Personal eye protection
- Prescribed prisms
- Prescribed tints
- Prescription details
- Sports eyewear dispensing

D Ocular abnormalities and special optical appliances — 1 hour total

Candidates will be required to complete station exams which may comprise of the following scenarios:

D1. Abnormal ocular conditions — **10 mins**
Identify pathological ocular conditions from photographs

D2. Abnormal ocular conditions — **10 mins**
Identify a pathological condition and follow the correct referral procedure if appropriate

D3. Low vision — **10 mins**
Describe the design features, benefits and limitations for the low vision appliances supplied

D4. Low vision — **10 mins**
From the case notes discuss the benefits and limitations of the low vision aid

D5. Special optical appliances — **10 mins**
Describe the design features, fit and advise on use for a particular special optical appliance

D6. Sports appliances — **10 mins**
Describe the design features, fit and advise on use for a particular sports appliance

E Assessment of portfolio

Candidates are required to submit their portfolio on the examination day for assessment by an ABDO examiner. The assessment will be based on the 51 case records.

The candidate will collect their original portfolio at the end of the day.

Final Qualifying Examination

Section A: Lenses and Manual Skills

Section A1: Spectacle Checking

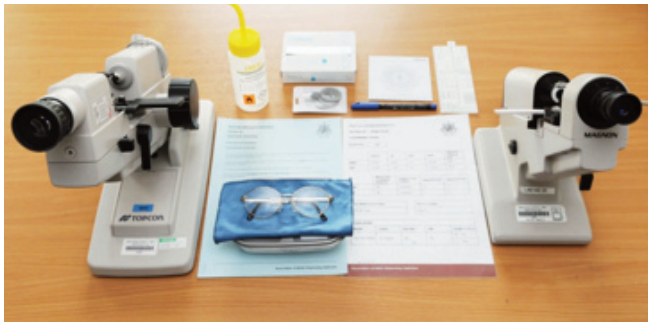
Objective: **15 minutes**

To check a pair of spectacles glazed with bifocal lenses on a manual focimeter against a written order and verify the given parameters conform to BS tolerances:

- Spherical power
- Cylindrical power
- Axis
- Addition
- Segment top position
- Geometric inset
- Any additional features relating to the lenses
- Frame details and measurements

Equipment provided: *see picture opposite*

- A1 lens box containing spectacles with glazed bifocals lenses
- Manual focimeter
- A fine-pointed lens marker pen
- Frame ruler
- Optical protractor
- Lens cleaner
- A1 answer sheet
- Candidate spectacle order form
- Scrap paper



Method:

1. Clearly enter your candidate number and box set number on the answer form.
2. Mark your lenses R and L to avoid confusion due to exam nerves.
3. If possible keep both eyes open when using the focimeter.
4. 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 or negative 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.
5. Starting with the right lens, place into the focimeter and centre accordingly.
6. Check the sphere and cylinder powers of the right lens and its axis.
7. You may wish to note the prescription down on the back of the form to help you remember and compare where the errors are in the order.
8. Using the focimeter's marking device, dot the optical centre of the right lens.
9. If necessary you may enhance the central dot with your marker pen, but take care not to enlarge the dot which may cause inaccuracies in your measurements.
10. Segment inset: mark the centre of the segment top position. Measure the horizontal distance between the distance optical centre and centre of the seg top position.
11. Near addition: check whether the segment is on the front or back surface of the lens. If it is on the front then you need to determine the front vertex power of the distance portion.
12. With the spectacles in the same plane, position the segment at the near verification point and read the front vertex power.

13. The addition power will be the difference between the front surface near power and the the front surface distance power.
14. Repeat for the left lens.
15. Place the spectacles on your frame ruler using the vertical and horizontal scales to set each lens at the geometric centre.
16. Read the vertical position of the optical centres stating whether this falls above or below the horizontal centre line in mm.
17. Seg top position: note the vertical position of the segment top stating whether this falls above or below horizontal centre line in mm.
18. Segment Drop: measure the vertical distance between the seg top and the distance optical centre.
19. Repeat for the left lens.
20. Check the segment shape and size are correct.
21. Note if there are tints or coatings as specified.
22. Check the frame details match the required order.
23. 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 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: 1mm

Tips:
- Ensure this section is completed in the time allowed as it will be collected with section A2 after 30 minutes.
- When listing the errors note exactly where the error is in the first column and what the error detail is in the second column to receive maximum marks;

For example:

Nature of Fault	**Measurement of fault compared to order**
Right sphere	reads +1.50 should be +2.00

- When practising this section aim for 5 mins per lens allowing 5 mins to double check your answers.
- Ensure all signs are present and record prescriptions to two decimal places.
- Check on the exact meaning of horizontal centre line and geometric centre.

Suggested reading:
- Ophthalmic Lenses and Dispensing (M Jalie) Chapter 1
- Practical Ophthalmic Lenses (M Jalie and L Wray) Experiment 49
- Spectacle lenses Theory and Practice (Fowler and Petrie) Chapter 6

The following 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 6 pairs of spectacles using a manual focimeter. We advise that you have your answers checked by your supervisor in practice; we also recommend, to help you with this revision, you do your practice spectacle checking on a manual focimeter as this skill can be easily forgotten.

Instructions to candidates

The spectacles provided have been supplied by the manufacturer to the prescription and specification on the order form.

Check the spectacles against the order and clearly state up to **eight** errors in the boxes provided overleaf.

You are not required to examine the lenses for material or surface defects.

Please ensure your **Candidate Number** and **Box Set Number** are clearly written in the spaces provided overleaf.

Time allowed: 15 minutes

Final Qualifying Examination

Section A1

Spectacle Checking

abdo

Candidate number		Box Set Number	
Venue		Date	

Please note: Only the first **eight** errors recorded will be marked

Nature of fault	**Measurement of fault compared to order**	**Leave blank**

Assessed competency: 4.1.3	**Total A1**	
Competency Pass/Fail (delete as appropriate)		

Examiner 1 Signature		Examiner 2 Signature	

SAMPLE PAPER

Final Qualifying Examination

Section A: Lenses and manual skills

Section A1: Spectacle checking revision form

Nature of fault	Measurement of fault compared to order	Checked

Nature of fault	Measurement of fault compared to order	Checked

Nature of fault	Measurement of fault compared to order	Checked

Final Qualifying Examination

Section A: Lenses and manual skills

Section A1: Spectacle checking revision form

Nature of fault	Measurement of fault compared to order	Checked

Nature of fault	Measurement of fault compared to order	Checked

Nature of fault	Measurement of fault compared to order	Checked

Final Qualifying Examination

Section A: Lenses and Manual Skills

Section A2: Spectacle Duplication

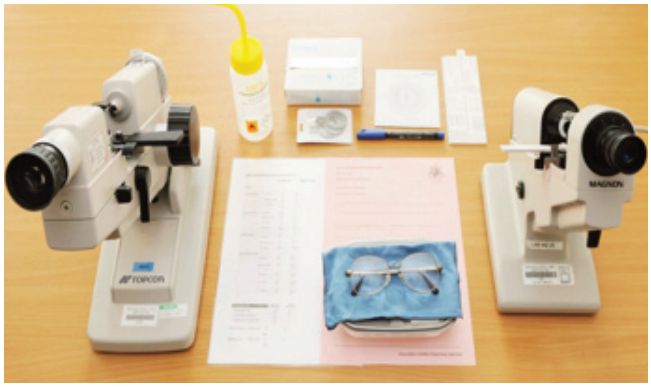
Objective: **15 minutes**

To record the following measurements in order for a pair of spectacles glazed with progressive power lenses to be duplicated:

- Identify type of progressive power lens
- Spherical power
- Cylindrical power
- Axis
- Addition
- The magnitude and direction of any prismatic element
- Monocular centration distances
- Fitting cross heights measured in relation to the horizontal centre line
- Any additional features relating to the lens
- Frame details and measurements

Equipment provided: *see picture opposite*

- A2 box set containing spectacles glazed with progressive power lenses
- Manual focimeter
- Progressive power lens markings list
- A fine-pointed lens marker pen
- Frame ruler
- Lens cleaner
- Optical protractor
- A2 answer sheet
- Scrap paper



Method:

1. Clearly enter your candidate number and box set number on the answer form.
2. Clearly mark your lenses R and L to avoid confusion due to exam nerves.
3. Holding the frames up to the light, locate the manufacturer's engravings and record the reading addition.
4. Using the list of progressive power markings, identify the make and manufacturer of the lenses and locate the correct template.
5. Using the correct template mark the distance reference point, the prism reference point, the nasal and temporal engraving points and near verification point.
6. Note if there are any tints or coatings on the lenses.
7. Set up the eyepiece of the focimeter: (If possible keep both eyes open when using the focimeter):

   Rotate the eyepiece to its maximum; ensure the target is out of focus by setting the scale to a high positive or negative value. Now rotate the eyepiece inwards until the graticule is just in focus.
8. Then set the power scale to zero. The resulting target and graticule should both be in focus.
9. Starting with the right lens, place into the focimeter at the distance reference zone.
10. Record sphere and cylinder powers of the right lens and its axis.
11. You can record either the plus or minus cyl form, but be consistent in your cyl form and remain with this format throughout your revision and this section.

12. 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.
13. Place the near verification zone in the centre of the viewing platform and verify the engraved reading addition.
14. Repeat for the left lens.
15. Place the spectacles on your frame ruler using the vertical and horizontal scales to set each lens at the geometric centre.
16. 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).
17. 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.
18. Repeat for the left lens.
19. Note the frame name, colour, eyesize, distance between lenses and angle of side on your answer form.

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 will vary 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: 1mm

Tips:
- Ensure this section is completed in the time allowed as it will be collected with section A1 after 30 minutes.
- When practising this section aim for 5 mins per lens allowing 5 mins to double check your answers
- Ensure all signs are present and record prescriptions to two decimal places.

Suggested reading:
- Ophthalmic Lenses and Dispensing (M Jalie) Chapter 1
- Practical Ophthalmic Lenses (M Jalie and L Wray) Experiment 49
- Spectacle lenses Theory and Practice (Fowler and Petrie) Chapter 6

The next page shows the form you will see in the examination. Following that, we have created a table for you to practise and record the parameters of 12 pairs of spectacles using a manual focimeter. We advise that you have your answers checked by your supervisor in practice; we also recommend, to help you with this revision, you do your practice spectacle checking on a manual focimeter as this skill can be easily forgotten.

Instructions to candidates

The spectacles provided are intended to be duplicated using the information you record overleaf.

A list of progressive lens identification markings and several templates are provided.

Please ensure your **Candidate Number** and **Box Set Number** are clearly written in the spaces provided overleaf.

Time allowed: 15 minutes

Final Qualifying Examination

Section A2

Spectacle Duplication

abdo

Candidate number		Box Set Number	
Venue		Date	

			Leave blank	
Lens manufacturer				
Lens design name				
Sphere	R	L		
Cylinder	R	L		
Axis	R	L		
Addition	R	L		
Prism and base setting at prism reference point	R	L		
Monocular centration distances	R	L		
Vertical position of fitting point relative to HCL	R	L		
Frame name and colour				
Eyesize and DBL				
Angle of side	R	L		

Assessed competency: 4.1.4	**Total**	
Competency Pass/Fail (delete as appropriate)		

Examiner 1 signature		Examiner 2 signature	

FQE Section A2 Spectacle Duplication 0815

SAMPLE PAPER

Final Qualifying Examination

Section A: Lenses and manual skills

Section A2: Spectacle Duplication Revision Form

Measurement	Results		Results		Results	
Lens manufacturer						
Lens design name						
Sphere	R	L	R	L	R	L
Cylinder	R	L	R	L	R	L
Axis	R	L	R	L	R	L
Addition	R	L	R	L	R	L
Prism and base setting at prism reference point	R	L	R	L	R	L
Monocular centration distances	R	L	R	L	R	L
Vertical position of fitting point relative to HCL	R	L	R	L	R	L
Frame name and colour						
Eyesize and DBL						
Angle of side	R	L	R	L	R	L

Checked			

Measurement	Results		Results		Results	
Lens manufacturer						
Lens design name						
Sphere	R	L	R	L	R	L
Cylinder	R	L	R	L	R	L
Axis	R	L	R	L	R	L
Addition	R	L	R	L	R	L
Prism and base setting at prism reference point	R	L	R	L	R	L
Monocular centration distances	R	L	R	L	R	L
Vertical position of fitting point relative to HCL	R	L	R	L	R	L
Frame name and colour						
Eyesize and DBL						
Angle of side	R	L	R	L	R	L

Checked			

Final Qualifying Examination

Section A: Lenses and manual skills

Section A2: Spectacle Duplication Revision Form

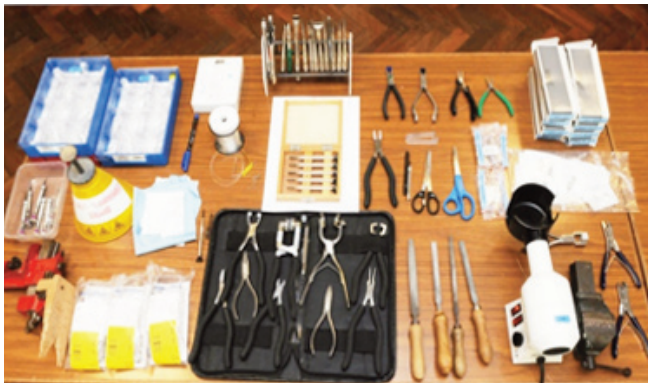
Measurement	Results		Results		Results	
Lens manufacturer						
Lens design name						
Sphere	R	L	R	L	R	L
Cylinder	R	L	R	L	R	L
Axis	R	L	R	L	R	L
Addition	R	L	R	L	R	L
Prism and base setting at prism reference point	R	L	R	L	R	L
Monocular centration distances	R	L	R	L	R	L
Vertical position of fitting point relative to HCL	R	L	R	L	R	L
Frame name and colour						
Eyesize and DBL						
Angle of side	R	L	R	L	R	L
Checked						

Measurement	Results		Results		Results	
Lens manufacturer						
Lens design name						
Sphere	R	L	R	L	R	L
Cylinder	R	L	R	L	R	L
Axis	R	L	R	L	R	L
Addition	R	L	R	L	R	L
Prism and base setting at prism reference point	R	L	R	L	R	L
Monocular centration distances	R	L	R	L	R	L
Vertical position of fitting point relative to HCL	R	L	R	L	R	L
Frame name and colour						
Eyesize and DBL						
Angle of side	R	L	R	L	R	L
Checked						

Final Qualifying Examination

Section A: Lenses and Manual Skills

Section A3: Manual Skills Task



Objective: **30 minutes**

Task one will be either:

- Replace faulty components on a compression plug rimless mount
- Remove a broken nylon cord, replace and re-fit the lens

Tasks two and three will be any of the following:

- Spring in lenses and set up frame
- Shorten a metal side by cutting and re-bending
- Increase the angle of let-back on a spectacle frame by filing
- Adjust a metal eye rim to accommodate high plus lenses or lenses made with a high plus front curvature

Equipment provided: *see picture above*

- A fine-pointed lens marker pen
- Screw drivers
- Supra nylon
- Ribbon
- Rimless plugs
- Rimless lock nut set
- Frame adjusting pliers
- Frame ruler
- Files
- Pin
- Knife/ blade
- Rimless pliers
- Frame heater
- Side cutters

Method:
Replace a rimless compression plug

1. You will only be required to replace one rimless plug in one spectacle mount.
2. Remove the broken plug elements from the drilled holes in the lens using the appropriate rimless tube stripper.
3. Remove any rimless plug tubing from the compression posts on the frame side.
4. Select appropriate replacement plug to insert into the drilled holes from the back of the lens to the front.
5. Ensure the plug adjoinment bar is lying flat against the back surface of the lens and the excess tubing extends from the front surface of the lens.
6. Using the head cutting pliers, trim the excess tubing back to the lens surface: be careful not to scratch the lens with the pliers at this point.
7. Then insert the compression posts of the side, into the remaining tubing from the front of the lens to the back.
8. You may not be able to push the posts all the way to the back of the lens; you will need to use the rimless compression pliers to complete this.
9. Be careful with the pliers, not to roll the back of the rimless compression plug, as the repair will not last.
10. You may have to remove the new plug and repeat the process if the lens is not secure.
11. Once you are happy the side has been replaced securely, straighten the frame and clean the lenses
12. Replace the finished spectacles in the envelope provided.

Remove a broken nylon cord:

1. Remove the broken cord from both sides of the lens rim, if required push the cord through the hole using a pin or fine pointed tool.
2. Measure the amount of cord you will require to replace the lens, allowing 20mm extra either side for manoeuvre.
3. Thread the cord through the top hole from the inside of the frame to the outside at the nasal edge of frame and return the cord through the second hole to the inside edge of the frame.
4. Ensure it is seated tightly by squeezing gently the nylon into the frames supra groove with pliers.
5. Thread the cord through the bottom hole on the temporal side of the frame to the outside of the frame, and then return the cord to the inside edge of the frame through the top hole on the temporal side.
6. Keep the cord loose at this point.
7. Hold the lens in place in the top rim and stretch the cord to the bottom edge of the lens.
8. Remove the lens and press the cord into the supra groove on the frame where the rim finishes.
9. Shorten the ends of the cord both nasal and temporal and tuck the remainder into the frames supra groove.
10. Push the top edge of the lens into the top rim of the frame; slide the ribbon between the lens and the cord.
11. Using the ribbon, stretch the cord around the edge of the lens and into the glazed supra groove.
12. Ensure the cord is in place along the full bottom edge of the lens and slide the ribbon out.
13. Rotate the lens to ensure there is limited movement, if the lens rotates easily in the frame, you will need to replace the cord again.
14. Clean both the lenses and ensure the frame is straight and correctly set.
15. Replace the finished spectacles in the envelope provided.

Spring in lenses and set up frame:

1. Clearly enter your candidate number and box set number on the envelope.
2. Clearly mark your lenses R and L to avoid confusion due to exam nerves.
3. If possible keep both eyes open when using the focimeter.
4. Set up the eyepiece of the focimeter:
5. Rotate the eyepiece to its maximum; ensure the target is out of focus by setting the scale to a high positive or negative value. Now rotate the eyepiece inwards until the graticule is just in focus.
6. Then set the power scale to zero. The resulting target and graticule should both be in focus.
7. Starting with the right lens, place into the focimeter and centre accordingly.
8. Record sphere and cylinder powers of the right lens and its axis.
9. You can record either the plus or minus cyl form, but be consistent in your cyl form and remain with this format throughout your revision and this section.
10. Record the right lens axis accurately, and using the focimeters marking device, dot the optical centre of the right lens.
11. Repeat for the left lens.
12. Call the examiner over and they will observe you remove the lenses from the frame and they will then distort it for you .
13. Heat the plastics frame to ensure pliability when you re-insert the lenses.
14. Insert the right lens back into the frame from the front plane of the spectacle frame.
15. Repeat for the left lens.
16. Check the axis position of the lenses on the focimeter to ensure that they have both been accurately inserted into place.
17. Once you are happy with the lens positioning, ensure the frame is straight and clean the lenses.
18. Replace your finished spectacles back in the envelope provided.

Shorten a metal side:

1. Ensure you are making the adjustment on the left or right side as specified on your envelope.
2. Measure the length to bend from the centre of the dowel point to the ear point.
3. Measure the length of drop from the ear point to the extreme end of the side.
4. Heat the end tip in the frame heater.
5. Straighten the end tip and remove the acetate end cover.
6. Measure the specified amount and mark if required the point you wish to cut on the metal side.
7. If you measure back 1mm less than required then you can cut off your mark This avoids leaving ink marks on the part of the side you are going to use.
8. Cut at the desired measurement with the metal side cutters.
9. File the metal side tip to ensure it does not scratch the inside of the acetate tip on re-application.
10. Replace the acetate tip.
11. Heat the tip in the frame heater and re-bend the side to the desired length .
12. Ensure the length of drop is the same as before and the length to bend has been reduced as specified.
13. Once you are happy you have reached the desired measurement, straighten the frame and clean the lenses.
14. Replace the finished spectacles in the envelope provided.

Increase the angle of let-back

1. Identify the correct side to be adjusted.
2. Measure the angle of let-back by placing the frame on the end of the ruler and reading the horizontal angle between the inner surface of the fully opened side, adjacent to the joint, and a normal to the back plane of the front.
3. Close the side of the frame that needs to be adjusted, holding the frame securely in your palm.
4. Place the file flat against the side end that meets with the frame front, keeping the un-ridged edge of the file facing towards the back surface of the frame front
5. Pull the file backwards firmly in one direction.
6. Repeat until the side when the side is closed the angle of let-back has been increased.
7. Then re-measure the angle of let-back.
8. Once you have reached the desired measurement straighten the frame and clean the lenses.
9. Replace the finished spectacles in the envelope provided.

Adjust a metal frame eye-rim

1. Release the screw retaining the lens.
2. Place the required lens into the eye wire and hold the closing block to assess how much adjustment is required.
3. Remove the lens and use the rim forming pliers to adjust the bow of the eye wire, both top and bottom to accommodate the curvature of the lens.
4. Be careful not to roll the rim of the frame in or out, as it will not be able to retain the bevel of the lens and the lens will fall out.
5. Replace the lens and the lens screw.
6. Repeat if necessary.
7. Once you are happy that the lens is secure, straighten the frame and clean the lenses.
8. Replace your finished spectacles in the envelope provided.

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: 1mm

Tips:

- Always check each frame before making any adjustments, and note any potential points of weakness or damage that is already present to the examiner.
- If the frame is not adjustable due to previous damage your task will be replaced with another.
- If you adjust a previously damages frame without notifying the examiner, they will assume you have caused it (as a patient would).
- Any adjustments or repairs that you would not normally do in practice (that might or instance normally be sent to your laboratory) practice on some old stock to ensure you are capable of all 6 adjustments/repairs on the day.
- When practising this section aim to complete the easiest tasks first allowing the remaining time to be allocated to your most difficult adjustment/repair.
- Ensure the frame is set up correctly and the lenses have been cleaned, as you would for your patients
- Ensure the frame is undamaged.

Final Qualifying Examination

Section A3: Revision notes

Final Qualifying Examination

Section B: Spectacle Dispensing

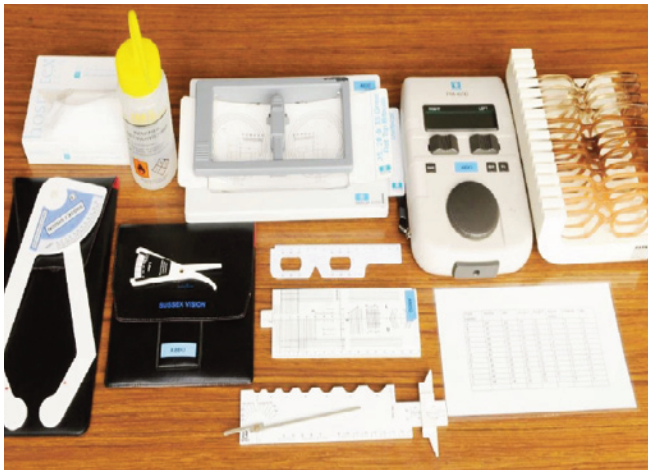
Section B1: Dispense a Handmade Frame

Objective: **30 minutes**

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

Equipment provided: *see picture opposite*

- Pupilometer
- Head callipers
- Vertex distance callipers
- Facial Gauge
- Frame ruler
- PD ruler
- Di-test
- 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 for example: hobbies and occupation, and make your lens choices based on this information.
3. You will have 20 minutes to take the required measurements; your examiner 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 format is ordered.
5. Add in your required lens details relevant to the occupation, hobbies and Rx.
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 whilst 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. 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.
   k. Frame details: you can 'copy' an existing frame from the selection provided, remember to change the eye size and DBR and related measurements if required.
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 examiner 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 the dispensing's in a different order than demonstrated in this guide. but you will complete all three 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.

The next two pages show the form you will see in the examination. Following that, we have created a table for you to practice and record the parameters of 6 patients. We advise that you have your answers checked by your supervisor in practice; you could make a cardboard spectacle front to check the accuracy of your measurements on family or friends.

Final Qualifying Examination

Section B - Spectacle Dispensing Order

Candidate number		Patient	
Venue		Date	

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

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

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

Assessed Competency:								
1.1.1	1.1.2	4.5.1	9.3.1	9.3.2	9.3.3	9.4.1	9.4.2	9.5.1

SAMPLE PAPER

RIGHT	SPH	CYL	AXIS	PRISM	BASE
	ADD				

LEFT	SPH	CYL	AXIS	PRISM	BASE
	ADD				

LENSES	Type Form and Material		Special instructions		Monocular Centration R L Decentration R L
	Tint/coating		Minimum size uncut		
	Segment. Shape & diameter	Height/top position	Segment inset	Fitting point position	PPL minimum height

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

SAMPLE PAPER

Final Qualifying Examination

Section B - Spectacle Dispensing Order

Section B1: Handmade Frame Revision Form

Lenses	Type Form and Material	Special instructions	Monocular Centration	
			R	L
			Decentration	
			R	L
	Tint and coating	Minimum size uncut		

Frames							
	Name, type, colour						
	Boxed lens size				DBL		Box centre distance
	Regular bridge frame:	Crest height	Projection		Distance between rims		Apical radius
					@		
					@		
	Sides:	Type	Length to bend		Angle of side		Head width
			R	L	R	L	
			Total length of side				Temple width
			R	L			

Lenses	Type Form and Material	Special instructions	Monocular Centration	
			R	L
			Decentration	
			R	L
	Tint and coating	Minimum size uncut		

Frames							
	Name, type, colour						
	Boxed lens size				DBL		Box centre distance
	Regular bridge frame:	Crest height	Projection		Distance between rims		Apical radius
					@		
					@		
	Sides:	Type	Length to bend		Angle of side		Head width
			R	L	R	L	
			Total length of side				Temple width
			R	L			

Lenses	Type Form and Material	Special instructions	Monocular Centration	
			R	L
			Decentration	
			R	L
	Tint and coating	Minimum size uncut		

Frames							
	Name, type, colour						
	Boxed lens size				DBL		Box centre distance
	Regular bridge frame:	Crest height	Projection		Distance between rims		Apical radius
					@		
					@		
	Sides:	Type	Length to bend		Angle of side		Head width
			R	L	R	L	
			Total length of side				Temple width
			R	L			

Section B1: Handmade Frame Revision Form

Lenses

Type Form and Material	Special instructions	Monocular Centration	
		R	L
		Decentration	
		R	L
Tint and coating	Minimum size uncut		

Frames

Name, type, colour						
Boxed lens size				DBL		Box centre distance
Regular bridge frame:	Crest height	Projection		Distance between rims		Apical radius
				@		
				@		
Sides:	Type	Length to bend		Angle of side		Head width
		R	L	R	L	
		Total length of side				Temple width
		R	L			

Lenses

Type Form and Material	Special instructions	Monocular Centration	
		R	L
		Decentration	
		R	L
Tint and coating	Minimum size uncut		

Frames

Name, type, colour						
Boxed lens size				DBL		Box centre distance
Regular bridge frame:	Crest height	Projection		Distance between rims		Apical radius
				@		
				@		
Sides:	Type	Length to bend		Angle of side		Head width
		R	L	R	L	
		Total length of side				Temple width
		R	L			

Lenses

Type Form and Material	Special instructions	Monocular Centration	
		R	L
		Decentration	
		R	L
Tint and coating	Minimum size uncut		

Frames

Name, type, colour						
Boxed lens size				DBL		Box centre distance
Regular bridge frame:	Crest height	Projection		Distance between rims		Apical radius
				@		
				@		
Sides:	Type	Length to bend		Angle of side		Head width
		R	L	R	L	
		Total length of side				Temple width
		R	L			

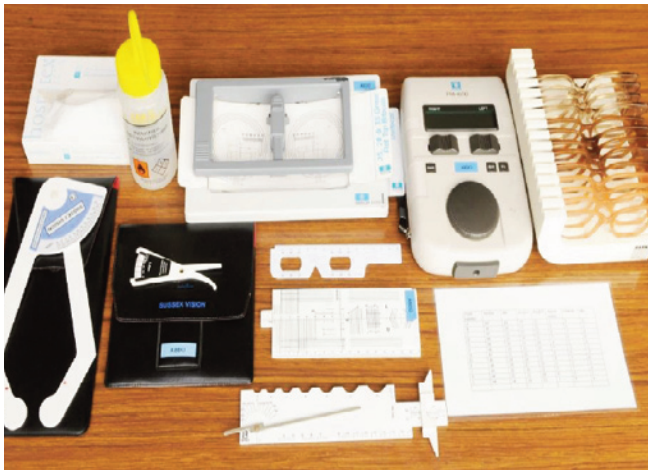
Final Qualifying Examination

Section B1: Revision notes

Final Qualifying Examination

Section B: Spectacle Dispensing

Section B2: Paediatric Dispense



Objective: **30 minutes**

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

Equipment provided: *see picture above*

- Pupilometer
- Head callipers
- Vertex distance callipers
- Facial Gauge
- Frame ruler
- PD ruler
- Di-test
- Frames to dispense
- Baby/children's heads
- 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 examiner for example hobbies, and make your lens choices based on this information.
3. You will have 20 minutes to take the required measurements; your examiner 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.
5. Add in your required lens details relevant to hobbies and Rx.
6. Pay particular attention to the seg size shape and fitting of the seg top for your paediatric patient.
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:
    - 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.
    - Distance between lenses (DBL); the distance between the nearest points of the apexes of the two lenses. Note; subtract an allowance for the bevel.
    - Boxed Centre Distance (BCD); horizontal distance between the two boxed centres (the intersection of horizontal and vertical centre lines of each box).
    - Bridge width; minimum distance between the pad surfaces of the frame measured along the bridge width line.
    - Vertex distance: measured from the back plane of the lens to the front surface of the cornea.
9. For a frame with pads on arms, measure and record:
    - 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.
    - Distance between lenses (DBL); the distance between the nearest points of the apexes of the two lenses. Note; subtract an allowance for the bevel.
    - Boxed Centre Distance (BCD); horizontal distance between the two boxed centres (the intersection of horizontal and vertical centre lines of each box).
    - 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 examiner to check.
12. The last 10 minutes of the section the examiner will ask you questions based on your measurements, final fitting and consideration of the anatomical development of children's facial features.

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 4 patients. We advise that you have your answers checked by your supervisor in practice.

Final Qualifying Examination

Section B - Spectacle Dispensing Order

Candidate number		Patient	
Venue		Date	

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

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

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

Assessed Competency:								
1.1.1	1.1.2	4.5.1	9.3.1	9.3.2	9.3.3	9.4.1	9.4.2	9.5.1

SAMPLE PAPER

RIGHT	SPH	CYL	AXIS	PRISM	BASE
	ADD				

LEFT	SPH	CYL	AXIS	PRISM	BASE
	ADD				

LENSES	Type Form and Material		Special instructions		Monocular Centration R L Decentration R L
	Tint/coating		Minimum size uncut		
	Segment. Shape & diameter	Height/top position	Segment inset	Fitting point position	PPL minimum height

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

SAMPLE PAPER

Final Qualifying Examination

Section B - Spectacle Dispensing Order

B2: Paediatric Dispense Revision Form

Lenses

Type Form and Material		Special instructions		Monocular Centration
				R / L
				Decentration
				R / L
Tint and coating		Minimum size uncut		
Segment shape and diameter	Height / Top position	Segment inset	Fitting point position	PPL minimum height

Frames

Name, type and colour				
Boxed lens size		DBL	Box centre distance	
Fixed pad bridge frame:		Bridge width		
Frame with pads on arms:		Distance between pad centres		Vertex distance
Sides:	Type	Length to bend R / L	Angle of side	Head width
		Total length of side R / L		Temple width

Lenses

Type Form and Material		Special instructions		Monocular Centration
				R / L
				Decentration
				R / L
Tint and coating		Minimum size uncut		
Segment shape and diameter	Height / Top position	Segment inset	Fitting point position	PPL minimum height

Frames

Name, type and colour				
Boxed lens size		DBL	Box centre distance	
Fixed pad bridge frame:		Bridge width		
Frame with pads on arms:		Distance between pad centres		Vertex distance
Sides:	Type	Length to bend R / L	Angle of side	Head width
		Total length of side R / L		Temple width

B2: Paediatric Dispense Revision Form

Lenses

Type Form and Material		Special instructions		Monocular Centration
				R / L
				Decentration
				R / L
Tint and coating		Minimum size uncut		
Segment shape and diameter	Height / Top position	Segment inset	Fitting point position	PPL minimum height

Frames

Name, type and colour				
Boxed lens size		DBL	Box centre distance	
Fixed pad bridge frame:		Bridge width		
Frame with pads on arms:		Distance between pad centres		Vertex distance
Sides:	Type	Length to bend R / L	Angle of side	Head width
		Total length of side R / L		Temple width

Lenses

Type Form and Material		Special instructions		Monocular Centration
				R / L
				Decentration
				R / L
Tint and coating		Minimum size uncut		
Segment shape and diameter	Height / Top position	Segment inset	Fitting point position	PPL minimum height

Frames

Name, type and colour				
Boxed lens size		DBL	Box centre distance	
Fixed pad bridge frame:		Bridge width		
Frame with pads on arms:		Distance between pad centres		Vertex distance
Sides:	Type	Length to bend R / L	Angle of side	Head width
		Total length of side R / L		Temple width

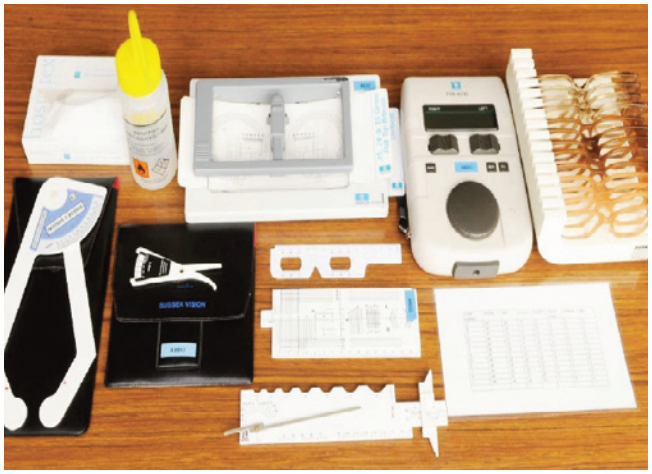
Preliminary Qualifying Examination

Section B2: Revision notes

Final Qualifying Examination

Section B: Spectacle Dispensing

Section B3: Bespoke Progressive Dispense



Objective: **30 minutes**

Select the most appropriate frame and record details for the frame with pads on arms. Fit the desired frame to the patient before taking the relevant progressive power measurements and any specific measurements required for the bespoke progressive power lens choice.

Equipment provided: *see picture above*

- Pupilometer
- Head callipers
- Vertex distance callipers
- Facial Gauge
- Frame ruler
- PD ruler
- Di-test
- Frames to dispense
- Baby/children's heads
- 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 for example occupation hobbies and any concerns, and make your lens choices based on this information.
3. You will have 20 minutes to take the required measurements; your examiner 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.
5. Add in your required lens details relevant to the occupation, hobbies and Rx.
6. Pay particular attention to the lens design relative to occupation and hobbies.
7. Be aware of any extra measurements the lens type requires and their relevance.
8. Select and fit the most appropriate frame to the patient.
9. Note the frame name, type and colour.
10. Take the following measurements for a frame with pads on arms.
    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.
    e. Vertex distance: the examiner must be called over to observe your method at this point: measure from the back plane of the lens to the front surface of the cornea.

11. Always list two measurements where R and L is stated on the answer form and state your answer in mm.
12. Leave any markings you make on the lenses for the examiner to check.
13. The last 10 minutes of the section the examiner will ask you questions based on your measurements, extra measurements required for the specified lens type and their relevance, lens design in relation to patient requirements and final fitting.

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 6 patients. We advise that you have your answers checked by your supervisor in practice.

Final Qualifying Examination

Section B - Spectacle Dispensing Order

Candidate number		Patient	
Venue		Date	

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

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

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

Assessed Competency:								
1.1.1	1.1.2	4.5.1	9.3.1	9.3.2	9.3.3	9.4.1	9.4.2	9.5.1

SAMPLE PAPER

RIGHT	SPH	CYL	AXIS	PRISM	BASE
	ADD				

LEFT	SPH	CYL	AXIS	PRISM	BASE
	ADD				

LENSES	Type Form and Material		Special instructions		Monocular Centration R L Decentration R L
	Tint/coating		Minimum size uncut		
	Segment. Shape & diameter	Height/top position	Segment inset	Fitting point position	PPL minimum height

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

SAMPLE PAPER

Final Qualifying Examination

Section B - Spectacle Dispensing Order

B3: Bespoke Progressive Dispense Revision Form

Lenses

Type Form and Material		Special instructions		Monocular Centration	
				R	L
				Decentration	
				R	L
Tint and coating		Minimum size uncut			
Segment shape and diameter	Height / Top position	Segment inset	Fitting point position	PPL minimum height	

Frames

Name, type, colour					
Boxed lens size		DBL		Box centre distance	
Frames with pads on arms:		Distance between pad centres		Vertex distance	
Sides:	Type	Length to bend		Angle of side	Head width
		R	L		
		Total length of side			Temple width
		R	L		

Lenses

Type Form and Material		Special instructions		Monocular Centration	
				R	L
				Decentration	
				R	L
Tint and coating		Minimum size uncut			
Segment shape and diameter	Height / Top position	Segment inset	Fitting point position	PPL minimum height	

Frames

Name, type, colour					
Boxed lens size		DBL		Box centre distance	
Frames with pads on arms:		Distance between pad centres		Vertex distance	
Sides:	Type	Length to bend		Angle of side	Head width
		R	L		
		Total length of side			Temple width
		R	L		

Lenses

Type Form and Material		Special instructions		Monocular Centration	
				R	L
				Decentration	
				R	L
Tint and coating		Minimum size uncut			
Segment shape and diameter	Height / Top position	Segment inset	Fitting point position	PPL minimum height	

Frames

Name, type, colour					
Boxed lens size		DBL		Box centre distance	
Frames with pads on arms:		Distance between pad centres		Vertex distance	
Sides:	Type	Length to bend		Angle of side	Head width
		R	L		
		Total length of side			Temple width
		R	L		

B3: Bespoke Progressive Dispense Revision Form

Lenses

Type Form and Material		Special instructions			Monocular Centration	
					R	L
					Decentration	
					R	L
Tint and coating		Minimum size uncut				
Segment shape and diameter	Height / Top position	Segment inset	Fitting point position	PPL minimum height		

Frames

Name, type, colour					
Boxed lens size		DBL		Box centre distance	
Frames with pads on arms:		Distance between pad centres		Vertex distance	
Sides:	Type	Length to bend		Angle of side	Head width
		R	L		
		Total length of side			Temple width
		R	L		

Lenses

Type Form and Material		Special instructions			Monocular Centration	
					R	L
					Decentration	
					R	L
Tint and coating		Minimum size uncut				
Segment shape and diameter	Height / Top position	Segment inset	Fitting point position	PPL minimum height		

Frames

Name, type, colour					
Boxed lens size		DBL		Box centre distance	
Frames with pads on arms:		Distance between pad centres		Vertex distance	
Sides:	Type	Length to bend		Angle of side	Head width
		R	L		
		Total length of side			Temple width
		R	L		

Lenses

Type Form and Material		Special instructions			Monocular Centration	
					R	L
					Decentration	
					R	L
Tint and coating		Minimum size uncut				
Segment shape and diameter	Height / Top position	Segment inset	Fitting point position	PPL minimum height		

Frames

Name, type, colour					
Boxed lens size		DBL		Box centre distance	
Frames with pads on arms:		Distance between pad centres		Vertex distance	
Sides:	Type	Length to bend		Angle of side	Head width
		R	L		
		Total length of side			Temple width
		R	L		

Final Qualifying Examination

Section C - Prescription Analysis

Objective: **1 hour 30 minutes**

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

Equipment provided:

- Scrap paper
- Spare pens
- Section D prescription book
- Lens description box set

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 practice and put your thoughts into some order;
    i. What is the prescription for?
    ii. Are there any errors or any information missing?
    iii. What could be a potential problem,
    iv. How could you solve the problem.
2. Scrap paper will be provided, you will need to be prepared to calculate:
    - near prescriptions and addition powers,
    - Transposition and alternate sph/cyl and cross cyl transposition,
    - differential prism,
    - effectivity.
3. Use the scrap paper to write or draw your answers where required.
4. The examiners will keep any 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:
    - Advice and/or instructions given to patient
    - Paediatric (including pre-school) dispensing
    - Complex prescriptions
    - Patient history
    - Contact lens legalities
    - Personal eye protection
    - Discussion on lens types suitable for the prescription
    - Prescribed prisms
    - Fitting and adjustment details
    - Prescribed tints
    - Gross anisometropia
    - Prescription details
    - Low vision
    - Sports eyewear dispensing prescription
    - Occupational dispensing

Tips:

- Don't forget to speak to the examiners, they will encourage you, but you need to talk to them to be able to be awarded the associated marks.
- Practise prescription analysis with your supervisor; 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.
- Examiners 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 examiner if you do not know the answer, they will move you on to something else that can hopefully gain you marks.
- Examiners 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.

The next four pages are examples of prescriptions for you to practice with. We advise that you have your answers checked by your supervisor in practice.

C: 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 - Prescription Analysis

C: 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 R6/6$_{-1}$ 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

C: 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 C - Prescription Analysis

C: Prescription Analysis Revision Records

R	Sph	Cyl	Axis	Prism	Base
Dist	+10.00	+3.25	175		
Add	+3.25				

L	Sph	Cyl	Axis	Prism	Base
Dist	+11.00	+2.75	10		
Add	+3.25				

NOTES:

7

R	Sph	Cyl	Axis	Prism	Base
Dist	+0.50	+0.50	180		
Add	+3.50				

L	Sph	Cyl	Axis	Prism	Base
Dist	+0.25	+0.75	160		
Add	+3.50				

NOTES:

Age 52
Uses computers and does needlework

8

Final Qualifying Examination

Section D - Abnormal Ocular Conditions and Special Optical Appliances

Section D1: Abnormal Ocular Conditions

Objective: **10 minutes**

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

Equipment provided:

- D1 answer sheet
- Wallet containing two abnormal ocular condition photographs

Method:

1. Clearly enter your candidate number and wallet set number on the answer form.
2. Select image A and add the image number to the first column.
3. Take your time to look at the image: note signs that are specific to the condition rather than a general description of the eye.
4. Three condition specific signs are required here for example: redness at the lid margin, eyelashes crusty…
5. State three symptoms you would expect the patient to describe for the likely condition.
6. Note the exact name of the condition you believe the image is demonstrating.
7. List three facts regarding the management of the condition you have named.
8. Repeat for image B.
9. Make sure your answers are legible.

Tips:

- When practising this section aim for four minutes per image allowing two minutes to double check your answers.
- Ensure all signs are present and the symptoms match the conditions 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 you will see in the examination. Following that, we have created a table for you to practise and record the parameters of 18 pathological ocular conditions. We advise that you have your answers checked by your supervisor in practice.

Final Qualifying Examination

Station D1

Candidate Number:		Set Number:	

Image Number			Leave Blank
State 3 condition specific signs			
State 3 symptoms of this condition			
State likely diagnosis			
Management (state 3 facts)			
		Total:	

Examiners comments/reasons competency not met:		
Overall marks reduced by 50%: YES/NO	**Mark Awarded:**	

Examiner 1 Signature:		Examiner 2 Signature:	

SAMPLE PAPER

Final Qualifying Examination

Section D - Abnormal Ocular Conditions and Special Optical Appliances

Section D1: Abnormal Ocular Conditions Revision Forms

State **three** condition specific signs			
State **three** symptoms of this condition			
State likely diagnosis			
Management (state **three** facts)			
State **three** condition specific signs			
State **three** symptoms of this condition			
State likely diagnosis			
Management (state **three** facts)			
State **three** condition specific signs			
State **three** symptoms of this condition			
State likely diagnosis			
Management (state **three** facts)			

Section D1: Abnormal Ocular Conditions Revision Forms

State **three** condition specific signs			
State **three** symptoms of this condition			
State likely diagnosis			
Management (state **three** facts)			
State **three** condition specific signs			
State **three** symptoms of this condition			
State likely diagnosis			
Management (state **three** facts)			
State **three** condition specific signs			
State **three** symptoms of this condition			
State likely diagnosis			
Management (state **three** facts)			

Final Qualifying Examination

Section D - Abnormal Ocular Conditions and Special Optical Appliances

Section D1: Abnormal Ocular Conditions Revision Forms

State **three** condition specific signs			
State **three** symptoms of this condition			
State likely diagnosis			
Management (state **three** facts)			
State **three** condition specific signs			
State **three** symptoms of this condition			
State likely diagnosis			
Management (state **three** facts)			
State **three** condition specific signs			
State **three** symptoms of this condition			
State likely diagnosis			
Management (state **three** facts)			

Final Qualifying Examination

Section D - Abnormal Ocular Conditions and Special Optical Appliances

Section D2: Abnormal Ocular Conditions

Objective: **10 minutes**

Identify pathological ocular condition from photographs or illustrations, note signs and expected symptoms and follow the correct referral procedure where appropriate.

Equipment provided:

- D2 answer sheet
- Wallet containing one ocular condition photographs

Method:

1. Clearly enter your candidate number and wallet set number on the answer form.
2. Take your time to review the image:
3. Note three signs that are specific to the condition rather than a general description of the eye.
4. State three questions that would be relevant to aid your diagnosis in practice.
5. You will need to note the expected answers here too.
6. Note the exact name of the condition you believe the image is demonstrating and the possible cause.
7. Note three facts regarding the management of the condition you have named.
8. List the referral information you would expect to see on a standard referral letter as well as:
    a. How urgent is this referral?
    b. Where and to whom will you refer this patient?
9. Note the possible treatment of the condition you have named.
10. Make sure your answers are legible.

Tips:

- When practising this section aim for eight minutes write your information allowing two minutes to double check your answers.
- Ensure all signs are present and the symptoms match the conditions 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 you will see in the examination. Following that, we have created a table for you to practise and record the parameters of 12 pathological ocular conditions. We advise that you have your answers checked by your supervisor in practice.

Final Qualifying Examination

Station D2

Candidate Number:		Set Number:	

	Candidate Answers	Leave Blank
State 3 condition specific signs		
State 3 relevant questions to aid diagnosis and expected answers		
State likely diagnosis and cause		
Urgency of referral to? and information required		
Likely treatment		
	Total:	

Reasons competency not met:		
Overall marks reduced by 50%: YES/NO	**Mark Awarded:**	

Examiner 1 Signature:		Examiner 2 Signature:	

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Final Qualifying Examination

Section D - Abnormal Ocular Conditions and Special Optical Appliances

Section D2: Abnormal Ocular Conditions Revision Forms

State **three** condition specific signs		
Three relevant questions to aid diagnosis give expected answers		
Likely diagnosis and cause		
Urgency of referral to? and information required		
Likely treatment		

State **three** condition specific signs		
Three relevant questions to aid diagnosis give expected answers		
Likely diagnosis and cause		
Urgency of referral to? and information required		
Likely treatment		

Section D2: Abnormal Ocular Conditions Revision Forms

State **three** condition specific signs		
Three relevant questions to aid diagnosis give expected answers		
Likely diagnosis and cause		
Urgency of referral to? and information required		
Likely treatment		

State **three** condition specific signs		
Three relevant questions to aid diagnosis give expected answers		
Likely diagnosis and cause		
Urgency of referral to? and information required		
Likely treatment		

Final Qualifying Examination

Section D - Abnormal Ocular Conditions and Special Optical Appliances

Section D2: Abnormal Ocular Conditions Revision Forms

State **three** condition specific signs		
Three relevant questions to aid diagnosis give expected answers		
Likely diagnosis and cause		
Urgency of referral to? and information required		
Likely treatment		

State **three** condition specific signs		
Three relevant questions to aid diagnosis give expected answers		
Likely diagnosis and cause		
Urgency of referral to? and information required		
Likely treatment		

Final Qualifying Examination

Section D - Abnormal Ocular Conditions and Special Optical Appliances

Section D3: Low Vision Aid

Objective: **10 minutes**

Identify the low vision aid and discuss its benefits and limitations to a low vision patient.

Equipment provided:

- D3 answer sheet
- Box set containing two low vision aids

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 two features about the optical system the appliance uses.
6. List four benefits or limitations of the appliance for a low vision patient.
7. Note three guidance points you would give the patient when advising them to use the appliance
8. Repeat for appliance B.

Tips:

- When practising this section aim for 4 to mins write your information for each appliance allowing 2 mins to double check your answers.
- When listing benefits and limitations try and note 2 benefits and 2 limitations.
- 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. Following that, we have created a table for you to practise and record the parameters of nine low vision appliances. We advise that you have your answers checked by your supervisor in practice.

Final Qualifying Examination

Station D3

Candidate Number:		Set Number:	

Appliance Number			Leave Blank
Name of Appliance			
State 2 features about the optical system			
State 4 functional benefits or limitations			
Advice on Use (3 guidance points)			
		Total:	

Examiners comments/ reasons competency not met:		
Overall marks reduced by 50%: YES/NO	**Mark Awarded:**	

Examiner 1 Signature:		Examiner 2 Signature:	

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Final Qualifying Examination

Section D - Abnormal Ocular Conditions and Special Optical Appliances

Section D3: Low Vision Aid Revison Forms

Name of Appliance			
State **two** features on the optical system			
State **four** functional benefits or limitations			
Advice on Use (**Three** guidance points)			
Name of Appliance			
State **two** features on the optical system			
State **four** functional benefits or limitations			
Advice on Use (**Three** guidance points)			
Name of Appliance			
State **two** features on the optical system			
State **four** functional benefits or limitations			
Advice on Use (**Three** guidance points)			

Section D3: Low Vision Aid Revison Forms

Name of Appliance			
State **two** features on the optical system			
State **four** functional benefits or limitations			
Advice on Use (**Three** guidance points)			
Name of Appliance			
State **two** features on the optical system			
State **four** functional benefits or limitations			
Advice on Use (**Three** guidance points)			
Name of Appliance			
State **two** features on the optical system			
State **four** functional benefits or limitations			
Advice on Use (**Three** guidance points)			

Final Qualifying Examination

Section D - Abnormal Ocular Conditions and Special Optical Appliances

Section D3: Low Vision Aid Revison Forms

Name of Appliance			
State **two** features on the optical system			
State **four** functional benefits or limitations			
Advice on Use (**Three** guidance points)			
Name of Appliance			
State **two** features on the optical system			
State **four** functional benefits or limitations			
Advice on Use (**Three** guidance points)			
Name of Appliance			
State **two** features on the optical system			
State **four** functional benefits or limitations			
Advice on Use (**Three** guidance points)			

Final Qualifying Examination

Section D - Abnormal Ocular Conditions and Special Optical Appliances

Section D4: Low Vision Aid

Objective: **10 minutes**

Identify the low vision aid and discuss its benefits and limitations to the relevant low vision patient.

Equipment provided:

- D4 answer sheet
- Box set containing basic patient case notes and a low vision aid

Method:

1. Clearly enter your candidate number and box set number on the answer form.
2. Take your time to review the appliance and the case notes.
3. Name the appliance and describe it.
4. List four functional benefits of the appliance relative to this low vision patient.
5. List three functional limitations of the appliance for this low vision patient.
6. Note three guidance points you would use when teaching the patient to use the appliance.
7. State three non-optical products or services also available to low vision patients.

Tips:

- When practising this section aim for eight minutes to write your information allowing two minutes to double check your answers.
- When listing benefits and limitations make them relevant to the patient described in the notes.
- 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. Following that, we have created a table for you to practice and record the parameters of 8 low vision appliances. We advise that you have your answers checked by your supervisor in practice.

Final Qualifying Examination

Station D4

Candidate Number:		Set Number:	

	Candidate Answers	Leave Blank
Name and describe appliance		
State 4 functional benefits		
State 3 functional limitations		
Advice on Use (3 guidance points)		
State 3 non-optical products and services		
	Total:	

Examiners comments/ reasons competency not met:		
Overall marks reduced by 50%: YES/NO	**Mark Awarded:**	

Examiner 1 Signature:		Examiner 2 Signature:	

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Section D - Abnormal Ocular Conditions and Special Optical Appliances

Section D4: Low Vision Aid Revision Forms

Name and describe appliance		
State **four** functional benefits		
State **three** functional limitations		
Advice on Use (**Three** guidance points)		
State **three** non-optical products and services		

Name and describe appliance		
State **four** functional benefits		
State **three** functional limitations		
Advice on Use (**Three** guidance points)		
State **three** non-optical products and services		

Section D4: Low Vision Aid Revision Forms

Name and describe appliance		
State **four** functional benefits		
State **three** functional limitations		
Advice on Use (**Three** guidance points)		
State **three** non-optical products and services		

Name and describe appliance		
State **four** functional benefits		
State **three** functional limitations		
Advice on Use (**Three** guidance points)		
State **three** non-optical products and services		

Final Qualifying Examination

Section D - Abnormal Ocular Conditions and Special Optical Appliances

Section D4: Low Vision Aid Revision Forms

Name and describe appliance		
State **four** functional benefits		
State **three** functional limitations		
Advice on Use (**Three** guidance points)		
State **three** non-optical products and services		

Name and describe appliance		
State **four** functional benefits		
State **three** functional limitations		
Advice on Use (**Three** guidance points)		
State **three** non-optical products and services		

Final Qualifying Examination

Section D - Abnormal Ocular Conditions and Special Optical Appliances

Section D5: Special Optical Appliance

Objective: **10 minutes**

Identify the low vision aid and discuss its benefits and limitations to a low vision patient.

Equipment provided:

- D5 answer sheet
- Box set containing 2 special optical 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 three special design features that make it suitable for use.
6. List two dispensing/fitting considerations when ordering this appliance.
7. Note two guidance points you would give the patient when advising them to use the appliance.
8. Repeat for appliance B.

Tips:

- When practising this section aim for four minutes to write your information for each appliance allowing two minutes to double check your answers.
- When listing design features think about their benefits relevant to the type of patient you are supplying 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. Following that, we have created a table for you to practise and record the parameters of 9 special optical appliances. We advise that you have your answers checked by your supervisor in practice

Final Qualifying Examination

Station D5

Candidate Number:		Set Number:	

Appliance Number			Leave Blank
Name of Appliance			
State 3 special design features			
State 2 dispensing and fitting requirements			
Advice on use (2 guidance points)			
		Total:	

Examiners comments/ reasons competency not met:		
Overall marks reduced by 50%: YES/NO	**Mark Awarded:**	

Examiner 1 Signature:		Examiner 2 Signature:	

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Section D - Abnormal Ocular Conditions and Special Optical Appliances

Section D5: Special Optical Appliance Revision Forms

Name of Appliance			
State **three** special design features			
State **two** dispensing and fitting requirements			
Advice on use (**Two** guidance points)			
Name of Appliance			
State **three** special design features			
State **two** dispensing and fitting requirements			
Advice on use (**Two** guidance points)			
Name of Appliance			
State **three** special design features			
State **two** dispensing and fitting requirements			
Advice on use (**Two** guidance points)			

Section D5: Special Optical Appliance Revision Forms

Name of Appliance			
State **three** special design features			
State **two** dispensing and fitting requirements			
Advice on use (**Two** guidance points)			
Name of Appliance			
State **three** special design features			
State **two** dispensing and fitting requirements			
Advice on use (**Two** guidance points)			
Name of Appliance			
State **three** special design features			
State **two** dispensing and fitting requirements			
Advice on use (**Two** guidance points)			

Final Qualifying Examination

Section D - Abnormal Ocular Conditions and Special Optical Appliances

Section D5: Special Optical Appliance Revision Forms

Name of Appliance			
State **three** special design features			
State **two** dispensing and fitting requirements			
Advice on use (**Two** guidance points)			
Name of Appliance			
State **three** special design features			
State **two** dispensing and fitting requirements			
Advice on use (**Two** guidance points)			
Name of Appliance			
State **three** special design features			
State **two** dispensing and fitting requirements			
Advice on use (**Two** guidance points)			

Final Qualifying Examination

Section D - Abnormal Ocular Conditions and Special Optical Appliances

Section D6: Sports Appliance

Objective: **10 minutes**

Identify the low vision aid and discuss its benefits and limitations to a low vision patient.

Equipment provided:

- D6 answer sheet
- Box set containing 3 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 and use of the appliance.
5. List four special design features that make it suitable for the particular sport.
6. List two dispensing/fitting considerations when ordering this appliance.
7. Repeat for appliance B.
8. Repeat for appliance C.

Tips:

- When practising this section aim for 3 minutes to write your information for each appliance allowing 1 minute to double check your answers.
- When listing design features think about their benefits relevant to the type of sport the patient will be undertaking.
- 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. Following that, we have created a table for you to practise and record the parameters of 18 sports appliances. We advise that you have your answers checked by your supervisor in practice.

Final Qualifying Examination

Station D6

Candidate Number:		Set Number:	

Appliance Number				Leave Blank
Name and use of appliance				
State 4 special design features				
State 2 dispensing /fitting requirements				
			Total:	

Examiners comments/ reasons competency not met:		
Overall marks reduced by 50%: YES/NO	**Mark Awarded:**	

Examiner 1 Signature:		Examiner 2 Signature:	

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Section D - Abnormal Ocular Conditions and Special Optical Appliances

Section D6: Sports Appliance Revision Forms

Name and use of appliance			
State **four** special design features			
Two dispensing /fitting requirements			
Name and use of appliance			
State **four** special design features			
Two dispensing /fitting requirements			
Name and use of appliance			
State **four** special design features			
Two dispensing /fitting requirements			

Section D6: Sports Appliance Revision Forms

Name and use of appliance			
State **four** special design features			
Two dispensing /fitting requirements			
Name and use of appliance			
State **four** special design features			
Two dispensing /fitting requirements			
Name and use of appliance			
State **four** special design features			
Two dispensing /fitting requirements			

Final Qualifying Examination

Section D - Abnormal Ocular Conditions and Special Optical Appliances

Section D6: Sports Appliance Revision Forms

Name and use of appliance			
State **four** special design features			
Two dispensing /fitting requirements			
Name and use of appliance			
State **four** special design features			
Two dispensing /fitting requirements			
Name and use of appliance			
State **four** special design features			
Two dispensing /fitting requirements			

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Revision notes

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Spectacle Lenses Theory and Practice: (Fowler and Petrie)
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