



# **Examination Report**

**Part 2 Fellowship of the Royal College of  
Ophthalmologists (FRCOphth) written  
examination**

**June 2023**

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## 1 Summary

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The written paper of this sitting of the Part 2 Fellowship in Ophthalmology (FRCOphth) examination was held in June 2023.

The reliability of this exam was 0.79, and the percentage of questions with a good item discrimination ( $> 0.20$ ) was 44.9 per cent. One question was removed from paper 1 and one question was removed from paper 2; therefore the examination was marked out of 178.

The pass mark for the written examination was raised by 1 SEM above the mark identified by the standard set by the Ebel method from 61.8 per cent to 65.2 per cent (i.e. 116/178). The pass rate for the examination was 60.6 per cent.

Twenty five candidates obtained the Ebel mark (61.8 per cent), but fell below the pass mark of Ebel +1 SEM (65.2 per cent). As such, the addition of +1 SEM has had a substantial impact on the pass rate, which would be 74.4 per cent rather than 60.6 per cent without the addition of the SEM.

## 2 The candidates

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There were 180 candidates for the examination. One hundred and forty two candidates were on their first attempt at the examination.

## 3 The written paper

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The written part of the part 2 FRCOphth examination consists of a multiple-choice question paper, which is administered in two parts. Candidates must pass the written paper to be allowed to sit the clinical part of the examination.

As part of the quality management of the College's assessment process, the written papers are reviewed by the senior examiner after marking, but before the results are known. Two questions were removed from the examination papers as a result of this review.

The Part 2 FRCOphth subcommittee reviews all of the questions with a low item discrimination and facility.

Table 1: *The MCQ paper blueprint*

Topic	Sub-topic	Paper 1	Paper 2	Total
<b>Basic Science</b>	Anatomy and physiology	1	1	2
	Genetics	2	1	3
	Optics and laser	0	1	1
	Pathology and microbiology	1	1	2
	<i>Sub-total</i>	4	4	8
<b>Clinical Ophthalmology</b>	Cataract and lens	5	5	10
	Cornea and external eye	10	10	20
	Glaucoma	5	5	10
	Medicine	3	5	8
	Neurology and pupils	8	8	16
	Oculoplastics and orbit	5	5	10
	Paediatrics	4	4	8
	Retina	9	10	19
	Strabismus and motility	4	4	8
	Trauma	2	2	4
	Uveitis and Oncology	6	6	12
	<i>Sub-total</i>	61	64	125
<b>Investigations</b>	Neuro-imaging	2	1	3
	Ophthalmic	5	4	9
	Orthoptics	1	2	3
	Other/general	0	1	1
	<i>Sub-total</i>	8	8	16
<b>Miscellaneous</b>	Economics	0	1	1
	Ethics and driving	2	2	4
	Guidelines and standards	3	1	4
	Nutrition	1	0	1
	Research and EBM	1	2	3
	Statistics and epidemiology	2	1	3
	<i>Sub-total</i>	9	7	16
<b>Pharmacology and therapeutics</b>	Pharmacology and therapeutics	7	6	13
	<i>Sub-total</i>	7	6	13
<b>Grand Total</b>		<b>89*</b>	<b>89*</b>	<b>178</b>
*1 question was removed from the marking of each paper.				

## 4 Results

Table 2: *MCQ statistics*

Statistic	Value	Percentage
Mean score:	117/178	65.8%
Median score:	118/178	66.3%
Standard deviation:	12.1	6.8%
Candidates:	180	
Reliability:	0.79	
Standard error of measurement (SEM):	5.57	3.1%
Range of marks:	81 – 146	45.5% – 82.0%
Pass mark derived from standard setting:	110/178	61.8%
<i>Pass rate without addition of SEM:</i>	<i>134/180</i>	<i>74.4%</i>
<b>Pass mark + 1 SEM:</b>	<b>116/178</b>	<b>65.2%</b>
<b>Pass rate:</b>	<b>109/180</b>	<b>60.6%</b>

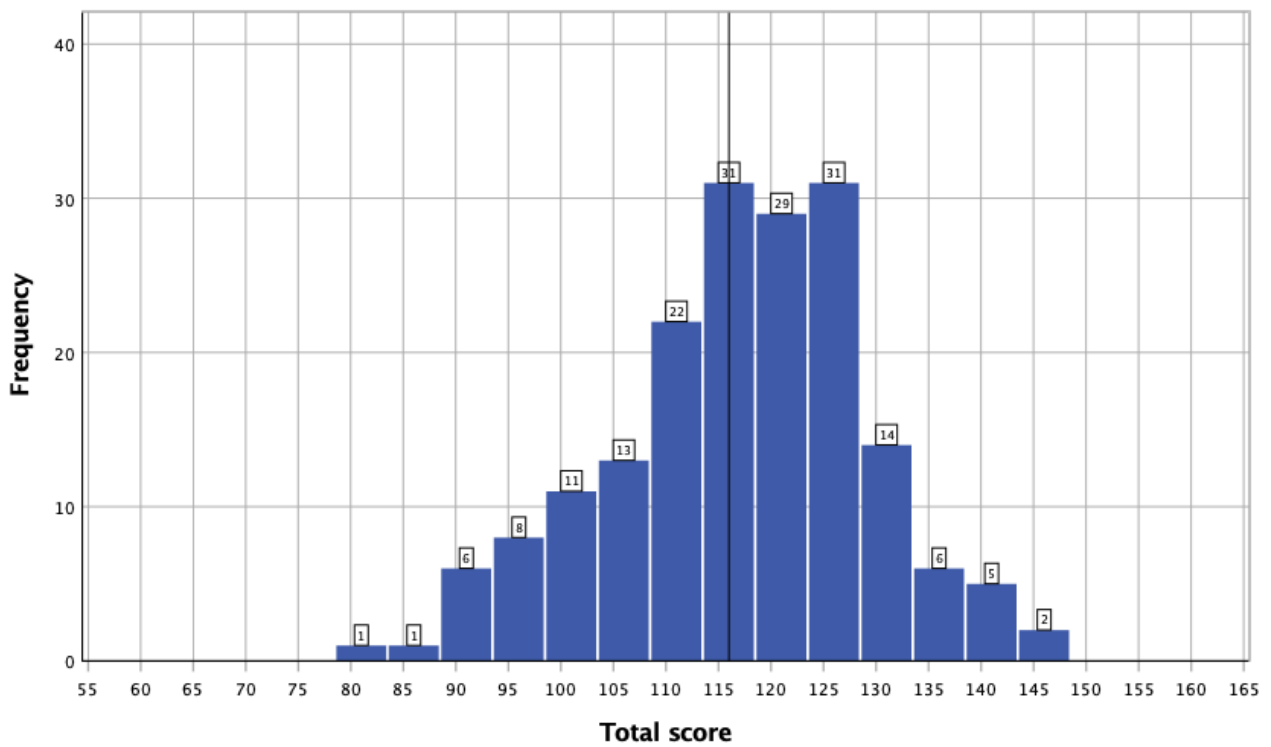


Figure 1: *Distribution of scores*

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## 4.1 Analysis of questions

Item analysis data allows us to identify easy, moderate and difficult questions, and those which are good, poor or negative discriminators. Optimally, all questions should be moderately difficult and good discriminators.

Table 3: *Discrimination against facility value*

	Facility Value				
		Low (<25% correct)	Moderate (25%-74% correct)	High (≥75% correct)	Total
Discrimination	Negative	1	7	0	8
	Poor (0-0.19)	5	41	44	90
	Good (0.20-1)	2	53	25	80
	<b>Total</b>	<b>8</b>	<b>101</b>	<b>69</b>	<b>178</b>

## 4.2 Standard setting for multiple choice questions (MCQ) paper (Ebel method)

Table 4: *Classification of the questions*

	Difficult	Moderate	Easy	Total
Essential	0	26	53	79
Important	6	28	40	74
Supplementary	3	10	12	25
Total	9	64	105	178

Table 5: *Expected percentage correct by borderline candidates*

	Difficult	Moderate	Easy
Essential	0.60	0.70	0.80
Important	0.50	0.55	0.60
Supplementary	0.25	0.30	0.30

Table 6: *Weighted score*

	Difficult	Moderate	Easy	Total
Essential	0	18.2	42.4	60.6
Important	3	15.4	24	42.4
Supplementary	0.75	3	3.6	7.35
Total	3.75	36.6	70	110.35

SEM:	5.57
MCQ pass mark (Ebel + 1 SEM):	116

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### 4.3 Breakdown of written results

Table 7: *Breakdown of written results by attempt number*

Attempt	Failed	Passed	Pass rate (%)	Total
1	54	88	62.0%	142
2	9	17	65.4%	26
3	5	3	37.5%	8
4	1	1	50.0%	2
5	1	0	0.0%	1
6	1	0	0.0%	1
Total	71	109	60.6%	180



Table 8: *Breakdown of results by deanery*

Country	Deanery	Failed	Passed	Total
UK	East Midlands	3	1	4
	East of England	6	5	11
	East of Scotland	0	1	1
	London and KSS (Kent, Surrey and Sussex)	5	15	20
	Mersey	2	3	5
	North Scotland	0	2	2
	North Western	3	3	6
	Northern	3	7	10
	Northern Ireland	0	2	2
	Oxford	0	4	4
	South East of Scotland	1	3	4
	Peninsula (South West)	1	2	3
	South Yorkshire and Humberside	1	1	2
	Wales	0	2	2
	Wessex	0	3	3
	West Midlands	2	6	8
	West of Scotland	3	0	3
	Yorkshire	1	2	3
Overseas	Eire	0	1	1
	Europe and Overseas	4	4	8
	Not applicable	14	14	28
	Unknown	22	28	50
<b>Total</b>	<b>Total</b>	<b>71</b>	<b>109</b>	<b>180</b>

## 4.4 Comparison to previous years

Table 9: *Comparison with the written papers from previous examinations*

Examination	Candidates	Pass mark	Pass rate	Pass rate in OST
June 2023**	180	65.20%	60.60%	~
Dec 2022**	167	63.00%	66.00%	75.00%
Jun 2022**	216	62.00%	81.00%	87.00%
Dec 2021**	203	65.00%	72.00%	84.00%
Jul 2021**	151	66.00%	70.00%	78.00%
Dec 2020**	202	65.00%	45.00%	52.00%
Dec 2019**	128	62.00%	70.00%	84.00%
Jul 2019**	121	66.00%	64.00%	68.00%
Dec 2018**	127	65.00%	58.00%	59.00%
Jul 2018**	90	65.00%	61.00%	77.00%
Dec 2016**	143	64.00%	77.00%	83.00%
Jun 2016**	171	64.00%	70.00%	79.00%
Nov 2015**	145	64.00%	41.00%	46.00%
Jun 2015**	118	65.00%	48.00%	53.00%
Dec 2014**	106	65.00%	47.00%	54.00%
Sep 2014**	136	63.00%	70.00%	71.00%
Feb 2014	117	58.00%	90.00%	94.00%
Sept 2013	103	59.00%	93.00%	97.00%
Feb 2013*	109	61.00%	85.00%	89.00%
Sept 2012	95	57.00%	81.00%	84.00%
Feb 2012	104	58.00%	65.00%	68.00%
Sept 2011	77	59.00%	68.00%	71.00%
Feb 2011	46	65.00%	46.00%	50.00%
Sept 2010	26	65.00%	58.00%	75.00%
Feb 2010	21	65.00%	48.00%	
Sept 2009	16	61.00%	38.00%	
Feb 2009	15	59.00%	53.00%	
Sept 2008	7	63.00%	86.00%	

\* The written papers changed from MCQ and EMQ papers (90 questions on each) to a 180-question MCQ paper at this sitting

\*\* The pass mark is now set at Ebel + 1 SEM

~ Data not available

Table 10: *Quality of questions compared to previous years*

Exam	Facility				Discrimination		
	Low	Moderate	High		Negative	Poor	Good
June 2023	4.50%	56.70%	38.80%		4.50%	50.60%	44.90%
Dec 2022	7.30%	53.90%	38.80%		7.90%	51.70%	39.90%
Jun 2022	3.40%	55.10%	41.50%		11.90%	60.20%	27.80%
Dec 2021	5.10%	47.20%	47.80%		9.60%	56.20%	34.30%
Jul 2021	6.10%	48.30%	45.60%		8.90%	54.40%	36.70%
Dec 2020	7.80%	52.00%	40.20%		10.60%	58.10%	31.30%
Dec 2019	6.20%	51.70%	42.00%		11.90%	58.50%	29.50%
Jul 2019	1.70%	55.20%	43.10%		12.60%	58.60%	28.70%
Dec 2018	5.10%	50.30%	44.60%		10.20%	57.10%	32.80%
Jul 2018	2.20%	53.90%	43.80%		9.60%	50.00%	40.40%
Nov 2016	4.00%	54.20%	41.80%		6.20%	54.20%	39.50%
Jun 2016	3.90%	50.00%	46.10%		6.70%	56.10%	37.20%
Nov 2015	3.90%	59.60%	36.50%		9.60%	57.30%	33.10%
Jun 2015	5.00%	54.20%	40.80%		9.50%	42.50%	48.00%
Sep 2014	2.80%	59.80%	37.40%		5.60%	59.80%	34.60%
Feb 2014	3.90%	54.40%	41.70%		8.90%	56.70%	34.40%
Sep 2013	3.90%	46.60%	49.40%		6.70%	55.10%	38.20%
Feb 2013	4.40%	53.30%	42.20%		8.30%	53.30%	38.30%