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FROM THE EXAMINATIONS DEPARTMENT

Public Report on the Part 2 FRCOphth Examination February/April 2011

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Part 2 FRCOphth Written Examination

The written papers of the sixth sitting of the Part 2 FRCOphth examination were held in London on Monday 7 February 2011.

The candidates

46 candidates presented themselves for the examination.

The written papers

The written papers consisted of a 2-hour, 90 question single best answer from 4 MCQ paper and a 45 stem, 90-question EMQ paper lasting 3 hours. Candidates must pass the written papers to be allowed to sit the clinical part of the examination. To pass, candidates must gain a total score from both papers that equals or exceeds the combined marks from the Ebel standard setting process. They must also gain at least the pass mark minus 1 SEM in each paper.

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. As a result one question was removed from the MCQ paper, and two questions were removed from the EMQ paper with one additional EMQ question being amended. The papers were then remarked and the pass marks adjusted.

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

The MCQ paper

Table 1 Content (Blueprint)

		Sept 2010	Feb 2011
Basic science	Anatomy & embryology	2	4
	Microbiology	3	3
	Optics	7	2
	Genetics	1	2
	Pathology	6	5
	Physiology	3	0
Clinical ophthalmology	Cataract	2	3
	Neurology & pupils*	5	4
	Glaucoma	3	3
	Strabismus	3	3
	Paediatrics	2	2
	Vitreo-retinal	2	4
	Medical retina & uveitis	5	4
	Oculoplastics and orbit	2	3
	Cornea & external eye	4	4
	Oncology	1	2
Management & therapeutics	Pharmacology & therapeutics	9	8
Investigations		13	17
Miscellaneous	Statistics and research	8	7
	Medicolegal	2	1
	Health economics	1	1
	Ethics	1	2
	General medicine	1	1
	Guidelines	3	4
Total		89	89
* 1 question was removed from the paper			

MCQ paper statistics:

Mean score:	58/89
Median score:	58.5/89
Standard deviation:	6.76
Candidates:	46
KR20: (measurement of reliability)	0.7
Standard error of measurement (SEM):	3.99
Range of marks:	41-73
Pass mark derived from Standard Setting:	58
Pass mark – 1 SEM	54
Pass rate:	25/46 (54%)

Table 2 **Distribution of marks**

Score	Distribution	
36-40		
41-45	/	1
46-50	////	5
51-55	//// // /	11
56-60	//// // /	11
61-65	//// // //	12
66-70	////	5
71-75	/	1
		46

Analysis of questions

The Speedwell data allows us to identify easy, moderate and difficult questions, and those, which are excellent, good, poor or perverse (negative) discriminators. Ideally all questions should be moderate and good/excellent.

Table 3

	Difficult (<25 correct)	Moderate (25-74) Correct)	Easy (>75 correct)	Total
Negative discrimination	3	8	4	15
Poor discrimination (0-0.19)	2	15	20	37
Good discrimination (0.2-0.5)	0	25	9	34
Excellent discrimination (>0.5)	0	3	0	3
Total	5	51	33	89
Comparison to Ebel*	14	19	56	

*Easy (EM + EE + IE); Moderate (ED + IM + SE); Difficult (ID + SD + SM)

Standard setting for MCQ paper (Ebel method)

Table 4: Classification of the questions

	Difficult	Moderate	Easy	
Essential	0	12	21	33
Important	2	16	23	41
Supplementary	4	8	3	15
Total	6	36	47	89

Table 5: Percentage correct by borderline candidates

	Difficult	Moderate	Easy
Essential	0.575	0.675	0.875
Important	0.45	0.575	0.7
Supplementary	0.225	0.315	0.5

Table 6: Weighted score

	<i>Difficult</i>	<i>Moderate</i>	<i>Easy</i>	
<i>Essential</i>	0	8.1	18.375	26.475
<i>Important</i>	0.9	9.2	16.1	26.200
<i>Supplementary</i>	0.9	2.52	1.5	4.920
<i>Total</i>	1.8	19.82	35.975	58

MCQ pass mark: 58/89 (65%)

One question was removed from the paper after marking

Table 7: Comparison of pass marks and pass rates for last 5 MCQ papers

	Sept 2008	Feb 2009	Sept 2009	Feb 2010	Sept 2010	Feb 2011
Candidates	7	15	16	21	26	46
Mean score	70%	63%	60%	61%	63%	65%
Reliability (KR 20)	0.5	0.8	0.8	0.8	0.8	0.7
SEM	3.8	4.05	3.98	3.92	3.85	3.99
Standard setting	Ebel					
Pass mark	61%	64%	64%	66%	65%	65%
Modified pass mark	53%	60%	60%	61%	NA	NA
33% discrimination						
Negative	13	8	12	8	12	15
Poor	45	23	31	26	35	37
Good	32	46	31	42	35	34
Excellent	0	13	16	14	8	3
Facility						
Difficult (<25%)	10	10	13	14	6	5
Moderate	36	38	42	43	46	51
Easy (>75%)	44	42	35	33	38	33
Pass rate	100%	60%	50%	52%	50%	54%

The EMQ paper

The subjects that were assessed in the EMQ paper are summarised below:

Table 8: Content (Blueprint)

		Sept 2010	Feb 2011
Clinical ophthalmology	Uveitis	2	6
	Paediatrics	4	4
	Vitreo-retinal	2	6
	Medical retina	8	8
	Strabismus	4	4
	Oculoplastics and orbit	4	4
	Cornea/external eye*	6	7
	Trauma	2	4
	Cataract/lens	4	4
	Glaucoma	4	4
Neurology and medicine	Neurology	12	10
	Medicine	4	2
Basic sciences	Pathology/genetics	6	4
	Optics/refraction	2	2
	Anatomy/physiology	2	0
Pharmacology and therapeutics	Pharmacology*	12	11
Investigations		12	4
Miscellany	Research & statistics	0	4
Total		90	88

* 2 questions removed

EMQ paper statistics:

Mean score:	54/88
Median score:	56/88
Standard deviation:	7.44
Candidates:	46
KR20: (measurement of reliability)	0.7
Standard error of measurement (SEM):	3.91
Range of marks:	39-74
Pass mark derived from Standard Setting:	57/88
Pass mark – 1 SEM	53/88
Pass rate:	20/46 (43%)

Table 9: Distribution of marks

<i>Score</i>	<i>Distribution</i>	<i>Number</i>
31-35		
36-40	//	2
41-45	////	4
46-50	///// ///	8
51-55	///// ///	8
56-60	///// ///// ///// //	17
61-65	/////	5
66-70	/	1
71-75	/	1
		46

Analysis of questions

Speedwell data allows us to identify easy, moderate and difficult questions, and those, which are excellent, good, poor or perverse (negative) discriminators. Ideally all questions should be moderate and good/excellent

Table 10

	Difficult (<25 correct)	Moderate (25-74) Correct)	Easy (>75 correct)	Total
Negative discrimination	3	3	3	9
Poor discrimination (0-0.19)	1	16	15	32
Good discrimination (0.2-0.5)	6	24	13	43
Excellent discrimination (>0.5)	0	4	0	4
Total	10	47	31	88
Comparison to Ebel*	18	19	51	

*Easy (EM + EE + IE); Moderate (ED + IM + SE); Difficult (ID + SD + SM)

Standard setting for EMQ paper (Ebel method)

Table 11: Classification of the questions:

	Difficult	Moderate	Easy	
Essential	0	12	28	40
Important	7	19	11	37
Supplementary	5	6	0	11
Total	12	37	39	88

Table 12: Percentage correct by borderline candidates

	Difficult	Moderate	Easy
Essential	0.575	0.675	0.875
Important	0.45	0.575	0.7
Supplementary	0.225	0.315	0.5

Table 13: Weighted score

	<i>Difficult</i>	<i>Moderate</i>	<i>Easy</i>	
<i>Essential</i>	0	8.1	24.5	32.6
<i>Important</i>	3.15	10.925	7.7	21.775
<i>Supplementary</i>	1.125	1.89	0	3.015
<i>Total</i>	4.275	20.915	32.2	57

EMQ pass mark: 57/88 (65%)

Two questions were removed from the paper after marking

Table 14: Comparison of pass marks and pass rates for last 5 EMQ papers

	Sept 2008	Feb 2009	Sept 2009	Feb 2010	Sept 2010	Feb 2011
Candidates	7	15	16	21	26	46
Mean score	74%	52%	61%	59%	64%	61%
Reliability (KR 20)	0.8	0.9	0.8	0.9	0.8	0.7
SEM	3.52	3.96	3.89	4	3.9	3.91
Standard setting	Ebel					
Pass mark	64%	63%	67%	66%	64%	65%
Modified pass mark	57%	54%	62%	61%	NA	NA
33% discrimination						
Negative	8	4	8	6	7	9
Poor	45	15	27	34	35	32
Good	0	49	35	32	41	43
Excellent	37	22	20	18	7	4
Facility						
Difficult (<25%)	8	22	19	10	7	10
Moderate	35	42	43	49	45	47
Easy (>75%)	47	28	28	31	38	31
Pass rate	100%	47%	31%	48%	54%	43%

Overall results from the written papers

To pass the Part 2 FRCOphth written examination candidates are required to:

1. *Obtain a combined mark from both papers that equals or exceeds the combined pass marks obtained by the standard setting exercise explained above.*
2. *Obtain a mark in both papers that equals or exceeds the pass mark minus 1 standard error of measurement for each paper.*

A candidate is therefore allowed to compensate a poor performance in one paper by a very good performance in the other paper. They cannot compensate for an extremely poor performance in one paper whatever the combined mark.

The minimum mark required in order to meet standard 1 above for this examination was 115/177. The minimum mark required in each paper (to meet standard 2 above) was 54 in the MCQ paper and 53 in the EMQ paper.

21 candidates gained a total mark that met standard 1 above. All candidates obtained the minimum mark required in the MCQ and EMQ papers (standard 2).

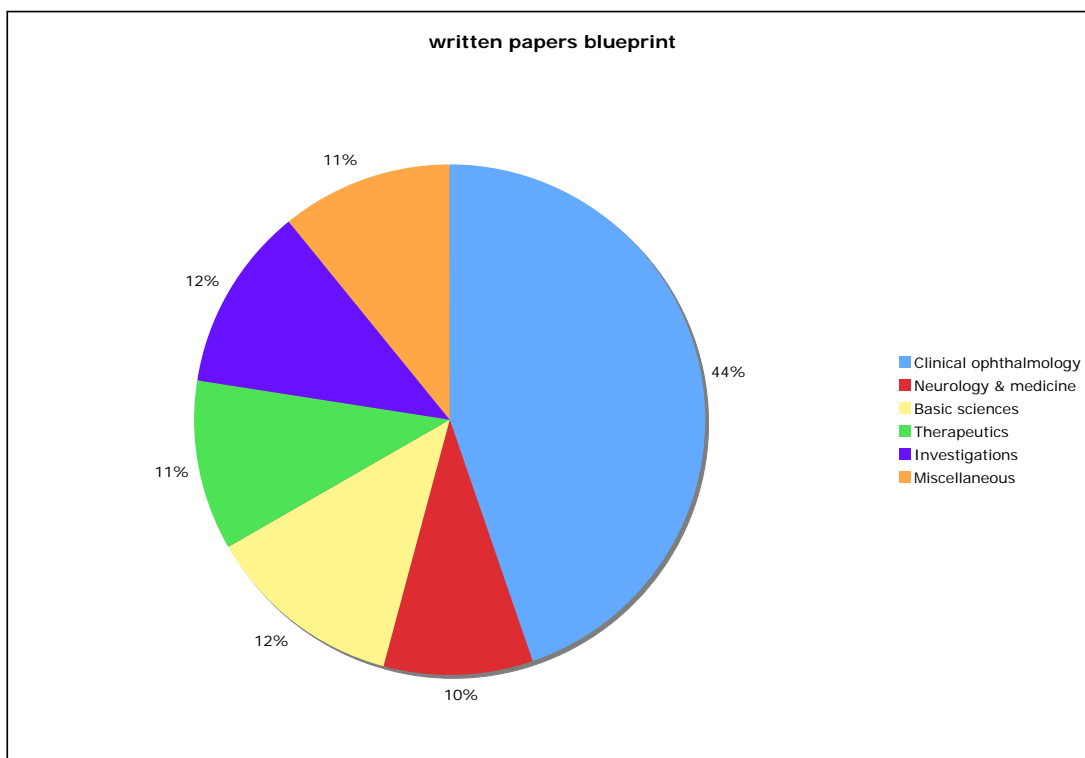
21 candidates (46%) passed the written examination and were invited to sit the practical examination.

Table 15: Distribution of marks

	Distribution	Mark
61-70		
71-80	/	1
81-90	//	2
91-100	//// /	6
101-110	//// // /	11
111-120	//// // // /	16
121-130	//// /	6
131-140	///	3
141-150	/	1
Total		46

Table 16: Combined blueprint from both papers

		Sept 2010	Feb 2011
Theme	Topic	N=	
Clinical ophthalmology 79	Retina and uveitis	15	18
	Paediatrics and strabismus	13	13
	Vitreo-retinal	4	10
	Oculoplastics and orbit	6	7
	Cornea/external eye	10	11
	Trauma	2	4
	Cataract/lens	6	7
	Glaucoma	7	7
	Oncology	1	2
	Neurology & medicine 17	Neurology	17
Medicine		5	3
Basic sciences 22	Pathology/genetics	16	14
	Optics/refraction	9	4
	Anatomy/physiology	7	4
Therapeutics 19	Therapeutics	21	19
Investigations 21	Ophthalmic & Neuro-imaging	25	21
Miscellaneous 19	Statistics, research, epidemiology	8	11
	Economics, ethics, law, guides	7	8
Total		179	177



Breakdown of Written Results

Table 17: Breakdown of written results by training

	Failed	Passed	Total
In OST	14	14	28
Not in OST	11	7	18
Total	25	21	46

These differences are not statistically significant ($p=0.55$ Fisher's exact test)

Table 18: Breakdown of written results by stage of training

	Failed	Passed	Total
ST3	1	0	1
ST4	0	4	4
ST5	7	4	11
ST6	3	3	6
ST7	0	1	1
SpR/FTSTA/LAT	3	2	5
	14	14	28

Table 19: Breakdown of results by deanery

	Failed	Passed	Total
East Midlands (South)	0	1	1
East Scotland	0	1	1
London	3	4	7
Mersey	0	1	1
North Western	1	0	1
Northern Ireland	0	1	1
Oxford	0	3	3
Peninsula	0	1	1
South Yorks & South Humber	1	0	1
Severn	1	2	3
Wales	1	0	1
Wessex	1	0	1
West Midlands	2	0	2
Yorkshire	4	0	4
	14	14	28

Table 20: Breakdown of written results by gender

	Failed	Passed	Total
Female	5	7	12
Male	20	14	34
Total	25	21	46

These differences are not statistically significant ($p=0.33$ Fisher's exact test)

Table 21: Breakdown of written results by country of qualification

	Failed	Passed	Total
UK	11	9	20
Outside UK (Inc Republic of Ireland)	14	12	26
Total	25	21	46

These differences are not statistically significant ($p=1.0$ Fisher's exact test)

Table 22: Breakdown of written results by number of previous attempts

Attempts	Failed	Passed	Total
1 (First)	18	15	33
2	2	5	7
3	3	1	4
4	2	0	2
Total	25	21	46

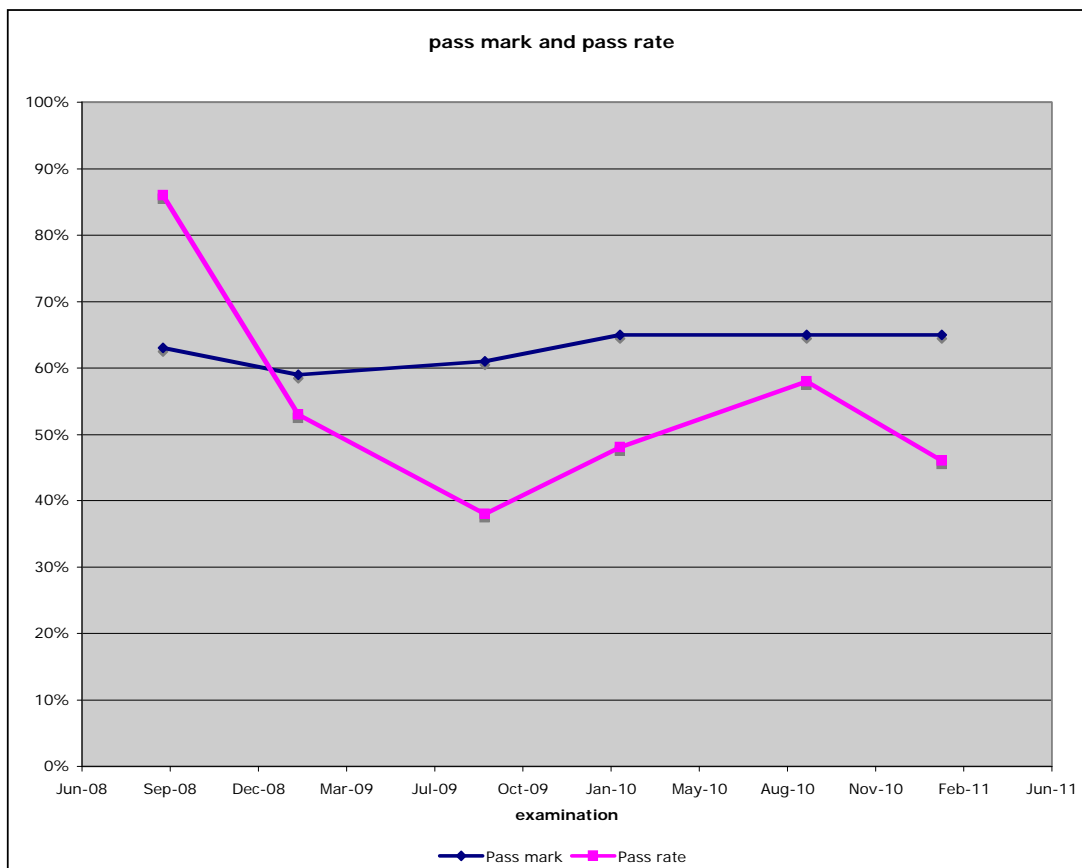
Table 23: Breakdown of written results by first language

	Failed	Passed	Total
English	12	14	26
Other	13	7	20
Total	25	21	46

These differences are not statistically significant ($p=0.24$ Fisher's exact test)

Table 24: Comparison with the written papers from previous examinations

Examination	Pass mark	Pass rate
September 2008	63%	86%
February 2009	59%	53%
September 2009	61%	38%
February 2010	65%	48%
September 2010	65%	58%
February 2011	65%	46%



Practical examinations

The practical part of the sixth sitting of the Part 2 FRCOphth examination was held in Middlesbrough between 4 and 6 April 2011.

The Structured Vivas

There were five structured vivas, which were held on 4 April 2011 in the Counties Suite of the Crathorne Hotel, Middlesbrough. The communication skills OSCE station was conducted as one of the viva stations, making six stations in all. Each viva lasted 10 minutes. The stations were:

Station 1. Patient investigations and data interpretation

Investigation of unilateral proptosis / orbital imaging (*morning session*)

To explore knowledge and investigation of Corneal Ectasia and its treatment (*afternoon session*)

Station 2. Patient management 1

Investigation and management of a young female patient with acute toxoplasma chorioretinitis (*morning session*)

Management of acute optic neuritis due to sarcoid (*afternoon session*)

Station 3. Patient management 2

Management of glaucoma and knowledge of management of common post-operative complications (*morning session*)

Management of a young patient with retinal ischaemia secondary to cilioretinal artery occlusion (*afternoon session*)

Station 4. Attitudes, ethics and responsibilities.

Management of refractive surprise following cataract surgery (*morning session*)

Ocular manifestations of syphilis and the importance of patient confidentiality and notification to public health authority (*afternoon session*)

Station 5.

Audit, research and evidence based practice (5 minutes)

Hydroxychloroquine and ocular toxicity screening guidelines (*morning session*)

Interpretation of investigations in temporal arteritis (*afternoon session*)

Health promotion and disease prevention (5 minutes)

The prevention of transmission of blood-borne viruses in ophthalmic surgery (*morning session*)

Risk reduction of neurovascular disease following amaurosis (*afternoon session*)

The vivas were held in three, inter-joining rooms, with stations further divided by screens. The examination was conducted in four rounds. Six candidates were examined in the first rotation and five candidates per round were examined in the following three rotations. The examiners were very happy with the facilities.

Each station began with a clinical scenario, and subsequent discussion was based upon, but not limited to, the clinical diagnosis suggested by the scenario.

Structured Viva Statistics

Maximum mark (5 stations, 10 examiners, 12 marks per station):	120
Pass mark (using borderline candidate method):	70/120
Mean score:	84/120
Median score:	82/120
Range:	63-107
Reliability: (Cronbach alpha)	0.8
SEM:	5
Adjusted pass mark (+ 1 SEM)	75/120 (63%)

Modifying the pass mark up by 1 SEM changed the pass rate for the structured viva examination. 15/21 (71%) candidates passed the structured vivas.

Table 25: Results for each station (combined marks from each examiner)

	<i>Station 1</i>	<i>Station 2</i>	<i>Station 3</i>	<i>Station 4</i>	<i>Station 5</i>
	<i>PI</i>	<i>PM</i>	<i>PM</i>	<i>AER</i>	<i>Role HPDP</i>
Mean	19	18	15	14	18
Median	19	18	15	15	16
Minimum	14	13	4	6	13
Maximum	24	23	22	20	24

Table 26: Correlation between examiner's marks at each station

<i>Station 1</i>	<i>Station 2</i>	<i>Station 3</i>	<i>Station 4</i>	<i>Station 5</i>
<i>PI</i>	<i>PM</i>	<i>HPDP</i>	<i>AER</i>	<i>Role</i>
0.742	0.714	0.836	0.508	0.813

Table 27: Correlation between examiner's global judgements at each station

<i>Station 1</i>	<i>Station 2</i>	<i>Station 3</i>	<i>Station 4</i>	<i>Station 5</i>
<i>PI</i>	<i>PM</i>	<i>HPDP</i>	<i>AER</i>	<i>Role</i>
0.331	0.736	0.860	0.509	0.311

There is good agreement between examiners in all stations apart from station 4 (marks and global judgments) and station 5 (global judgment).

Table 28: Correlation between viva stations

		<i>Station 2</i>	<i>Station 3</i>	<i>Station 4</i>	<i>Station 5</i>
		<i>PM</i>	<i>PM</i>	<i>AER</i>	<i>Role HPDP</i>
<i>Station 1</i>	PI	0.052	0.374	-0.071	0.334
<i>Station 2</i>	PM		0.363	0.185	0.096
<i>Station 3</i>	PM			0.311	0.352
<i>Station 4</i>	AER				0.353

The correlation between the viva stations is moderate with the notable exception of station 1 with stations 2 and 4. Station 2 had poor correlation with station 5.

Table 29: Standard setting for the structured vivas

	1		2		3		4		5		Total
<i>Number of borderline candidates</i>	2	3	5	7	4	6	8	6	6	4	51
<i>Median borderline candidate mark</i>	7	8	7	8	5.5	6	8	6.5	7	7	70

Evaluation

Candidate evaluation – Structured Viva

Detailed evaluation relating to specific stations is provided in appendix 1.

General comments made by the candidates:

- Some conditions are rare.
- Poor arrangement of stations, possible to hear other candidates and examiners, distracting.
- Time was good but it is v distracting when you can hear the station next door. Would like to know what station you are going to do. Viva should be included in the exam but if it is done better – more sensible with ‘usual scenarios’.
- Some of the questions were quite esoteric. The viva stations were different for the morning and afternoon stations – how is the RCOphth going to compare ‘like with like’ especially with some difficult stations.
- Having several tables in one big hall is quite noisy. Difficult to concentrate when you can hear fellow candidates talking at the other stations.
- Only worry is that the two sessions’ questions were quite different. Difficult for it to be fair unless there were marked differently.
- Thought there was a very strong emphasis on uveitis.
- Could hear people in adjacent stations – off putting.
- Not told which station was which – this would have been helpful.
- Strong bias towards uveitis and very rare conditions. Did not cover many areas of the curriculum. Examiners had specific answers in mind and were not interested in anything else. This is very unrealistic. In clinic a wide range of conditions may be considered prior to diagnosis & a proper history would be used.
- Questions are a little too closed to demonstrate knowledge/understanding. Tempting to be defensive.
- Disproportionate amount of uveitis in 6 station exam.
- Not told what any of the stations were, they all seemed like patient management with a heavy emphasis on uveitis.
- Don’t think viva should be included in the Part 2 FRCOphth, as clinical OSCE will cover all.
- The viva venue was far away and difficult to get there.

The OSCE

There were seven OSCE stations in all. The six clinical stations were held on Tuesday 5 and Wednesday 6 April 2011 in the Eye Department at James Cook University Hospital. The communication OSCE was conducted with the structured vivas. There were three rotations over the course of 5 April and one rotation on the morning of 6th April. Four of the OSCE stations lasted 15 minutes. The medicine and neurology stations ran as a double station and lasted 30 minutes. The communication OSCE lasted 10 minutes. There were two examiners at each station. In the communication OSCE, one examiner was a trained lay assessor. Patients with the following clinical problems were made available by the host department for the examiners:

5 April 2011 – Morning Rotation

Station 1 – Cataract & Anterior Segment

Bilateral lens subluxation not Marfans
Partial aniridia cataract (nystagmus)
Bilateral post RK & cataract, pigment on endothelium
Reis Butler, L DALK
Right pterygium
Schneider's crystalline dystrophy
RCS, nystagmus and ectopic pupil

Station 2 – Glaucoma & Lid

Hughes flap after excision of melanotic lesion LLL
Left ACG + bilateral Yag PI, atrophic left iris
Gorlins syndrome, previous Mohs excision
Left BCC excised & Hughes flap reconstruction lagophthalmos (awaiting tarsorrhaphy)
Left trabeculectomy, bilateral anterior uveitis (bilateral cataract)
Bilateral ptosis
POAG cupping/coloboma
POAG worse in left eye
Oculodermal melanosis
Marfan's syndrome with posterior dislocation of lens

Station 3 – Posterior Segment

Exudative diabetic maculopathy, previous laser
X linked retinoschisis + Bulls eye maculopathy (iridotomy for ACG)
Right RD cryo explant, pseudophakia, left prosthesis
Asteroid hyalosis
Right wet AMD, left dry AMD
Right ST BRVO, L macroaneurysm + exudates sup temp
Right BRVO, disc collats, macular scar
Right diabetic maculopathy Right R1, M1, P1, Left R1, M0

Station 4 – Strabismus & Orbit

TED, goitre, lid lag, proptosis, reduced EOM
TED
Post enucleation socket syndrome
LCS with poor fixation left eye
Fully accom squint, aged 6

Medicine & Neurology – Station 5 and 6

Team A

Angioid streaks + R macular scar pseudoxanthoma elasticum (also diabetic retinopathy)
Myotonic dystrophy, brow suspension
Sjogren's syndrome, rheumatoid arthritis (involutional ptosis)
Left APD, retinal artery occlusion
AION with superior visual field defect in right eye

Team B

Marfan's syndrome, bilateral subluxed lenses with induced myopia
Ankylosing spondylitis, chronic uveitis
Right homonymous hemianopia from CVA
TED, stable restriction of eye movements, decompressed last year
Cavernous sinus meningioma with LDS and 3mm lat displacement

5 April 2011 – Afternoon Rotation

Station 1 – Cataract & Anterior Segment

Bilateral lens subluxation not Marfan's
Epithelial ingrowth post LASIK
Left heterochromic cyclitis bilateral pseudophakia R Yag
R>L peripheral corneal thinning, pseudophakia caps opacification
R Corneal intrastromal FB post trauma
Bilateral PK
Schneider's crystalline dystrophy

Station 2 – Glaucoma & Lid

Hughes flap after excision of melanotic lesion LLL
Left BCC excised & Hughes flap reconstruction lagophthalmos (awaiting tarsorrhaphy)
Left trabeculectomy, bilateral anterior uveitis (bilateral cataract)
Bilateral ptosis
Left ectropion
Bilateral trabs cupped discs pseudophakia
POAG cupping/coloboma

Station 3 – Posterior Segment

Left CSR + adjoining macular scar
Right wet AMD, left dry AMD. Left OD drusen
L ischaemic CRVO
L CRVO, CMO & disc oedema post Avastin
Left wet AMD and right drusen
X linked retinoschisis + Bulls eye maculopathy (iridotomy for ACG)
Right RD cryo explant, pseudophakia. Left prosthesis

Station 4 – Strabismus & Orbit

TED, goitre, lid lag, proptosis, reduced EOM
Age 6, jaw winker, accommodative RCS, recent ptosis surgery
Post enucleation socket syndrome
R>L Duane's syndrome
LCS with poor fixation left eye

Medicine & Neurology – Station 5 and 6

Team A

Myotonic dystrophy, brow suspension
Left APD, retinal artery occlusion

Sjogren's syndrome, rheumatoid arthritis (involutional ptosis)
TED, reduced OM, proptosis
AION with superior visual field defect in right eye

Team B

R NPL, L 6/24 Right APD (myopic ret degen L+ mac hole)
Ankylosing spondylitis, chronic uveitis
Right homonymous hemianopia (asymmetric disc cupping, dry AMD)
TED
Cavernous sinus meningioma with LDS and 3mm lat displacement

6 April 2011 – Morning Rotation

Station 1 – Cataract & Anterior Segment

Bilateral lens subluxation Marfans
L traumatic mydriasis, subluxed lens
Partial aniridia cataract (nystagmus)
Bilateral post RK & cataract, pigment on endothelium
Reis Butler, L DALK
Right pterygium
Sequelae of iritis
Schneider's crystalline dystrophy

Station 2 – Glaucoma & Lid

Left ACG + bilateral Yag PI, atrophic left iris
Right phthisis, LUL entropion (previous RUL entropion repair)
Punctal ectropion & dermatochalasis
Gorlins 2 BCCs on RLL
Left trabeculectomy, bilateral anterior uveitis (bilateral cataract)
Pseudoexfoliative chronic glaucoma with right phacotrab CDs 0.9 and 0.4

Station 3 – Posterior Segment

Bilateral disc drusen (L amblyopic 6/60)
Diabetic retinopathy bilateral laser, bilateral M1
Bilateral lasered diabetic maculopathy
Right early dry AMD, left old wet AMD + fibrosis
Right CRVO + PRP
Bilateral diab maculopathy, PRP, macular oedema old L inferior vit haem
Choroidal naevus IT RE, cups 0.5 and 0.9
Choroidal naevus

Station 4 – Strabismus & Orbit

TED, lid retraction, lateral flare
Age 6, jaw winker, accommodative RCS, recent ptosis surgery
Post enucleation socket syndrome
Age 3, Left Brown's syndrome

Medicine & Neurology – Station 5 and 6

Team A

Angioid streaks + R macular scar pseudoxanthoma elasticum (also diabetic retinopathy)
Myotonic dystrophy, brow suspension
TED, reduced OM, proptosis
Homonymous hemianopia

Team B

Ushers syndrome, bilateral inferior pigmentary retinopathy

MS, Left RAPD & optic atrophy

Cavernous sinus meningioma with LDS and 3mm lat displacement

Left homonymous hemianopia due to CVA, right R2 M0 P1, Left R3 M1 P1. Left DR.

OSCE Results

Candidates examine three patients in stations 1-3, two patients in stations 4, four patients in station 5 and one patient in station 6. Each patient is worth a maximum of 12 marks (2 examiners x 3 marks x 2 criteria). To balance the contribution to a candidate's mark from each station, the mark from each of stations 1-3 and 7 is weighted by 0.666. The relative contribution from each station in the OSCE is thus 2,2,2,2,4,1.

Maximum mark after weighting: 156

Stations 1-3: 2 criteria scored 0-3 for 3 patients by 2 examiners x 0.666 = 24

Station 4: 2 criteria scored 0-3 for 2 patients by 2 examiners = 24

Station 5: 2 criteria scored 0-3 for 4 patients by 2 examiners = 48

Station 6: 3 criteria scored 0-3 for 1 patient/actor by 2 examiners x 0.666 = 12

OSCE Statistics

Pass mark (using borderline candidate method):	91/156
Mean score:	106/156
Median score:	107/156
Range:	100-133
Reliability (Cronbach alpha):	0.9
SEM:	6.9
Adjusted pass mark (+1 SEM)	98/156 (63%)

Table 30: Correlation between examiner's marks at each station

Station 1	Station 2	Station 3	Station 4	Station 5/6	Station 7
Cat/AS	Glauc/lid	Posterior	Orbit/Strab	Med/neural	Comm.
0.777	0.749	0.896	0.823	0.849	0.811

Table 31: Correlation between examiner's global judgements at each station

Station 1	Station 2	Station 3	Station 4	Station 5/6	Station 7
Cat/AS	Glauc/lid	Posterior	Orbit/Strab	Med/neural	Comm.
0.600	0.628	0.664	0.476	0.815	0.921

There was good agreement between examiners marks in all stations but poor agreement on global performance in station 4.

Table 32: Correlation between station scores (combined marks 2 examiners)

		Station 2	Station 3	Station 4	Station 5/6	Station 7
		Glauc/lid	Posterior	Orbit/Strab	Med/neuro	Comm.
Station 1	Cat/AS	-0.190	0.096	-0.287	0.017	0.134
Station 2	Glauc/lid		0.565	0.425	0.228	0.257
Station 3	Posterior			0.585	0.581	0.663
Station 4	Orbit/Strab				0.512	0.392
Station 5	Med/neuro					0.378

All stations had good correlation with each other, apart station 1 was poorly correlated with all other stations.

Table 33: Standard setting for the OSCE

Station	1		2		3		4		5 & 6		7	
No. of borderline candidates	8	5	9	11	9	3	1	2	6	3	4	2
Median borderline candidate score	6.7	7.3	6	6.7	8.7	7.3	8	7.5	14	12	7.3	3.7

The pass mark for the OSCE was increased from 91 by 1 SEM to 98 (63%).

Evaluation

Candidate evaluation

Detailed evaluation regarding individual stations is provided in appendix 1

General candidate comments:

- I think you are using unfamiliar equipment in an unfamiliar environment, which takes time.
- Using the direct in 3 stations is not reflective of practice.
- Time constraints make examination and discussion difficult. Recommend less patients.
- Clinic space/room was narrow and cramped.
- Plastics – two patients were very similar – lower lid excisions.
- Was asked same questions about thyroid eye disease twice.
- Candidates with the MRCOphth should be exempt as they have already had clinical skills examined.
- I am concerned that the direct ophthalmoscope is faulty/patient appropriate – this affected performance in the rest of that station and sequel.
- Fair assessment of knowledge – some of it
- Included in the exit examination – potentially.
- Very well organised today.
- The movement in the place was difficult.
- OSCE was much fairer and a better assessment than the viva.
- An alternative way of examining would be to have realistic clinic scenarios examining us on a range of patients with us holding a consultation as if in our daily practice.
- Very unrealistic exam. No ability to have a history (a proper history) before looking at exam findings. V unusual cases compared to morning session.

Overall results

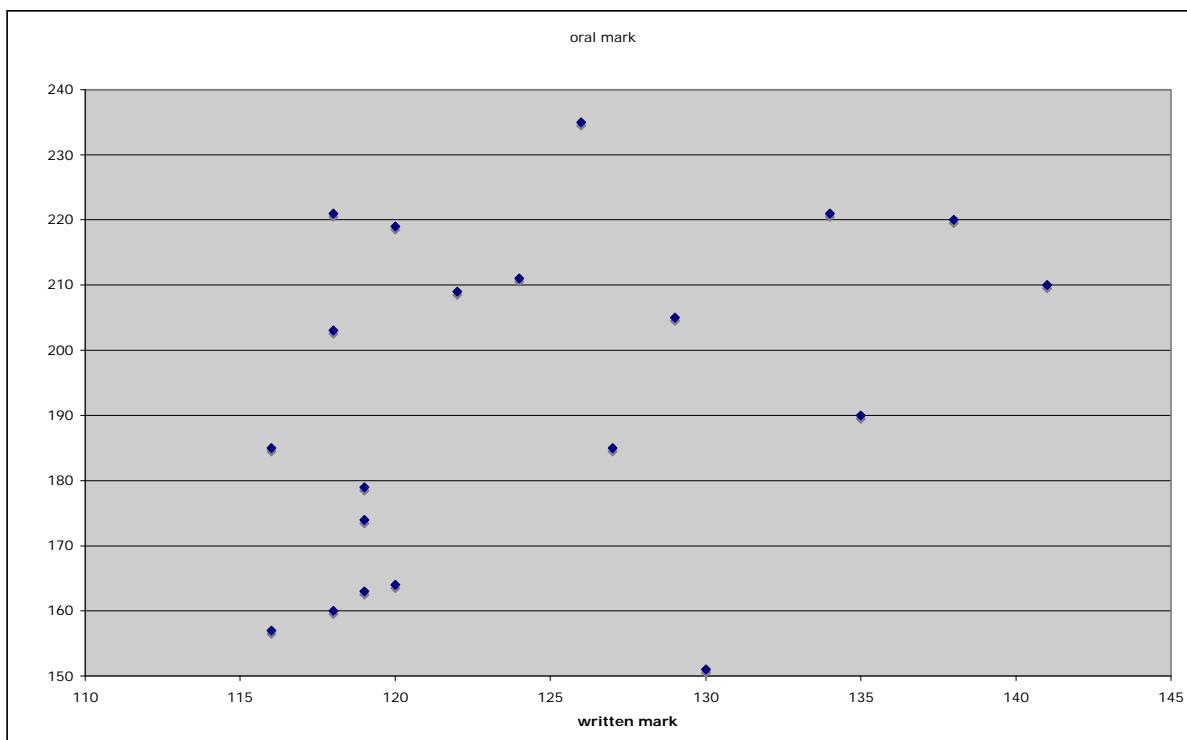
Table 34: Correlation between scores in each part of examination

	EMQ	VIVA	OSCE
MCQ	0.557	0.498	0.369
EMQ		0.394	0.087
VIVA			0.456

Correlation between written and oral examinations: 0.401

There is reasonable correlation between all components of the examination apart from the EMQ and the OSCE.

Scatter plot of relationship between written and oral parts of the examination



Breakdown of Clinical Examination

Table 35: Breakdown of clinical examination results by training

	Failed	Passed	Total
In OST	2	12	14
Not in OST	4	3	7
Total	6	15	21

These differences are not statistically significant ($p = 0.12$)

Table 36: Breakdown of clinical examination results by gender

	Failed	Passed	Total
Female	3	4	7
Male	3	11	14
Total	6	15	21

These differences are not statistically significant ($p = 0.63$)

Table 37: Breakdown of clinical examination results by first language

	Failed	Passed	Total
English	3	11	14
Other	2	4	6
Total	5	15	20

These differences are not statistically significant ($p = 0.48$)

Table 38: Breakdown of results by deanery

	Failed	Passed	Total
East Midlands (S)	1	0	1
East of Scotland	0	1	1
London	1	3	4
Mersey	0	1	1
Northern Ireland	0	1	1
Oxford	0	3	3
Peninsula	0	1	1
Severn	0	2	2
total	2	12	14

Table 39: Breakdown of results by level of training

	Failed	Passed	Total
SpR/ST7 (LAT)	0	3	3
ST6	0	3	3
ST5 (1 LAT)	0	4	4
ST4 (1 LAT)	2	2	4
Total	2	12	14

Table 40: Breakdown of clinical examination results by country of qualification

	Failed	Passed	Total
UK	1	10	11
Outside UK (inc Republic of Ireland)	5	5	10
Total	6	15	21

These differences are statistically significant ($p = 0.05$)

Table 41: Breakdown of clinical examination results by number of previous attempts

Attempts	Failed	Passed	Total
1 (First)	3	12	15
2	2	3	5
3	1	0	1
Any resit	3	3	6

Breakdown of Results for the Overall Examination (written and practical parts combined)

Table 42: Breakdown of clinical examination results by training

	Failed	Passed	Total
In OST	16	12	28
Not in OST	15	3	18
Total	31	15	46

These differences are not statistically significant ($p=0.1$)

Table 43: Breakdown of clinical examination results by gender

	Failed	Passed	Total
Female	8	4	12
Male	23	11	34
Total	31	15	46

These differences are not statistically significant ($p = 1.0$)

Table 44: Breakdown of results by deanery

	Failed	Passed	Total
East Midlands (South)	1	0	1
East Scotland	0	1	1
London	4	3	7
Mersey	0	1	1
North Western	1	0	1
Northern Ireland	0	1	1
Oxford	0	3	3
Peninsula	0	1	1
South Yorks & South Humber	1	0	1
Severn	1	2	3
Wales	1	0	1
Wessex	1	0	1
West Midlands	2	0	2
Yorkshire	4	0	4
Total	16	12	28

Table 45: Breakdown of written results by stage of training

	Failed	Passed	Total
ST3	1	0	1
ST4	2	2	4
ST5	7	4	11
ST6	3	3	6
ST7	0	1	1
SpR/FTSTA/LAT	3	2	5
	16	12	28

Table 46: Breakdown of clinical examination results by country of qualification

	Failed	Passed	Total
UK	10	10	20
Outside UK (inc Republic of Ireland)	21	5	26
Total	31	15	46

These differences are statistically significant ($p = 0.05$)

Table 47: Breakdown of clinical examination results by number of previous attempts

Attempts	Failed	Passed	Total
1 (First)	21	12	33
2	4	3	7
3	4	0	4
4	2	0	2
Any resit	10	3	13
Total	31	15	46

Comparison to previous examinations

Date	Oct 08	April 09	Sept 09	April 10	Oct 10	April 11
Candidates	7	15	16	21	26	46
MCQ pass mark	61%	64%	64%	66%	65%	65%
Reliability	0.6	0.8	0.8	0.8	0.8	0.7
EMQ pass mark	64%	64%	66%	65%	64%	65%
Reliability	0.8	0.9	0.8	0.9	0.8	0.7
Viva pass mark	59%	59%	64%	57%	56%	63%
Reliability	0.9	0.8	0.8	0.9	0.8	0.8
OSCE pass mark	65%	60%	63%	61%	62%	63%
Reliability	0.9	0.8	0.9	0.80	0.9	0.9
Written pass rate	86%	53%	38%	48%	58%	46%
Oral pass rate	50%	50%	33%	50%	73%	71%
Overall pass rate	29%	27%	13%	24%	58%	33%

Summary

The Part 2 FRCOphth examination has developed into a reliable examination with a realistic pass rate. Candidates and examiners were asked to evaluate the examination and provided a lot of very useful and detailed comments.

Michael Nelson BSc (Hons) FRCOphth MAEd

Education Adviser

June 2011

Appendix 1 Detailed candidate evaluation

Structured Viva

Question 1:

Were you treated in a courteous manner by the examiners in this station?

S1. Patient Investigations			S2. Patient Management 1			S3. Patient Management 2			S4. Attitudes, Ethics & Responsibilities			S5. Audit, Research & EBM and Health Promotion			Communication Skills		
Yes	No	DNA	Yes	No	DNA	Yes	No	DNA	Yes	No	DNA	Yes	No	DNA	Yes	No	DNA
100%	0	0	95%	5%	0	85.5%	9.5%	5%	86%	14%	0	100%	0	0	86%	0	14%

Question 2:

Were the topics you were asked to discuss appropriate for the station?

S1. Patient Investigations			S2. Patient Management 1			S3. Patient Management 2			S4. Attitudes, Ethics & Responsibilities			S5. Audit, Research & EBM and Health Promotion			Communication Skills		
Yes	No	DNA	Yes	No	DNA	Yes	No	DNA	Yes	No	DNA	Yes	No	DNA	Yes	No	DNA
90%	10%	0	95%	5%	0	62%	28.5%	9.5%	57%	24%	19%	76%	19%	5%	81%	9.5%	9.5%

Question 3: Were the questions of an appropriate standard for an exit examination?

S1. Patient Investigations			S2. Patient Management 1			S3. Patient Management 2			S4. Attitudes, Ethics & Responsibilities			S5. Audit, Research & EBM and Health Promotion			Communication Skills		
Yes	No	DNA	Yes	No	DNA	Yes	No	DNA	Yes	No	DNA	Yes	No	DNA	Yes	No	DNA
86%	5%	9%	90%	5%	5%	71%	10%	19%	62%	14%	24%	76%	19%	5%	71%	10%	19%

Comments on each station

Patient Investigations

- It was very difficult to distinguish between the stations as to whether you were doing patient management or ethics or investigations.

Patient Management 1

- Patient appropriate but there is very little time for you to be able to get through the question and have time to think.
- Very rare case – uveitis again.

Patient Management 2

- Could have been more difficult (more discriminatory)
- Felt intimidated by examiner – he looked frustrated.
- Patient appropriate? Case of retinal migraine, which is a diagnosis of exclusion & discussion of treatment of migraine from an ophthalmologist? Unfair question, not routinely seen or diagnosed by ophthalmologists.
- Retinal migraine causing BRAO is v v rare. It felt as if they were just trying to get that answer and weren't so interested in differential diagnosis and this would be a diagnosis of exclusion.
- Retinal migraine is rare and is a diagnosis of exclusion. I think the case was not appropriate and difficult.
- Retinal migraine is rather rare – other group had easier questions.
- Retinal migraine sign is so rare. Is it appropriate asking something so esoteric?

- Re courteous manner – one examiner was fine.
- Extremely rare case. Ridiculous questions.

Attitudes, ethics and responsibilities

- Syphilis is rare – a lot of that station was on diagnosis and management at this station rather than ethics (management mainly done at GUM – I don't think many consultant ophthalmologists do this).
- Examiner kept interrupting. Wanted me to read his mind. Didn't really know what he wanted ?complaints/audit. The examiner didn't lead me to what he wanted.
- In AER station on refractive surprise, the examiner wanted to see something specific when the topic is quite broad.
- AER and HP/EBM viva questions were difficult to comprehend. Was not sure what was expected.
- Not clear what the examiners wanted
- Unnecessary discussion of investigation & management of syphilitic uveitis without leaving enough time for the ethical scenario.
- V poor quality picture – asked about the clinical picture, description of photo & diagnosis. $\frac{3}{4}$ of the time was about the photo – v. little about ethics or attitude.
- 2 cases with neuro-retinitis in one exam viva is too much. I was asked about diagnosis and management for $\frac{1}{2}$ the time, the colour photo was hazy & not clear and the questions weren't clear.
- Too many 'patient management' questions in the ethic station should have signs to say which station is which so candidates know what to expect.
- Half the questions had to do with patient management rather than handling sensitive issue of syphilis.
- I am not sure this station was a good test. I was initially asked about posterior uveitis work up but this was an ethics station. Ocular syphilis is pretty rare so a question regarding systemic treatment of syphilis is not really reasonable, especially as the focus should have been attitudes, ethics etc.
- Not clear that this was the AER station as seemed to be run like a patient management station.
- Not clear this was ethics until $\frac{1}{2}$ - $\frac{3}{4}$ way through station. Appeared to be uveitis patient management again.

Audit, research & EBM and Health Promotion

EBM – had never heard of certain guidelines/standards that were asked

EBM & HP – was better than other station but had random stats in it.

EBM – asked about management

EBM – hardly any questions directed at audit/research/EBM.

EBM/HP – was cut off a lot by one of the examiners, got interrupted quite a bit. Other examiner said it was a trick question & better like next time.

EBM/HP – seemed to be very management focused.

EBM/HP – questions not particularly clear. Jumped to stats without any idea that this was such a station & question line not obvious.

Structured vivas: Overall evaluation

	Yes	No	DNA
Was the structured viva examination well organized?	62%	24%	14%
Were you given clear instructions about the structured viva examination?	81%	9.5%	9.5%
Did you feel that the structured viva examination was a fair assessment of your knowledge?	52.5%	33.5%	14%
In your opinion should the structured viva examination be included in the exit examination?	71%	19%	10%

OSCE

Question 1: Were you treated in a courteous manner by the examiners in this station?

S1. Cataract & Anterior Segment			S2. Glaucoma & Lid			S3. Posterior Segment			S4. Strabismus & Orbit			S5. Medicine & Neurology		
Yes	No	DNA	Yes	No	DNA	Yes	No	DNA	Yes	No	DNA	Yes	No	DNA
100%	0	0	95%	0	5	95%	5	0	100%	0	0	90.5%	9.5%	0

Question 2: Were the patients you were asked to examine appropriate for the station?

S1. Cataract & Anterior Segment			S2. Glaucoma & Lid			S3. Posterior Segment			S4. Strabismus & Orbit			S5. Medicine & Neurology		
Yes	No	DNA	Yes	No	DNA	Yes	No	DNA	Yes	No	DNA	Yes	No	DNA
95%	5%	0	95%	5%	0	71%	14.5%	14.5%	95%	5%	0	95%	5%	0

Question 3: Were the questions of an appropriate standard for an exit examination?

S1. Cataract & Anterior Segment			S2. Glaucoma & Lid			S3. Posterior Segment			S4. Strabismus & Orbit			S5. Medicine & Neurology		
Yes	No	DNA	Yes	No	DNA	Yes	No	DNA	Yes	No	DNA	Yes	No	DNA
95%	5%	0	95%	5%	0	85.5%	5%	9.5%	95%	5%	0	90.5%	9.5%	0

Candidates' Comments:

Cataract and Anterior Segment

No candidate comments

Glaucoma and Lid

- Patient not appropriate - rare conditions.
- Intimidated by examiner regarding NICE guidelines.

Posterior Segment

- Thought the direct ophthalmoscope was smudged.
- I could get a line at all with direct – this is (usually) not the case in clinic – was the appropriate/.....
- Sarcastic comment by one examiner
- Difficult slit lamp examination, small pupil by the time I was examining
- Indirect ophthalmoscope patient squeezing and rolling his eyes.
- 2 cases for direct ophthalmoscope and no time for indirect.

Strabismus and Orbit

- Child had lost concentration making examination difficult
- Examination of a child not suitable due to limited time and cooperation of patient.

Medicine and Neurology

- Rare conditions, unable to take history.
- Aggressive questioning by one examiner. Not clear as to what they wanted you to examine eg myotonic dystrophy 'examine what you want'.
- One examiner was very belligerent and aggressive. They were intimidating and not helpful at all. I feel they should not be allowed to examine.
- One examiner unnecessarily rude from the outset, quite aggressive, dismissive and looking down at their notes. Other examiner was courteous.
- One examiner talked to you as though you were a medical student rather than an experienced colleague.

OSCE: Overall evaluation

	Yes	No	DNA
Was the OSCE well organized?	95%	5%	0
Were you given clear instructions about the OSCE?	95%	5%	0
Did you feel that the OSCE was a fair assessment of your knowledge?	81%	9.5%	9.5%
In your opinion should the OSCE be included in the exit examination?	76%	14%	10%