The Royal College of Ophthalmologists

Diploma (DRCOphth)
Examination

Candidates’ Information Pack
Introduction

The Diploma examination assesses a candidate’s basic knowledge, clinical skills and understanding of ophthalmology. Candidates should be able to gather and interpret clinical data and communicate effectively with patients and colleagues.

Outcomes Assessed by the DRCOphth Examination

The examination is a test of:
- Clinical skills
- The ability to form a differential diagnosis and a management plan
- The ability to practise general medical skills relating to ophthalmological practice
- The understanding of clinical investigations
- The knowledge and understanding of basic sciences in relation to ophthalmology
- Communication skills

Structure of the examination

The examination will comprise of theoretical papers, a structured viva and an objectively structured multi-station clinical examination (OSCE) as follows:

- A 3 hour Multiple Choice Question (MCQ) paper of 120, single best item stem, questions relating to basic sciences and theoretical optics
- A 2 hour Constructed Response Question (CRQ) paper of 12 questions
- A Structured Viva consisting of five stations, each will be timed for a precise period of 5 minutes. Station 7 of the OSCE, Communication Skills, will not be conducted in a clinical setting and will be held at the same time as the Structured Viva, lasting for a precise period of 5 minutes.

The stations are set out as follows:

Station 1: Patient Management 1
Station 2: Patient Management 2
Station 3: Patient Investigations
Station 4: Ethics and Evidence Based Medicine
Station 5: Public Health (including Health Promotion and Disease Prevention)

Two examiners will be present at each station for the duration of the cycle.

- A Multi Station Clinical examination (OSCE) consisting of a series of 7 stations. Each of the clinical stations will be timed for precise periods 10 minutes. Station 7, Communication Skills, will not be conducted in a clinical setting and will be held at the same time as the Structured Viva, lasting for a precise period of 5 minutes.

The stations are set out as follows:

Station 1: Posterior Segment 1
Station 2: Posterior Segment 2
Station 3: Anterior Segment
Station 4: Strabismus and Neuro-Ophthalmology
Station 5: Pupils and Visual Fields
Station 6: External Eye
Station 7: Communication Skills (takes place logistically with Structured Viva)
The Multiple Choice Question (MCQ) Paper

The MCQ paper consists of 120 single best answer questions and will assess basic and clinical science and theoretical optics. There will be no negative marking.

Example:

Laser trabeculoplasty is most likely to be effective in an eye with:-

a) Angle recession glaucoma.

b) Posner Schlossman glaucoma (inflammatory glaucoma).

c) Pseudo-exfoliative glaucoma.

d) Reigers syndrome.

Correct Response– C

Standard Setting for the MCQ

The pass mark for the MCQ paper will be set by a panel of examiners using Ebel’s method prior to the examination.
The Constructed Response Question (CRQ) Paper

Constructured Response Questions are used to test the candidate’s knowledge of important aspects in the practice of ophthalmology. This will involve 12 questions over a period of 2 hours.

CRQ may involve questions of the following subjects although this list is not an exhaustive list and candidates are expected to note the syllabus and its contents:

- Biometry
- Orthoptic reports
- Fluorescein angiography
- Fundus photos
- Equipment
- Visual fields
- Ray diagrams
- Ultrasound

Example of a CRQ

A 75 year old male presented with a painful, red left eye. Visual acuity was perception of light, the anterior chamber was flat and the intraocular pressure was 40 mmHg. He had a mature cataract and an ultrasound was performed.

The eye was enucleated and the relevant histology is reported below.

“The principal microscopic abnormality is the presence of a choroidal melanoma situated posteriorly and temporally within the globe measuring a maximum of 11mm in diameter by 6mm in thickness. The tumour has breached Bruch’s membrane at its periphery. The tumour is comprised principally of epitheliod melanocytes. There is no evidence of scleral or vortex vein invasion in the sections examined.”

1. Name 4 features of the ultrasound which suggest malignant melanoma (4 marks)
   - Shape-dome/mushroom (1 mark)
   - Thickness> 2mm (1 mark)
   - High surface reflectivity (1 mark)
   - Low internal reflectivity (1 mark)
   - Choroidal excavation (1 mark)

2. Name the 2 most important poor prognostic features mentioned in the Pathology report (2 marks)
   - Size
   - Cell Type
3. What other cell types may be found in choroidal melanomas? (2 marks)
   Spindle A
   Spindle B

4. Name 4 investigations you would order in this patient (4 marks)
   LFT’s
   Liver Ultrasound/CT
   CXR
   CT/MRI orbit

**Standard Setting for the CRQ**

The pass mark in the CRQ paper is standard set using the borderline candidate method.

**Exemption from the Diploma Written Papers**

Candidates who have passed the Part 1 FRCOphth examination since October 2006 are exempt from the MCQ and CRQ papers of the Diploma examination.

Candidates holding the following historic examinations are also eligible to apply for exemption from the MCQ and CRQ papers:

Part 1 and Part 2 MRCOphth (prior to November 2008)
Part 1 and Part 2 MRCSEd (prior to August 2008)
Structured Viva

Introduction

The Structured Viva consists of a series of strictly timed assessment ‘stations’, where various areas of competence are tested by examiners using an objective marking scheme in order to increase the reliability and validity of the examination.

Format of the Structured Viva

The Structured Viva will consist of a series of five stations, each of which will be timed for precise periods of 5 minutes. Station 7 of the OSCE, Communication Skills, will not be conducted in a clinical setting and will be held at the same time as the Structured Viva, lasting for a precise period of 5 minutes.

The stations are set out as follows:

Station 1: Patient management 1
Station 2: Patient management 2
Station 3: Patient investigations
Station 4: Ethics and Evidence Based Medicine
Station 5: Public Health (including Health Promotion and Disease Prevention)

Two examiners will be present at each station for the duration of the cycle.

The start and finish of each station is controlled by a timekeeper and clearly signalled.

Conduct of the Structured Viva

The timekeeper will announce the commencement of the station and the candidate will enter. The examiners will begin the questions, ensuring strict adherence to pre-agreed questions to ensure the same information is requested of each candidate. At the end of the 5 minute session the timekeeper will signal the end of the station. However it is possible that the structured questions may have been completed prior to the end of allotted time. Under these circumstances the viva will terminate ahead of schedule and the candidate will be informed that that viva station is complete and will be asked to leave that station. The candidate should then wait outside that station until asked to leave by the timekeeper. The candidate will leave the station and be directed to the next station. 5 minutes will be allowed for changeover and for examiners to independently complete the mark sheet.

Stations 1 & 2: Patient management 1 & 2

Case-based discussion may involve cases which are frequently seen and essential to manage by all ophthalmologists and unlikely to be represented in the OSCE examination. It may include (but not be restricted to) the following:

- Suspected child abuse
- Endophthalmitis
- Ocular Trauma
- Intraocular and orbital neoplasia
- Neurological emergencies
- Ocular emergencies
- Medical cases in relation to ophthalmology practice
Station 3: Patient investigations

Case-based discussion may include (but not be restricted to) the following:

a. Interpretation of biometry
b. Ocular and neuro-imaging
c. Hess charts
d. Electrophysiology
e. Working with uncertainty

Station 4: Ethics and Evidence Based Medicine *

Case-based discussion may include (but not be restricted to) the following:

- Medical ethics
- Consent
- Confidentiality
- Duties of a doctor
- Appraisal and revalidation
- Management of complaints
- Critical incident reporting
- Poor performance in a colleague
- Principles of audit and research
- Use of published evidence
- Published clinical guidelines

Station 5: Public Health (including Health Promotion and Disease Prevention)

Case-based discussion may include (but not be restricted to) the following:

- Screening for ophthalmic disease
- Prevention of cross infection
- Hospital acquired infection
- Drug side effects

* Candidates are advised to read and make themselves familiar with:

- NICE Guidelines
- College Guidelines
- GMC documents eg. Good Doctors Safer Patients, Revalidation, Good Medical Practice etc
- DVLA
Timetable

An example of the timetable for a cycle of the structured viva examination is set out below.

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<td>Candidate 1</td>
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<td>5 MINS</td>
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<td>Candidate 5</td>
<td>Candidate 6</td>
<td>Candidate 1</td>
<td>Candidate 2</td>
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<tr>
<td>5 MINS</td>
<td>09.30-09.35</td>
<td>Candidate 4</td>
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<td>5 MINS</td>
<td>09.40-09.45</td>
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<td>5 MINS</td>
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<td>Candidate 2</td>
<td>Candidate 3</td>
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At each station, the examiner should remind the candidate of the time available and the signals used to indicate the timing. It is vital that the timing of the station is strictly adhered to.

Method of Assessment for the Structured Viva

The mark sheets

10 mark sheets, in total, will be completed for each candidate by the examiners i.e. two examiners per station, 5 stations. Each structured viva is divided into two marking sections to be judged on a 4 point Likert scale as follows:

Poor ← 0 1 2 3 → Good

Marking guidance for each viva section is included for examiners within the structured question. Each examiner will therefore award up to 6 marks per viva station, with each mark counting towards the final overall score. The maximum total score for the Structured Viva exam is therefore 60.

For all candidates – whether pass or fail – detailed notes will be made on the reverse of the mark sheet so that constructive feedback can be forwarded to the candidate including the type of cases and questions asked. This feedback will be given as “satisfactory performance” and “unsatisfactory performance”.

Both examiners score the candidate independently.

Standard Setting for the Structured Viva

For each station, in addition to a numerical score, candidates receive a global judgement of pass, borderline or fail used only to identify the pass mark for the Structured Viva using the borderline group method.
The Multiple-station Objective Structured Clinical Examination (OSCE)

The OSCE consists of a series of strictly timed assessment 'stations', where various areas of competence are tested by examiners using an objective marking scheme in order to increase the reliability and validity of the examination.

Structure of the Multiple-station Examination

The clinical examination will consist of a series of six stations, each of which will be timed for precise periods of 10 minutes. Station 7, Communication Skills, will not be conducted in a clinical setting and will be held at the same time as the Structured Viva, lasting for a precise period of 5 minutes.

The stations are set out as follows:

Station 1: Posterior Segment 1
Station 2: Posterior Segment 2
Station 3: Anterior Segment
Station 4: Strabismus and Neuro-Ophthalmology
Station 5: Pupils and Visual Fields
Station 6: External Eye
Station 7: Communication Skills (takes place logistically with Structured Viva)

Two examiners will be present at each station for the duration of the cycle. Other than the communications skills station, the examination will take the form of short cases. Candidates will be examined on two patients per station.

The pairing of examiners and allocation to stations will be arranged by the Examinations Staff in consultation with the Senior Examiner. Two examiners in the same subspecialty should not usually examine together.

Allocation of examiners may change for each cycle – but this will be kept to a minimum.

The start and finish of each station is controlled by a timekeeper and clearly signalled. However it is the duty of the examiners to maintain careful timekeeping and they must not over-run the time allocation for each station.

Conduct of the OSCE

The timekeeper will direct candidates into the appropriate clinic rooms before announcing the commencement of the station. One examiner will take the candidate into the station and instruct the candidate on the task required for the first patient. This should involve giving the candidate a brief clinical scenario/history and asking the candidate to examine the patient appropriately. After examination of the patient, the candidate will be asked to describe his/her findings and there will follow a short discussion on the investigation and management of the clinical problem. The second examiner should take the candidate to the second patient and ask the candidate to examine them. Candidates should be careful to undertake appropriate hand hygiene during the examination.

At the end of allotted time, the timekeeper will signal the end of the station. The candidate will leave the station and be directed to the next station. Time is scheduled to allow for changeover and for examiners to independently complete the mark sheets.
Stations 1 & 2: Posterior Segment 1 & 2

Skills to be tested may (but not be restricted to) include the assessment, interpretation, diagnosis and management of:

- Vitreous disorders
- Retinal detachment
- Retinoschisis
- Degenerative retinal disorders
- Choroidal disorders
- Macular disorders
- Diabetic retinopathy
- Posterior uveitis
- Intraocular tumours (primary and secondary)
- Injury involving the posterior segment
- Retinal disease and retinopathy

Candidates must be proficient in the examination of the posterior segment and including the use of the direct ophthalmoscope, indirect ophthalmoscope (indentation to be avoided) and slit lamp lenses.

Station 3: Anterior Segment

Skills to be tested may include (but not be restricted to) the assessment, interpretation, diagnosis and management of:

- Infectious external eye disease including conjunctivitis and keratitis
- Dry eye
- Cicatricial conjunctival disease
- Corneal and conjunctival degenerations
- Peripheral ulcerative keratitis
- Corneal dystrophies
- Allergic and atopic disease
- Complications of contact lens wear
- Corneal oedema, opacity, ectasia, corneal transplantation and corneal graft rejection and other complications
- Episcleritis
- Conjunctival and anterior uveal tumours
- Aniridia and other dysgenesis
- Anterior uveitis
- Anterior segment injury
- Lens dislocation
- Assessment, diagnosis and management of all forms of cataract and the complication of cataract surgery

In this section candidates must be proficient in the use of the slit lamp microscope in examining the anterior segment employing direct and indirect illumination, retro-illumination, specular reflection and scleral scatter as appropriate to best demonstrate signs.
Station 4: Strabismus and Neuro-Ophthalmology

Skills to be tested may include (but not be restricted to) the assessment, diagnosis and management of:

- Concomitant strabismus
- Amblyopia
- Incomitant strabismus
- Nystagmus
- Ocular motility syndromes (e.g. Duane’s, Brown’s)
- Ocular myopathies
- Supranuclear eye movement disorders
- Neuromuscular disease
- Orbital disease – orbital swelling, exophthalmos, orbital masses, thyroid eye disease

Candidates should be proficient in eye movement evaluation and cover test (including alternate cover and prism cover test) and methods of examining orbital disease.

Station 5: Pupils and Visual Fields

Skills to be tested may include (but not be restricted to) the assessment, interpretation, diagnosis and management of:

- Abnormal pupil sizes, responses eg anisocoria, afferent pupillary defect, Holmes Adie pupil, Horner’s syndrome and other causes of light near dissociation
- Field of vision defects eg neurological, glaucomatous, vascular or retinal aetiologies
- Third cranial nerve palsy
- Posterior synechiae
- Trauma
- Confrontation visual fields
- White pin peripheral field testing
- Red pin central field testing
- Amsler grid
- Central scotoma
- Enlarged blind spot
- Altitudinal field loss
- Bitemporal hemianopia
- Homonymous hemianopia
- Glaucomatous field defects

Station 6: External Eye

Skills to be tested may include (but not be restricted to) the assessment, interpretation, diagnosis and management of:

- Abnormal lid position (ectropion, entropion, ptosis, trichiasis, lagophthalmos and exposure)
- Abnormal lid swelling (chalazion, benign and malignant tumours)
- Blepharitis
- Epiphora
- Assessment of open and closed angle glaucoma
- Common secondary glaucomas including pseudoexfoliation and pigment dispersion syndrome
Station 7: Communication Skills

This station will take place within the Structured Viva component of the exam for logistical reasons.

The communication skills station consists of a simulated role-play. The candidate will receive a GP letter or case scenario to read. The candidate may make notes on the paper provided, which will be destroyed afterwards and not used for assessment. The timekeeper will announce commencement of the station. The interview will last for a 5 minute duration and involve interaction between the candidate and the patient/subject and may include history taking, taking consent for surgery, some form of counselling or advising patients. The interview will commonly take the following format:

- being given a brief background to the patient, a GP letter or an optometrist report to read
- taking a relevant history
- being presented with the findings of examination or investigation
- counselling the patient
- alternatively, a scenario may be suggested, e.g. a patient complaining about their treatment

History taking skills includes eliciting the presenting complaint systematically, enquiring about past medical history, family/smoking/alcohol treatment history. The candidate should be able to follow relevant leads and use appropriate verbal and non-verbal responses. There should be a good balance of open and closed questions and the interview should be conducted at an appropriate pace, without rushing or interrupting the subject inappropriately but covering the main aspects. The candidate should be able to interpret the history and discuss the implications of the patient’s main problem.

Communication skills. The candidate introduces himself or herself to the subject and explains their role clearly. They should put the subject at ease and establish a good rapport, exploring their concerns, feelings and expectations – while demonstrating empathy, respect and a non-judgemental attitude. The candidate should be able to provide clear explanations, free of jargon, which the patient/subject understands. They should be able to summarise the interview and check the patient’s understanding of the discussion.

It is vital that the information given to the patient is accurate and appropriate. This is an important aspect of this assessment.
**Timetable**

An example of the timetable for a cycle of the examination is set out below.

At each station, the examiner should remind the candidate of the time available and the signals used to indicate the timing. It is vital that the timing of the station is strictly adhered to.

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OSCE – Method of Assessment

The mark sheets

14 mark sheets in total will be completed for each candidate by the examiners i.e. two examiners per station, 7 stations. Each aspect of the OSCE station is judged on 4 point a Likert scale as follows:

| Poor (0) | 1 | 2 | 3 | Good |

For stations 1-6 examiners are asked to reach a judgment for both of the following elements:

- Examination
- Diagnosis and Management

For station 7 the examiners are asked to reach a judgement for each of the following elements:

- Establishment of Rapport and Information Gathering
- Information delivery
- Appropriateness of Advice and Accuracy of Information

This will generate 2 marks per element per patient. All marks will count towards the final overall score. It is therefore of great importance that each section is fully completed.

For all candidates – whether pass or fail – detailed notes will be made on the reverse of the mark sheet so that constructive feedback can be forwarded to the candidate including the type of cases and questions asked. This feedback will be given as “positive performance” and “negative performance”.

Both examiners score the candidate independently.

Standard Setting for the OSCE

For each station, in addition to a numerical score, candidates receive a global judgement of pass, borderline or fail used only to identity the pass mark for the OSCE using the borderline group method.

Important Note:
Aggressive or inconsiderate behaviour, physical or verbal, to a patient will invariably result in a clear fail.
Overall Result

Candidates are required to pass the clinical component. A marginal fail in one component can be compensated if a candidate performs well in the clinical (OSCE) component.

If awarded a fail, candidates must re-sit the entire examination, even if a pass was previously achieved in any section.

Results

Results will be released four weeks after the examination, once verified by the Senior Examiner. Candidates are not permitted to telephone the College for examination results. All results will be sent to candidates by first class post and the pass list will be displayed on the College website.

Counselling

The College places great importance on providing guidance to those candidates whose performance failed to meet the standard to pass the examination. For the practical components of the examination, examiners are asked to provide notes to assist in this process, particularly if there is concern regarding a candidate’s conduct during the examination (e.g. if the clinical method of the candidate was rough or caused patient discomfort). All candidates will receive details of their performance for formative purposes. It is intended that this is for personal information and that the candidate should only share this with his/her educational supervisor.

Appeals

A copy of the College’s Appeals Procedure is available from the Examinations Department. The sole grounds for appeal are:

- There is evidence of a procedural irregularity in the conduct or content of the Examination or Assessment (including administrative error) which has adversely affected the candidate’s performance

OR

- There were exceptional circumstances, such as illness or some other extenuating circumstance, which adversely affected the candidate’s performance in the Examination or Assessment and were not revealed for valid reasons prior to receipt of the result. The candidate’s request for consideration must be supported by documentary evidence which is acceptable to the Chairman of the Examinations Committee in the first instance and then to the Appeal Panel

Please note, appeals will not be accepted on the grounds that a candidate considers his/her effort were under-marked, that the candidate did not understand or was unaware of the Examination or Assessment Regulations or because the candidate seeks to question professional or academic judgement.