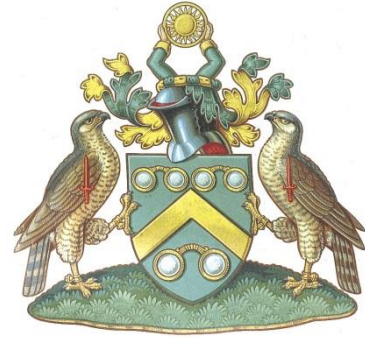


# Worshipful Company of Spectacle Makers



## Level 3 Optical Support

### Unit 10: Spectacle Lens Production Methods

**Summer 2018**

**Duration: 1.5 hours**

Candidate Number:

Date:

Answer **FOUR out of the five** questions

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

#### For office use only

Question number	Questions					Total	
	1	2	3	4	5	Marks	%
Marks							
Moderated							

Examiner's signature

Moderator's signature

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

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has been  
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Examiner's  
use only

<b>Q1b)</b>	Explain how and why <b>Standards</b> are used in quality inspection and control.	<b>(6 marks)</b>
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<b>Q1c)</b>	List <b>two</b> types of traditional surfacing laps and their uses.	<b>(4 marks)</b>
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**Question 2**

Examiner's  
use only

<b>Q2a)</b>	Explain the importance of <b>quality control</b> .	<b>(10 marks)</b>
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<b>Q2b)</b>	A lens has been returned from a customer complaining the powers are incorrect. Explain <b>the procedures</b> you would take to assess and correct this.	<b>(5 marks)</b>
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<b>Q2c)</b>	The <b>Medical Devices Directives</b> states that all frames sent for glazing should have what label on them?	<b>(5 marks)</b>
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**Question 3**

<b>Q3a)</b>	Describe the <b>difference</b> between a mini-lab and a full-scale lab.	<b>(10 marks)</b>
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<b>Q3b)</b>	List <b>five</b> materials used in frame manufacturing.	<b>(5 marks)</b>
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Examiner's  
use only

<b>Q3c)</b>	You have a standard <b>CR39 S28 bifocal</b> , explain how you would confirm the addition power for this type of lens.	<b>(5 marks)</b>
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**Question 4**

From the descriptions below, **identify** the different lens forms:

<b>Q4a)</b>	Symmetrical spherical front curve with a spherical or toroidal rear surface in single vision plastics material.	<b>(5 marks)</b>
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<b>Q4b)</b>	Spherical or toroidal front curve with a spherical back curve with a raised segment, commonly round, in glass material.	<b>(5 marks)</b>
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<b>Q4c)</b>	Lens with two spherical curves on the front surface separated by a distinct line formed by the curves which causes a 'step'. On the rear surface a spherical or toroidal surface. Available in glass and plastics material.	<b>(5 marks)</b>
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<b>Q4d)</b>	Reduced aperture lens in high plus or high minus powers with soft edged extended margins to increase the diameter. Available in glass or plastic materials.	<b>(5 marks)</b>
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**Question 5**

The following order has been received:

1.60 CR39 Single vision with UV coating  
Right: +3.75 +0.25 X 135 1.0 Prism Out  
Left: +6.25 -0.50 X 050 1.0 Prism In  
Add 1.00  
Diameter 65mm (Uncut)

<b>Q5a)</b>	Identify any mistakes.	<b>(10 marks)</b>
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**Important Instructions for Candidates**

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

1. Before you start to answer any question, take a few minutes to read through the paper.
2. Please ensure your candidate number and date are in the boxes on the front cover of this booklet.
3. Please **DO NOT** write your name on this booklet. Candidates must remain anonymous for marking purposes.
4. Write your answers as clearly as you can, using a black/blue pen only. Do not use a pencil. If the examiner cannot read your writing or figures you may lose marks, or even receive no marks at all. **Pencils may only be used for graphs and diagrams.**
5. You should read each question carefully, and make sure that you know what you have to do before you start to answer.
6. You must write your answers in the space provided. Additional paper may be used, if necessary, but you must show your candidate number and the question number at the top of each sheet; not your name. You must also annotate the box on the front cover of this booklet to show how many extra sheets you used.
7. Please do not write in the margins.
8. Make sure your diagrams are as clear and neat as possible; you will get marks for doing so. If you need to draw a graph, use as large a scale as practicable; this will give the most accurate answer.
9. When answering mathematical questions, write **ALL YOUR CALCULATIONS IN FULL**. Even if you get the final answer wrong, you may get credit for the parts of the calculation that are correct.
10. After you have completed each answer, re-read the question to make sure you have answered it fully.
11. Try to leave yourself enough time to check the completed paper through before handing it in.
12. Do not tear out any part of this booklet. All work must be handed in.
13. Before handing your paper in, ensure your Candidate number is entered clearly on the front of this booklet and on any extra sheets you may have used.
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