



Examination Report

Part 2 Fellowship of the Royal College of
Ophthalmologists (FRCOphth) Written
Examination

December 2020

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1 Summary

The written paper of this sitting of the Part 2 Fellowship in Ophthalmology (FRCOphth) examination was held in December 2020.

The reliability of this exam was 0.81, whilst the percentage of questions with a good item discrimination (>0.25) was 20 per cent. No questions were removed from paper 1 and one question was removed from paper 2; therefore the examination was marked out of 179.

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 per cent to 65 per cent. The pass rate for the examination was 45 per cent. The pass mark was 116/179 (i.e. 65 per cent of marks available).

Forty-three candidates obtained the Ebel mark (61 per cent) but fell below the pass mark of Ebel +1 SEM (65 per cent). Thus, the addition of +1 SEM has had a substantial impact on the pass rate which would be 66 per cent rather than 45 per cent without the addition of the SEM.

2 The candidates

There were 202 candidates for the examination. Of these 102/202 (50 per cent) were in Ophthalmic Specialist Training (OST). The largest group (27 per cent) were in training level OST5.

3 The written paper

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. One question was 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
Clinical Ophthalmology	Trauma	2	2	4
	Oculoplastic & Orbit	5	5	10
	Glaucoma	5	5	10
	Strabismus	4	4	8
	Paediatrics	4	4	8
	Retina	10	10	20
	Cataract	5	5	10
	Cornea & External Eye	10	10	20
	Uveitis & Oncology	6	6	12
	Neurology & Pupils	8	8	16
	Medicine	5	4	9
Pharmacology & Therapeutics	Pharmacology & Therapeutics	6	6	12
Investigations	Ophthalmic	5	4	9
	Orthoptic	1	2	3
	Neuro-Imaging	2	1	3
	Other	0	1	1
Miscellaneous	Statistics and epidemiology	2	1	3
	Research and EBM	1	2	3
	Nutrition	1	0	1
	Ethics and driving	2	2	4
	Standards and guidelines	2	2	4
	Economics	0	1	1
Basic Science	Anatomy and physiology	1	1	2
	Pathology and microbiology	1	1	2
	Genetics	2	1	3
	Optics	0	1	1
Total		90	89	179

4 Results

Table 2: MCQ Statistics

Statistic	Value	Percentage
Mean score:	113/179	63.1%
Median score:	114/179	63.7%
Standard deviation:	12.5	7.0%
Candidates:	202	
Reliability:	0.8	
Standard error of measurement (SEM):	5.56	3.1%
Range of marks:	62 - 138	34.6% - 77.1%
Pass mark derived from standard setting:	110/179	61.5%
<i>Pass rate without addition of SEM:</i>	<i>134/202</i>	<i>66.3%</i>
Pass mark + 1 SEM:	116/179	64.8%
<i>Pass rate:</i>	<i>91/202</i>	<i>45.0%</i>
<i>Pass rate in OST:</i>	<i>53/102</i>	<i>52.0%</i>

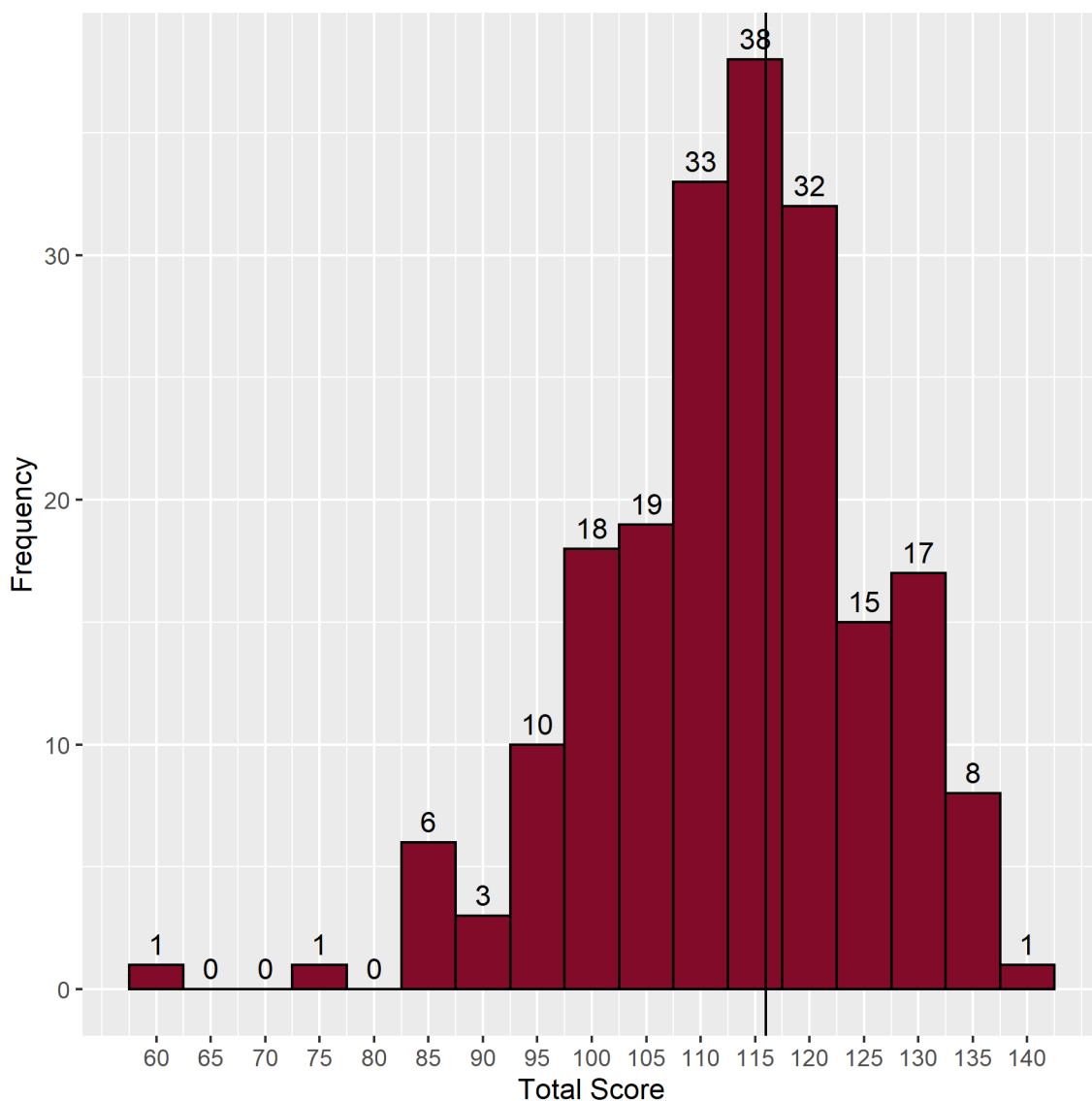


Figure 1: Distribution of scores

4.1 Analysis of questions

The Speedwell data provides analysis and identification of questions with low, moderate and high facility, and those which are good, poor or perverse (negative) discriminators. Ideally, all questions should have moderate facility and be good discriminators.

Table 3: Discrimination against facility value

	Facility Value			
	Low (<25 correct)	Moderate (25-74 correct)	High (≥75 correct)	Total
Discrimination				
Negative discrimination	5	9	5	19
Poor discrimination (0-0.19)	9	59	36	104
Good discrimination (0.2-1.0)	0	25	31	56
Total	14	93	72	179

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

Table 4: Classification of the questions

	Difficult	Moderate	Easy	Total
Essential	2	24	55	81
Important	5	27	36	68
Supplementary	4	12	14	30
Total	11	63	105	179

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	1.20	16.80	44.00	62.00
Important	2.50	14.85	21.60	38.95
Supplementary	1.00	3.60	4.20	8.80
Total	4.70	35.25	69.80	109.75

SEM: 5.56
 MCQ pass mark (Ebel + 1 SEM): 116

4.3 Breakdown of written results

Table 7: Breakdown of written results by training

Training	Failed	Passed	Pass rate (%)	Total
In OST	49	53	52.0	102
Not in OST	39	19	32.8	58
Unknown	23	19	45.2	42
Total	111	91	45.0	202

Table 8: Breakdown of written results by stage of training

Training	Failed	Passed	Pass rate (%)	Total
FY2	1	2	66.7	3
MO ST5	1	1	50.0	2
MO ST7	2	0	0.0	2
OST1	4	3	42.9	7
OST2	6	3	33.3	9
OST3	8	8	50.0	16
OST4	4	21	84.0	25
OST5	15	13	46.4	28
OST6	6	2	25.0	8
OST7	2	0	0.0	2
Total	49	53	52.0	102

Table 9: Breakdown of results by deanery

Country	Deanery	Failed	Passed	Total
UK	East Midlands	3	0	3
	East of England	7	0	7
	East of Scotland	0	2	2
	London and KSS (Kent, Surrey and Sussex)	8	15	23
	Mersey	0	3	3
	North of Scotland	0	2	2
	North Western	3	2	5
	Northern	4	6	10
	Northern Ireland	0	1	1
	Oxford	5	2	7
	Peninsula (South West)	1	1	2
	Severn	0	0	0
	Severn Institute	0	0	0
	South East of Scotland	2	1	3
	Wales	4	2	6
	Wessex	1	5	6
	West Midlands	4	4	8
	West of Scotland	2	1	3
	Yorkshire	4	5	9
Overseas	Eire	0	0	0
	Europe and Overseas	1	1	2
Total	Total	49	53	102

4.4 Comparison to previous years

Table 10: Comparison with the written papers from previous examinations

Examination	Candidates	Pass mark	Pass rate	Pass rate in OST
Sep 2008	7	63.0%	86.0%	
Feb 2009	15	59.0%	53.0%	
Sep 2009	16	61.0%	38.0%	
Feb 2010	21	65.0%	48.0%	
Sep 2010	26	65.0%	58.0%	75.0%
Feb 2011	46	65.0%	46.0%	50.0%
Sep 2011	77	59.0%	68.0%	71.0%
Feb 2012	104	58.0%	65.0%	68.0%
Sep 2012	95	57.0%	81.0%	84.0%
Feb 2013*	109	61.0%	85.0%	89.0%
Sep 2013	103	59.0%	93.0%	97.0%
Feb 2014	117	58.0%	90.0%	94.0%
Sep 2014**	136	63.0%	70.0%	71.0%
Dec 2014**	106	65.0%	47.0%	54.0%
Jun 2015**	118	65.0%	48.0%	53.0%
Nov 2015**	145	64.0%	41.0%	46.0%
Jun 2016**	171	64.0%	70.0%	79.0%
Dec 2016**	143	64.0%	77.0%	83.0%
Jul 2018**	90	65.0%	61.0%	77.0%
Dec 2018**	127	65.0%	58.0%	59.0%
Jul 2019**	121	66.0%	64.0%	68.0%
Dec 2019**	128	62.0%	70.0%	84.0%
Dec 2020**	202	65.0%	45.0%	52.0%

* 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

Table 11: Quality of questions compared to previous years

Exam	Facility				Discrimination		
	Low	Moderate	High		Negative	Poor	Good
Feb 2013	4.4%	53.3%	42.2%		8.3%	53.3%	38.3%
Sep 2013	3.9%	46.6%	49.4%		6.7%	55.1%	38.2%
Feb 2014	3.9%	54.4%	41.7%		8.9%	56.7%	34.4%
Sep 2014	2.8%	59.8%	37.4%		5.6%	59.8%	34.6%
Jun 2015	5.0%	54.2%	40.8%		9.5%	42.5%	48.0%
Nov 2015	3.9%	59.6%	36.5%		9.6%	57.3%	33.1%
Jun 2016	3.9%	50.0%	46.1%		6.7%	56.1%	37.2%
Nov 2016	4.0%	54.2%	41.8%		6.2%	54.2%	39.5%
Jul 2018	2.2%	53.9%	43.8%		9.6%	50.0%	40.4%
Dec 2018	5.1%	50.3%	44.6%		10.2%	57.1%	32.8%
Jul 2019	1.7%	55.2%	43.1%		12.6%	58.6%	28.7%
Dec 2019	6.2%	51.7%	42.0%		11.9%	58.5%	29.5%
Dec 2020	7.8%	52.0%	40.2%		10.6%	58.1%	31.3%

Table 12: Cumulative results by deanery (September 2010 to date)

Country	Deanery	Number of passes	Number of candidates	Pass Rate (%)
UK	East Midlands	50	81	61.7
	East of England	44	94	46.8
	East of Scotland	4	4	100.0
	East Scotland	9	10	90.0
	London and KSS (Kent, Surrey and Sussex)	258	369	69.9
	Mersey	52	83	62.7
	North of Scotland	3	4	75.0
	North Scotland	9	12	75.0
	North Western	50	87	57.5
	Northern	45	63	71.4
	Northern Ireland	19	25	76.0
	Oxford	37	55	67.3
	Peninsula (South West)	20	35	57.1
	Severn	36	47	76.6
	Severn Institute	0	1	0.0
	South East of Scotland	2	4	50.0
	South East Scotland	14	22	63.6
	Wales	38	70	54.3
	Wessex	33	54	61.1
	Overseas	West Midlands	71	115
West of Scotland		6	15	40.0
Total	West Scotland	24	41	58.5
	Yorkshire	68	120	56.7
	Eire	1	4	25.0
	Europe and Overseas	33	52	63.5
Total	Total	926	1467	63.1