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FROM THE EXAMINATIONS DEPARTMENT

Public Report on the Part 2 FRCOphth Written Examination February 2013

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Report on the Part 2 FRCOphth examination

The written paper of the tenth sitting of the Part 2 FRCOphth examination was held on Monday 25 February 2013.

The candidates

109 candidates presented themselves for the examination.

The written paper

In previous sittings, the Part 2 FRCOphth written examination consisted of two multiple choice question papers: 90 single best answer from four and 90 extended matching questions. In the February 2013 examination, there was a single multiple choice question examination, which was administered in two parts as two 2-hour, 90-question single best answer from four MCQ papers. 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. No questions were removed from the examination papers as a result of this review.

The Part 2 FRCOphth Sub-Committee reviews all of the questions with negative 33% item discrimination and low facility.

The MCQ Paper Blueprint

Table 1

		Feb 2013
Basic science		11
	Anatomy & embryology	1
	Microbiology	3
	Optics	1
	Genetics	5
	Pathology	1
	Physiology	0
Clinical ophthalmology		119
	Cataract	9
	Neurology & pupils	21
	Glaucoma	9
	Strabismus	8
	Paediatrics	7
	Vitreo-retinal	8
	Medical retina & uveitis	21
	Oculoplastics and orbit	12
	Cornea & external eye	19
	Trauma	5
Management & therapeutics	Pharmacology & therapeutics	14
Investigations		17
Miscellaneous		19
	EBM and research	6
	Medicolegal/Ethics	2
	Health economics	1
	General medicine	4
	Guidelines	6
Total		180

MCQ paper statistics:

Mean score:	123/180	(68.5%)
Median score:	124/180	(68.8%)
Standard deviation:	12.6	(7%)
Candidates:	109	
KR20: (measurement of reliability)	0.8	
Standard error of measurement (SEM):	6	(3%)
Range of marks:	95 to 151	(53 to 84%)
Pass mark derived from Standard Setting:	110/180	(61%)
Pass rate:	93/109	(85%)

Table 2: Distribution of scores

Score	Distribution	Total
91-95	//	2
96-100	//	2
101-105	////	5
106-110	//// //	9
111-115	//// // //	12
116-120	//// // // // /	16
121-125	//// // // //	15
126-130	//// // // //	15
131-135	//// // // /	11
136-140	//// // // //	13
141-145	////	5
146-150	///	3
151-155	/	1
Total		109

Analysis of questions

The Speedwell data provides analysis and identification of easy, moderate and difficult questions, and those, which are good, poor or perverse (negative) discriminators. Ideally all questions should be moderate and good.

Table 3

	Difficult (<25 correct)	Moderate (25-74) Correct)	Easy (>75 correct)	Total
Negative discrimination	3	10	2	15
Poor discrimination (0-0.19)	4	39	53	96
Good discrimination (0.2-0.5)	1	47	21	69
Total	8	96	76	180

Standard setting for MCQ paper (Ebel method)**Table 4: Classification of the questions:**

	Difficult	Moderate	Easy	
Essential	0	29	46	75
Important	8	41	35	84
Supplementary	2	8	11	21
Total	10	78	92	180

Table 5: Percentage correct by borderline candidates

	Difficult	Moderate	Easy
Essential	0.6	0.7	0.8
Important	0.5	0.55	0.6
Supplementary	0.25	0.3	0.3

Table 6: Weighted score

	Difficult	Moderate	Easy	
Essential	0	20.3	36.8	57.1
Important	4	22.55	21	47.55
Supplementary	0.5	2.4	3.3	6.2
Total	4.5	45.25	61.1	110.85

MCQ pass mark: 110/180 (61%)

Breakdown of Written Results

Table 7: Breakdown of written results by training

	Failed	Passed	Total
In OST	9	75	84
Not in OST	7	18	25
Total	16	93	109

These differences are statistically significant
($p=0.05$ Fisher exact probability test)

Table 8: Breakdown of written results by stage of training

	Failed	Passed	Total
ST3	0	2	2
ST4	2	3	5
ST5	1	36	37
ST6	5	27	32
ST7	0	6	6
	8	74	82

* Stage of training unknown for 2 candidates

Table 9: Breakdown of results by deanery

	Failed	Passed	Total	Pass rate
East Midlands	0	2	2	100
East of England	2	1	3	33
East of Scotland	0	2	2	100
London	1	22	23	96
Mersey	0	6	6	100
North of Scotland	0	2	2	100
North Western	0	4	4	100
Northern	0	3	3	100
N Ireland	0	1	1	100
Oxford	0	0	0	0
Peninsula	0	5	5	100
Severn	0	2	2	100
South of Scotland	0	2	2	100
Wales	0	6	6	100
Wessex	1	0	1	0
West Midlands	4	6	10	60
West of Scotland	0	5	5	100
Yorkshire	1	6	7	86
TOTAL	9	75	84	89

Table 10: Breakdown of written results by gender

	Failed	Passed	Total
Female	2	24	26
Male	14	69	83
Total	16	93	109

These differences are not statistically significant
($p= 0.25$ Fisher exact probability test)

Table 11: Breakdown of written results by country of qualification

	Failed	Passed	Total
UK	7	57	64
Outside UK (Inc Republic of Ireland)	8	33	41
Total	15	90	105

* Country of qualification unknown for 4 candidates

These differences are not statistically significant
($p= 0.26$ Fisher exact probability test)

Table 12: Breakdown of written results by stated ethnicity

	Failed	Passed	Total
Non-white	11 (6)	66 (41)	77 (47)
White	2 (0)	17 (12)	19 (12)
Total	13 (6)	83 (53)	96 (59)

Ethnicity not stated by 13 candidates (UK graduates)

These differences are not statistically significant for white/non-white
($p =1$ Fisher exact probability test)

Table 13: Breakdown of written results by first language

	Failed	Passed	Total
English	7	55	62
Other	7	27	34
Total	14	82	96

*First language unknown for 13 candidates

These differences are not statistically significant
($p= 0.23$ Fisher exact probability test)

Table 14: Breakdown of results by number of attempts

Attempt	Failed	Passed	Total	Pass rate
1 (first)	11	58	69	84
2	3	23	26	88
3	1	11	12	92
4	1	0	1	0
5	0	1	1	100
Any re-attempt	5	45	50	90

Table 15: Comparison with the written papers from previous examinations

Examination	Candidates	Pass mark	Pass rate
September 2008	7	63%	86%
February 2009	15	59%	53%
September 2009	16	61%	38%
February 2010	21	65%	48%
September 2010	26	65%	58%
February 2011	46	65%	46%
September 2011	77	59%	68%
February 2012	104	58%	65%
September 2012	95	57%	81%
February 2013	109	61%	85%

Comments

The transition to a single MCQ paper has succeeded in increasing the reliability of the examination. The high pass rate is notable, and hopefully reflects the better preparation of candidates.

Michael Nelson BSc (Hons) FRCOphth MAEd
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