



The Royal College of **Pathologists**

Pathology: the science behind the cure

THE ROYAL COLLEGE OF PATHOLOGISTS

Examinations Department

Annual Report of Examinations in 2008

**Prepared for the Examinations Committee for submission to the Council of the
Royal College of Pathologists**

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Contents

2	Foreword
2	Purpose of this report
2	Introduction
3	Ethnicity and gender of College examiners
6	Specialty reports
18	Fellowship by published works
19	Overview of College examinations
22	Examination developments 2009-10

Foreword

This is the third annual report on the examinations conducted by the Royal College of Pathologists. The first was published in June 2007, and considered gender and ethnicity issues in the examinations. This report includes a further analysis of ethnicity and gender of examiners within specialties. The year 2008 saw the first Clinical Embryology examinations and preparations for examinations for clinical scientists in Haematology. The first examinations in this latter specialty were conducted in the first session in 2009.

Purpose of the report

The purposes of this report are:

- 1 To provide the Examinations Committee and the Council of the College with a summary of the results of examinations in the previous year. The College expends considerable resources on providing examinations for the specialties it covers, and this is a report of results of that expenditure.
- 2 To provide information to external bodies (such as PMETB and deaneries) about the current situation with regard to the College's examinations.
- 3 To be a definitive source of information about the exams - available to College members, potential candidates and the public.

Introduction

The last report reported that the College was dropping the category of membership and that all those eligible for membership would be designated Fellows. 2008 has thus seen the first examinations for FRCPath rather than MRCPPath. This is only a change of name for the examination, changes to individual examinations are detailed below in the specialty reports.

The College has a wide variety of examinations to fit the requirements of widely differing specialties but does not have a dedicated examinations database. The College uses the College membership and administrative database for examinations purposes. Thus all data has to be transferred from individual excel spreadsheets used for the examination into the College database to enable reporting to the candidates, with attendant potential for transcription error. Unfortunately an error was made in one specialty resulting in four trainees receiving the wrong information (see report of Chemical Pathology examinations below). The examinations department has tightened procedures but the College is looking at a new administrative database and this will mean new methods for reporting results in the future. In the meantime the strengthened systems will be rigorously followed to ensure that the transcription process is as complete and error-free as humanly possible.

Ethnicity and gender of College examiners

The Royal College of Pathologists is committed to the principle of diversity and equality in employment, membership, academic activities, examinations and training. The principles of equality and diversity are included in the standards set out by the Postgraduate Medical Education and Training Board (PMETB) for postgraduate training and assessment. A paper from the British Medical Association in 2006 criticised Royal Colleges for their standards in this area and the 2006 College examinations report also looked at ethnicity and gender effects on examination results.

Amongst current pathology trainees, women outnumber men 10:7 with approximately equal numbers (amongst those who declared their ethnicity) of white and non-white origin. Overall 36.8% of fellows are female and there is no specialty where there are more female fellows than males. Women are less well represented amongst examiners. This does present the College with potential issues in dealing with exam candidates, which is why a session on equality and diversity is part of the mandatory training for College examiners (and also mandated by PMETB). The workforce is, however, changing all the time and it is clearly unlikely that examiners who qualified some years ago would represent the same ethnic and gender mix as today's trainees. However, to meet the aspirations of the College policy it is clearly desirable that College examiners should be representative of the College membership. Analysis of the whole examiner database in 2006 showed that examiners were not representative of the College membership, however, the data was not broken down into specialties. The examiner database in 2008 has been re-examined by specialty in order to see whether this is a problem across the specialties or confined to just one or two.

Methods

The College database was queried for gender, ethnicity, specialty and examiner status. Overseas Fellows were excluded from the analysis as the College only conducts the full examinations in the UK and therefore generally does not appoint overseas Fellows as examiners.

Ethnicity is self-reported so there are a wide variety of reported details. These were broken down into white, and non-white groups. Where ethnicity was not stated or could not be determined (e.g. Australian), the ethnicity has been categorised as unknown (31.9%).

The database records all specialties that Fellows declare in alphabetical order so it is difficult to determine main specialty where several are recorded. This is particularly true for European Fellows who may record several specialties against their name. For examiners, the examiner's specialty is known. A pragmatic decision was made for each case where a mix of specialties was recorded and, for the purpose of analysis, some specialties were amalgamated.

Chi-square tests were used to determine significance.

Results - Ethnicity

Specialty	Number of Fellows	Number with unknown ethnicity ⁷	Percentage Fellows who are examiners	Percentage Fellows who are white ⁶	Probability that examiners are representative
Cellular Pathology ¹	2099	689	11.0	64.8	<0.0000001
Clinical Biochemistry	647	157	7.4	85.3	0.164
Genetics ²	122	29	20.5	91.4	0.077
Haematology ³	1282	435	10.6	71.4	<0.0000001
Histocomp & Immunogen. ⁴	47	14	38.3	90.9	0.633
Immunology	179	71	17.9	79.6	0.309
Medical Microbiology & Virology	987	286	7.5	70.3	0.00535
Other ⁵	157	90	5.7	70.1	0.0392
Toxicology	61	17	16.4	97.7	0.898
Veterinary Pathology	110	26	29.1	96.4	0.288
All	5691	1814	10.8	72.3	<0.0000001

- 1 Includes cytopathology, histopathology, dermatopathology, neuropathology, paediatric pathology, forensic pathology.
- 2 Includes cytogenetics and molecular genetics
- 3 Includes haematology and transfusion medicine
- 4 Histocompatibility and immunogenetics
- 5 Specialty mostly not stated but includes very small specialties: oral pathology and clinical embryology.
- 6 Excludes unknown ethnicity.
- 7 Although those with unknown ethnicity were included in the analysis, the numbers involved obviously may affect the degree of certainty that can be derived from the statistical analysis, if they are unequally distributed between examiners and non-examiners.

The three specialties with the highest proportion of fellows of non-white ethnicity and the “other” group appear to have examiner panels which are not representative of their specialty. The “other” category cannot be considered further as this consists of very small specialties or those where the specialty is unknown.

Results - Gender

A similar analysis was conducted with respect to gender:

Specialty	Number of fellows	Percentage of female Fellows	Percentage female examiners	Probability that examiners are representative
Cellular Pathology	2099	37.8	29.1	0.00414
Clinical Biochemistry	647	30.9	18.8	0.0581
Genetics	122	41.8	40.0	0.838
Haematology	1282	38.5	24.3	0.000299
Histocompatibility & Immunogenetics	47	34.0	50.0	0.0689
Immunology	179	25.1	31.3	0.379
Medical Microbiology & Virology	987	41.6	33.8	0.154
Other ⁵	157	31.8	44.4	0.403
Toxicology	61	13.1	30.0	0.0836
Veterinary Pathology	110	26.4	34.4	0.222
All	5691	36.8	29.5	0.000061

The pattern here shows that in all except the big specialties of cellular pathology and haematology, examiners are representative of the gender mix of the specialty. Indeed in 4 specialties (excluding "other") there is a higher proportion of female examiners than fellows in the specialty.

Conclusions

Cellular pathology and haematology were not representative for either gender or ethnicity and medical microbiology was not representative for ethnicity. Examiners tend to be chosen from amongst teaching hospital and university staff which may have a different ethnic or gender mix. It is necessary for large specialties in particular to use teaching hospital staff as the examinations require the facilities of large teaching centres in order to accommodate the numbers required to conduct examinations, and the conduct of examinations requires some examiners who work at the examination centre. Although current College policy is for examiners to be recruited by open advert, some examiners have to be appointed from examination centres as it is virtually impossible to conduct examinations without a local organiser. This may have skewed the distribution of examiners and thus possibly the gender and ethnicity if this is indeed different between teaching and district general hospitals. The policy of open advert for examiners has not been running for long so the ethnic and gender mix of examiners may change to become more representative of the College fellowship. In the meantime, all specialties will be encouraged to recruit examiners by open advertisement, and only use appointment in rare instances where particular geographical or sub-specialist criteria make this necessary.

Specialty Reports

Clinical Biochemistry

Chair of panel of examiners: Dr. Andrew Day.

Candidates' qualifications: medical and clinical scientists

Training body: JCPT¹ (chemical pathology), JRCPTB² (chemical pathology with metabolic medicine)

Results of FRCPath examination:

Part of exam	Total Candidates	Passes
Part 1 Written	74	48
Part 1 Practical	53	38
Part 2	18	17

Part 1 written

The format of the examination continued unchanged in 2008 following the successful implementation of a Short Answer Question (SAQ) paper in 2007. Candidates sit a 3 hour essay paper (four essays from a choice of six), and a 3-hour SAQ paper (20 structured questions, no choice). Both papers performed well at both sessions, with good agreement between markers. In general there was also good agreement between papers for individual candidates although in the autumn paper it was noted that some candidates who possessed adequate breadth of knowledge on the basis of satisfactory performance in the SAQ paper appeared to be unable to demonstrate the required level of depth or criticality required to pass the essay questions. It will be interesting to see if this trend continues in subsequent sessions.

Owing to an unfortunate administrative error after the correct examination results had been approved by the Examinations Committee at the end of the Autumn session, two pass candidates were incorrectly notified that they had failed and two fail candidates were incorrectly notified that they had passed. This error was discovered a few days later and both immediate and ongoing action has been taken to correct it and to prevent recurrence of a similar problem in the future. The two candidates who were incorrectly informed that they had passed will have the examination fee waived for their next attempt, but the true result will stand and will count towards the total number of permitted attempts. A full report of this incident has been published elsewhere.

Part 1 Practical and Oral

The format of the exam continued unchanged. Paper 1 consists of a 14-question Objective Structured Practical Examination (OSPE), Paper 2 comprises a 10-question data interpretation and calculations paper and Paper 3 comprises a 3-hour laboratory practical.

The examination has continued to perform well. The overall pass rate of 72% was close to the long term average, and most candidates who failed did so as a result of poor performance in at least two of the three papers.

The number of candidates attempting this part of the examination has risen slightly during the last two years, but the Medical School laboratories at the University of Nottingham continue to provide high quality facilities with scope for further expansion if necessary. The availability of these laboratories is however increasingly limited due to more intensive use by the university itself, to the point that it is currently only possible to use them in September (before term begins) and in late April/May (after summer term courses end). It would be difficult to relocate the examination elsewhere, but the decoupling of the Part 1 written and practical examinations has made it possible to continue by holding the practical examinations early in the autumn session and late in the spring session.

¹ Joint Committee on Pathology Training

² Joint Royal Colleges of Physicians Training Board
Annual Report of Examinations in 2008

Part 2 Written Component

Candidates undertake the written component either by submitting a dissertation or by evidence of equivalent work in the form of an MD or PhD in a relevant discipline or a substantial body of published papers. Most candidates submit a dissertation, which is assessed by two examiners and if necessary revised in order to achieve a pass standard. Candidates may not proceed to the Part 2 Oral examination until successful completion of the written component. This requires careful planning on the part of candidates and their educational supervisors if medical trainees are to be able to enter the Part 2 Oral within the limited time allowed by the Specialist Registrar training programme

Part 2 Oral Examination

This is a one hour oral examination. In 2008 the examination followed the pattern established in the previous year whereby candidates undertake sequentially two 30-minute orals with two different pairs of examiners in order to achieve a broad based assessment. Oral 1 comprises set questions for which 30-minutes prior preparation is allowed. Oral 2 comprises 'unseen' questions designed to test skills and professional attributes across the broad range of the Curriculum.

Candidates undertake this final part of the examination almost at the end of training, so they are usually highly skilled and experienced. This may be the explanation for the relatively high pass rate (94% in 2008). The number of candidates attending the Part 2 Oral examination is relatively small (18 in total for 2008), so comparison between years is unreliable, but there is no evidence of any reduction in the standard of the examination. Nevertheless steps to increase further the reliability of the examination have been put in place for 2009.

Both the ongoing provision of an examination that is set and marked to high standards, and work to develop the exam, is very heavily dependent on the skill and hard work of the Panel of Examiners. Following the inevitable gradual retirement of long-serving and senior examiners during the last two years, a new group of well qualified Fellows has been recruited to join the Panel, which at the end of 2008 comprised 58 examiners.

Clinical Embryology

Chair of panel of examiners: Dr. Geraldine Hartsthorne.

Candidates' qualifications: clinical scientists

Results of FRCPPath examination:

Part of exam	Total Candidates	Passes
Part 1 Written	2	2
Part 1 Practical	2	2
Grandparenting	23	23

During 2008, four examiners have conducted grandparenting interviews for experienced clinical embryologists who can demonstrate active professional involvement at a high level for at least six years. In addition, Part I written and practical examinations in clinical embryology were set for the first time and passed by two applicants. These examinations will continue to be available on an annual basis.

In 2009, the panel of examiners in clinical embryology expects the first Part II applications to be submitted by those who have grandparented at Part I. The final opportunity for Part I grandparenting will be in the autumn 2009 session, after which all applicants will require to sit the examinations.

Cytopathology

Chair of panel of examiners: Dr. Peter Smith

Candidates' qualifications: medical

Training body: JCPT

Results of diploma examination:

Part of exam	Total Candidates	Passes
Written	1	0
Practical and oral	3	2

In the FRCPath Part 2, in the Autumn session the pass rate in the Cytopathology section was disappointingly low, although it was significantly higher than in the corresponding Histopathology section. The Cytopathology examiners panel shared the Histopathology examiners' concerns that many candidates appeared to have had insufficient experience in the subject and had entered the examination too early.

As previously agreed, the specific Cytopathology OSPEs were dropped and the number of slides in the microscopy section were increased to 8 cervical cytology and 8 non gynaecological cytology cases in the Autumn 2008 exam.

The number of candidates entering each session currently is causing severe difficulties to the examiners in terms of obtaining sufficient matched case material (the last session has required 14 sets of matched non-Gynae slides), and examiners available to join the central marking team. There is an urgent need to expand the panel if the level of entries is likely to continue at its present level. It would be extremely helpful if the organisation of the examination at the individual centres could be changed, so that double the number of candidates could use the same slide sets. I know that this is being considered by the current Histopathology examination co-ordinator, Dr Cathy Corbishley.

Few candidates are attempting the examination in "conventional" cervical cytology (only 3 in the most recent session) and consideration might be given as to when this can be discontinued as the last laboratory in England converted to LBC from October 2008. This does raise the issue of whether the College is simply providing a qualification for UK trainees or are also looking to examine foreign-trained pathologists?

Dermatopathology

Chair of panel of examiners: Dr. Maureen Walsh (to December 2008)

Dr. Alan Evans (from December 2008)

Candidates' qualifications: medical

Training body: none for diploma

Results of diploma examination:

Part of exam	Total Candidates	Passes
Written	9	8
Practical and oral	4	3

The future of the current qualification remains uncertain until there is a firm commitment from PMETB regarding the question of specialty recognition for Dermatopathology and transition to the proposed Fellowship. Despite this uncertainty the Diploma examination in its current form retains its strong reputation and continues to attract candidates from both pathology and dermatology.

In 2008 three successful candidates from the written examination decided to defer taking the practical. For 2009 it is likely that those who deferred may now come forward together with one re-sit candidate with the potential for a maximum of twelve candidates in November 2009 which will probably need two centres to run the practical examination simultaneously.

Forensic Pathology

Chair of the panel of examiners: Prof. Chris Milroy (to August 2008)

Prof. Jack Crane (from September 2008)

Candidates' qualifications: medical

Training body: JCPT

Results of FRCPath examination (Part 1 is the common histopathology MCQ/EMQ paper):

Part of exam	Total Candidates	Passes
Part 2	6	4

Although there is a diploma examination, there have been no candidates for some years. The specific Part 2 of this examination requires the submission of a casebook of forensic pathology cases with which the candidate has had substantial involvement.

Genetics

Chair of the panel of examiners: Dr. Teresa Davies

Candidates: clinical scientists and medical

Results of FRCPath examination

Part of exam	Total Candidates	Passes
Clinical Cytogenetics		
Part 1 Written	10	7
Part 1 Practical	14	6
Part 2	4	2
Molecular Genetics		
Part 1 Written	8	4
Part 1 Practical	3	3
Part 2	5	5

Candidates in the Genetic specialty may sit the examination in either Clinical Cytogenetics or Clinical Molecular Genetics. The Chair of the Genetics Examination panel oversees both examinations. The examination is primarily taken by clinical scientists, with only the very occasional application from medically trained candidates.

The Part 1 examination comprises written, practical and oral components. The written examination consists of 2 three-hour papers with a choice of 4 out of 5 questions. The practical examination is entirely paper based and consists of 2 three-hour papers with a number of short answer questions followed by a 20 minute viva on the following day based on the practical exam.

The decision has been made that from 2009 the viva part of the part 1 practical examination will be discontinued to move away from any exams that vary according to the candidates' prior performance as it is felt inappropriate to tailor questioning to performance in another part of the examination. This provides unequal treatment between candidates and allows examiners to be influenced by performance in other parts of the examination.

The results of the practical exam will be based entirely on the marks from practical papers. The separate viva component will remain in the Part 2 examination

Steps to ensure consistency between the 2 disciplines include setting the written papers at a joint meeting of the cytogenetics and molecular genetics examiners, the inclusion of a common question in each paper and the review of all marks by the Panel Chair. A marking scheme is set before each examination.

General feedback on the Part 1 examination was published in the British Society for Human Genetics Newsletter. During 2008 5 new examiners joined the panel, 4 in molecular genetics and one in clinical cytogenetics. All attended the college examiner training.

Haematology

Chair of the panel of examiners: Dr. Charles Singer

Candidates' qualifications: medical

Training body: JRCPTB

Results of FRCPath examination:

Part of exam	Total Candidates	Passes
Part 1 Written	148	87
Part 2 Old (Viva)	36	25
Part 2 New	97	57

These examination sessions marked the third and fourth of the new format examination approved by Council in 2005.

Part 1 Examination

An Angoff exercise is used to derive the pass mark and a Tucker exercise compares the scores on questions previously answered in the 2007 examinations. In the spring examination a higher proportion of candidates passed the MCQ than passed the essay paper. On this occasion 5 candidates passed the Essay Paper but failed the MCQ Paper. The overwhelming majority of candidates who failed the MCQ Paper also failed the Essay Paper. In the autumn exam, only 1 candidate who passed the Essay Paper failed the MCQ Paper.

New Format Part 2 Examination

This part of the examination was held at 5 centres in the spring: London (St Mary's), Aberdeen, Manchester, Oxford and Birmingham. The pass rate was within the range experienced in the old format Part 1 Practical Examination ($57\% \pm 14$ for 2004-2006) but is significantly below the pass rate for the old format Part 2 Oral examination ($88 \pm 14\%$ from 2004-6). Examiners reported that the morphology SAQs were particularly poorly answered (as in 2007) in this examination and more candidates failed Morphology (10) than Coagulation (9).

In the autumn, the examination was held at 5 centres: Edinburgh, Cambridge, Liverpool, London (St Thomas'), Plymouth. The pass rate was within a similar range to the spring exam. The SAQ Morphology paper was extended from 10 to 12 questions, with additional time and the Long Case Morphology paper was reduced from 4 to 3 questions. On this occasion, the morphology papers were answered better, however, coagulation remains the most significant hurdle for trainees, though concerns remain about the ability of trainees to achieve adequate exposure to morphology in the face of clinical pressures. This has been reported to the SAC and the need to emphasise laboratory training and in particular to develop protected training in Coagulation is under discussion. Transfusion training courses appear to provide trainees with the knowledge and skills necessary to pass this examination.

Old Format Part 2 Oral Examination

In the spring session, 19 candidates attempted this examination of whom 14 passed (pass rate 74%). This is within the range for the pass rate for this examination from 2004 to 2006 ($88 \pm 14\%$). In the autumn, 17 candidates attempted this examination and 11 passed (65%).

Old Format Part 2 Clinical Examination

1 candidate for the Part 2 examination required a Clinical Examination as a result of not having MRCP(UK) or equivalent. The candidate passed (100%). This option is no longer offered.

Challenges for 2009

Further workshops are required to generate new questions for the Part 1 examination particularly in Transfusion Medicine where the question banks are smaller.

A marked increase in candidates beyond 70-80 for the current Part 2 examination (79 presented for the Spring 2008 Part 1 Examination) will be difficult to accommodate. The limiting factors are availability of bone marrow material and the number of candidates who can have the Oral Examination in a single centre on a single day. If necessary the Oral Examination might be eliminated if workplace assessments can be developed to replace it.

The old format Part 2 oral examination will be conducted until all candidates who have passed the old format Part 1 Examination have either passed or run out of attempts. It is relatively easy to run and only 19 candidates presented themselves for this examination in Spring 2008 and 17 in Autumn 2008.

Histocompatibility and Immunogenetics

Chair of the panel of examiners: Dr. Andrea Harmer

Candidates' qualifications: clinical scientists

Results of FRCPATH examination:

Part of exam	Total Candidates	Passes
Part 1 Written	1	1
Part 1 Practical	2	1
Part 2	1	1

This was the second year of the current format of the examinations with the part 1 written papers in the Spring session and the Part 1 practical and Part 2 oral in the Autumn session.

Concern has been expressed by examiners and supervisors about the number of trainees who pass Part 1 but are not coming through to the Part 2 examination. Consultation within the H&I community has established that the limited options available for the Part 2 written component may be preventing some trainees from progressing. Work during 2008 has focussed on giving a wider range of options for candidates. The casebook option, which had not previously been available to scientific candidates, has now been included with appropriate guidelines for the contents. In addition, with the approval of the Examination's committee, the option of submitting a research thesis undertaken as part of a professional doctorate has also been added. These options will be available for candidates wishing to enter for the Part 2 examination from 2009 onwards.

Histopathology

Chair of the panel of examiners: Prof. Anthony Freemont (to March 2008)

Dr. Ray McMahon (from March 2008)

Candidates' qualifications: medical

Training body: JCPT

Results of FRCPATH examination:

Part of exam	Total Candidates	Passes
Part 1 Written	133	88
Part 2 Practical	201	78
Part 2 Autopsy	154	104

The Histopathology examination for FRCPATH is in two parts. The Part 1 exam has an MCQ/EMQ format and is designed to assess the knowledge base of candidates in the broad areas of surgical pathology, cytopathology and autopsy practice, as well as more general areas of pathology practice. Questions are provided by examiners convened at writing sessions, held at the College, with blueprinting of the examination according to the curriculum and intended learning outcomes. Examiners are requested to write questions according to the specific requirements of the blueprinting exercise.

At present the question bank has almost been exhausted after the initial intensive question writing workshops and a further exercise is planned for June 2009, under the guidance of the Part 1 coordinator, Dr Nick Griffin. This examination has high reliability indices and the overall pass rates over the past years indicate that candidates are generally well-prepared for this assessment.

The Part 2 examination, has two components: (1) histology/cytopathology which uses direct tests of clinical skills (surgical histology, cytopathology, frozen sections, long cases, macros and OSPEs) as assessment tools; and (2) the autopsy examination which uses a combination of a directly observed autopsy followed by interpretive assessments of autopsy related histopathology and toxicology and a structured viva. The two components described are effectively separate modules of the examination, with all candidates taking the examination for the first time being required to take both components. Failing one component however, and passing the other, results in the candidate retaking only the failed component. The two-day histopathology-cytopathology component has introduced a level of standardisation that was not hitherto possible, which has been accepted by PMETB as being a substantial and much needed change. Since its inception this new examination format has undergone natural evolution driven by candidate and examiner feedback. In 2008, the success rate was just under 40% (compared with 52% in the previous year). This pass rate reflects the view of the examiners that this is the College's final test of a candidates' proficiency prior to taking up a Consultant post and should be an assessment of their ability to practice safely. The overall failure rate for this component of the examination has increased, which indicates to the examiners that candidates may be taking the examination a little too soon. The autopsy component of examination has also undergone a natural evolution based on feedback, with approximately a 2/3rd pass rate, although overseas candidates have little, if any, experience in Autopsy Practice and perform badly. Plans for an autopsy-optional training programme are well advanced and when these are implemented the part 2 examination will necessarily change, possibly from Autumn 2010 but this depends on approval by PMETB of a revised curriculum, with separation of the modules. Another proposed change relates to a change in cervical cytology practice generally in the UK whereby the majority of general histopathologists will not be involved in cervical cytology reporting and thus, they will not need to have RCPATH demonstration of their competence in this area. The Histopathology FRCPATH Examination reflects good practice, and can show evidence of reaching the assessment standards required by PMETB. Parts of the examination are undergoing a natural evolution and others are undergoing change driven by College and PMETB policy and NHS practice in the UK.

Immunology

Chair of the panel of examiners: Dr. Dinakantha Kumararatne

Candidates' qualifications: medical and clinical scientists

Training body: JRCPTB

Results of FRCPATH examination:

Part of exam	Total Candidates	Passes
Part 1 Written	10	4
Part 1 Practical	9	7
Part 2	9	5

The format of the Part 1 and Part 2 examinations is essentially unchanged from that described for 2007, with the exception that the Part 1 practical examination can no longer be taken in the same sitting as the Part 1 written paper. Candidates therefore now sit the Part 1 practical examination after a minimum of 2.5 years of training.

Co-ordinators were appointed by the chair of the panel of examiners in 2008 for the Part 1 written examination, Part 1 practical examination, Part 2 casebook written option (from 2010), and Part 2 oral examination to assist the chair of the panel of examiners. Following an extended term of office culminating in planned changes in the format of the examination scheduled for implementation in 2010 to fulfil PMETB standards, Dr Kumararatne demitted from office to be replaced by Dr Duddridge following an appointment process in November 2008.

The majority of questions in both papers of the Part 1 written examination (answer 4 of 5 questions) are now in a structured short note format. Structured answers are required covering 3-4 topics such as genetic causation, molecular aetiology, clinical phenotype, immunological evaluation, complications, and treatment of 3 unrelated immunological conditions. By the use of such an approach across both written papers, knowledge, differential diagnosis and reasoning skills can be typically assessed in 60-70 areas of the curriculum between the two papers.

Following an Examiners' Meeting in February 2008, a new template for model answers was introduced for the Autumn 2008 sitting of the examinations. This identifies essential (including egregious errors), core (required for pass mark) and desirable (required for higher marks) elements of an answer agreed by the panel of 5 examiners responsible for standard setting for each of the Part 1 written, Part 1 practical and Part 2 oral examinations. With the additional time required for standard setting for model answers, it was agreed to use a third panel of five examiners for the Part 1 practical examination from 2009. The result of this is that the current cohort of examiners will be involved in setting at least one examination during the course of future years, in addition to marking Part 2 written options. This highlights the need to expand the number of examiners, in particular clinical scientist examiners.

Medical Microbiology

Chair of the panel of examiners: Prof. Stephen Gillespie (to December 2007)
Prof. Armine Sefton (from January 2008)

Candidates' qualifications: medical and clinical scientists
Training body: JCPT

Results of FRCPath examination

Part of exam	Total Candidates	Passes
Part 1 MCQ	81	65
Part 2 Old	2	1
Part 2 New	73	48

The FRCPath examination was revised several years ago with the first Part 2 of the "new" exam being held in 2005. Nobody is now sitting the "old" Part 1 examination but a few applicants are still completing the "Old" Part 2 examination which consists of submitting a project and undergoing two vivas. The current Part 1 Examination consists of a single three-hour multiple choice (MCQ) examination, with computerised marking.

The Current Part 2 Examination consists of two three hour written papers taken on a single day and a practical examination taken over two and a half days. The first paper consists of an extended essay question and three short notes questions. There is a choice of two extended essay questions which might be on a general management, service delivery or infection control topic. The short-notes questions map across the curriculum. Each short-note question has a general theme and the candidate is expected to write on three out of four possible questions.

The second paper consists of two components. The first component involves answering questions that are set on the interpretation of a scientific paper. The candidate has to answer questions on two scientific papers and a choice of three is provided. The second component involves answering ten short-answer questions. In these questions, the candidate is expected to evaluate a clinical history and laboratory results.

Neuropathology

Chair of the panel of examiners: Prof. Paul Ince (to December 2007)
Dr. John Xuereb (from January 2008)

Candidates' qualifications: medical
Training body: JCPT

Results of FRCPATH examination

Part of exam	Total Candidates	Passes
Part 2 Practical	6	3
Part 2 Autopsy	8	5

Two sittings of the FRCPATH Part 2 examination in Neuropathology were held in spring 2008 (macroscopical component in Nottingham and microscopical component in Sheffield) and in autumn 2008 (macroscopical component in Nottingham and microscopical component in Edinburgh). There are no adverse incidents to report concerning the examination process during 2008.

The microscopical component of the FRCPATH (Neuropathology) examination in autumn 2008 incorporated new procedures to maximise reliability, namely standard setting and internal audit. After trialling the process at this examination, the procedure was discussed at the last meeting of the RCPATH Examinations Committee and adapted as good practice for small-number subjects.

There have been changes to the membership of the Panel of Examiners in Neuropathology. Dr Olaf Ansorge (Oxford) and Professor Sebastian Brandner (Institute of Neurology, UCL) have joined the panel whilst Dr Waney Squire has left.

The Panel of Examiners met formally in January 2009 to discuss training and assessment in Neuropathology. A number of conclusions were reached:

- ◆ The autopsy will continue to be part of the high stakes FRCPATH examination in Neuropathology
- ◆ The new procedure for Standard Setting and Internal Audit was agreed and adopted for the microscopical component of the FRCPATH (Neuropathology)

Oral Pathology

Chair of the panel of examiners: Prof. Geoffrey Craig
Candidates' qualifications: Dental

Results of FRCPATH examination

Part of exam	Total Candidates	Passes
Part 1 Written	3	2
Part 2	1	1

The exam format remains unchanged. Part 1 written examination consists of two papers with a combination of essay questions and short notes. The Part 2 examination is a test of the candidate's, laboratory, diagnostic and reporting skills.

Paediatric Pathology

Chair of the panel of examiners: Dr. Marian Malone (to September 2008)

Prof. Gordan Vujanic (from September 2008)

Candidates' qualifications: medical

Training body: JCPT

Results of FRCPath examination:

Part of exam	Total Candidates	Passes
Part 2	4	4

The panel has changed the marking system according to the decision examiners made last year, and now the candidate is expected to pass every part of the exam in order to gain an overall pass. The cases and marking are agreed in advance by the panel.

In 2008 there were 4 candidates who all passed Part 2 of the exam.

Dr Marian Malone completed her term as a chair of the panel and Professor Gordan Vujanic has taken over. The panel mapped the exam against the curriculum as requested.

Toxicology

Chair of the panel of examiners: Dr. John Foster

Candidates' qualifications: medical and clinical scientists

Results of FRCPath examination

Part of exam	Total Candidates	Passes
Part 1 Written	2	1
Part 1 Practical	0	0
Part 2	0	0

This year has seen the toxicology examination continue to grow in strength and relevance to the College with the introduction of the new short answer question paper format for paper one and the retention of the regular essay format for paper two of the part 1 examination. We have successfully moved the practical assessment of the Part 1 examination to the Autumn with the theory papers being held once a year in the Spring. We had a 100% success rate for the introduction of the short answer paper in 2008 (2/2) with a 50% pass rate overall for the theory papers. Since the short answer paper effectively requires questions from all of the eight subspecialties, the involvement of all of the examiners in setting appropriate questions, and model answers, is essential. A small sub-team of examiners was convened to assure the quality and appropriateness of the model answers.

In terms of trainees, the specialty now has a registered panel numbered in the teens and this is in no small part down to the efforts of the trainee representative, Jen Nicol, who has taken the responsibility of organising training sessions involving the examiners and where trainees can meet examiners, to be instructed in the requirements for the examination and be provided with appropriate examination practice under as near to actual conditions as it is possible. Any trainees requiring additional experience in the variety of techniques required by the specialty are encouraged to contact Jen who has the support of the SAC in recommending suitable placements. This guarantees that candidates are properly prepared for the examination while at the same time remain fully informed of the exact requirements for success.

In order to support the analytical toxicology subspecialty a further four specialist examiners were recruited into the toxicology examinations panel. With the advent of the Life Sciences Taskforce and the Modernising Scientific Careers project in the National Health Service and the inclusion of analytical toxicology in this scheme, the need to bring the subspecialty rapidly up to the standards necessary has meant that a very comprehensive syllabus for the subspecialty has also been developed through this last year.

In summary the toxicology specialty continues to thrive thanks to the active participation of the SAC and the examiners panel, together with the obvious need from the industries involved for higher professional qualifications in the specialty.

Transfusion Medicine

Chair of the panel of examiners: Prof. Ian Franklin

Candidates' qualifications: medical

The Part 1 transfusion medicine examination was discontinued at the end of 2006. The Part 2 examination continued until the end of 2008 but no candidates entered this year. UK trained candidates intending to enter transfusion medicine now undertake general haematology training and subspecialise after obtaining FRCPATH in general haematology. The panel of examiners is still required to run the transfusion medicine part of the haematology examination, but now under the chairmanship of the haematology panel.

Veterinary Pathology

Chair of the panel of examiners: Dr. Graham Hall

Candidates' qualifications: veterinary medicine

Results of FRCPATH examination:

Part of exam	Total Candidates	Passes
Veterinary Pathology		
Part 1 Written	7	6
Part 1 Practical	7	5
Part 2	2	2
Vet. Clinical Pathology		
Part 1 Written	2	2
Part 1 Practical	0	0
Part 2	2	2

The exam format remains unchanged in 2008 with the Part 1 written examination and associated Part 1 practical. In 2009 the Part 1 will consist of a written examination only. Candidates successful in that examination will then be eligible to sit a practical examination that replaces the previous Part 2 examination.

Virology

Chair of the panel of examiners: Dr. Mark Zuckerman
Candidates' qualifications: medical and clinical scientist
Training body: JCPT

Results of FRCPATH examination

Part of exam	Total Candidates	Passes
Part 1 Written	13	9
Part 2 Old	1	1
Part 2 New	6	3

Joint microbiology and virology Part 1 MCQ exam: three of 6 candidates passed the Spring exam and 6 of 7 passed the Autumn exam. 'Old' virology Part 2 exam: the candidate who sat the Spring exam passed. There is only one other candidate eligible to sit this exam.

'New' virology FRCPATH Part 2 exam: the Spring exam was held in London and the single candidate failed. Five candidates sat the Autumn exam in Manchester. Two failed, one of whom has now sat the exam three times. Feedback and advice has been given again to the candidate and the educational supervisors. The format for this exam has now bedded in well and there has been less of an issue in marking the papers in a short time span.

Fellowship by published works

Co-ordinator of published works: Dr. William Marshall

Total Candidates	Passes
17	15 (of which 2 were fast-tracked)

Although the main business of the Examinations Committee is to oversee admission to fellowship by examination its brief also includes admission by published works. Applications are initially reviewed by the Coordinator. In the majority of instances, he then refers the application to the appropriate panel chair, who selects two experts to review the work in detail. If (as occasionally happens) the examiners' recommendations differ, a third examiner is appointed and the majority view prevails. Occasionally, the Coordinator may consider that an application is of such a high standard that it should be 'fast-tracked'. This fast-tracking procedure was validated by comparing the predicted outcome of a series of excellent applications with the outcome of standard assessment: there was 100% concordance. Potential fast-track applications are sent to the panel chair; if he is in agreement with the Coordinator, the application is accepted directly; if not, it is sent for detailed evaluation in the usual way.

All decisions are brought to the Examinations Committee for ratification, although because of the long time between the spring and autumn groups of meetings, candidates are informed of the outcome of their application once this has been determined. Most applications are of a high quality, and the examiners' recommendations are usually positive. The College provides detailed guidance to prospective applicants and their sponsors, recommending the minimum standards that are required. Prospective applicants are advised that they may submit their CVs to the Coordinator for an informal view as to whether their application reaches the required standard. This process is designed to prevent individuals from making premature or inappropriate applications, although the Coordinator makes it clear that the decision whether to submit an application rests with the potential candidate (with advice from his/her supervisor) alone.

Formal applications and requests for informal reviews are received from doctors and scientists from the countries of the UK and overseas. A problem for some overseas candidates is the pressure that they may be under to publish in national (rather than international) journals, which do not enjoy a wide circulation outside their own countries. Their research may be of high quality by local standards, and indeed may contribute significantly to the advancement of practice in the countries concerned, but Council has determined that the standards against which applications are assessed must be uniform. Because of this, more prospective candidates from overseas countries than from the UK are advised not to proceed with a formal application.

Overview of College Examinations

Purpose of FRCPATH examination

The FRCPATH examination constitutes an assessment of the candidate's knowledge of their specialty and their ability to apply that knowledge in the practice of the specialty. The tests of theory, taken as MCQ or EMQ, short answer or essay papers in Part 1 of the examination, aim to determine whether an individual has successfully acquired a core body of knowledge that will underpin their ability to practise in their chosen specialty. The practice tests, largely taken at Part 2, are designed to test candidates' practical skills and understanding of the specialty and often include written tests looking at the ability to write pathological reports. They aim to show whether the candidate can apply their knowledge appropriately and safely to the practice of the specialty.

The overall aim of the examination for medical trainees is to provide quality assurance that a trainee who has successfully completed the curriculum and specialty training programme has reached the standard appropriate for practice as an unsupervised specialist and award of a Certificate of Completion of Training (CCT) in the specialty. For non-medical candidates, passing the FRCPATH examination indicates they have reached the standard appropriate for unsupervised practice.

Candidate numbers

The College faces significant challenges in running examinations in some very small specialties. On average, over the last 3 years, the College has had to prepare to run approximately 37 examination sessions every 6 months for candidates from all the different specialties and at the different stages of training. Each session can contain anything from 1 to 6 separate examinations. During an average 6 month exam diet, 7 sessions do not run as there are no candidates or existing candidates withdraw; approximately half the remaining sessions have fewer than 10 candidates; a further 4 have between 11 and 20 candidates, and 4 between 21 and 50. The remaining exam sessions have more than 50 candidates. It is only the latter sessions which have sufficient results to draw valid statistical conclusions about reliability and validity. The small number of specialists in the smaller specialties also constrain the College's ability to formulate examinations that require intensive preparation and validation like MCQ and EMQ examinations, hence there is a continuing reliance on essays in a number of specialties.

Examination methods

The principal function of the written exams is to test basic understanding and knowledge of the specialty. Seven specialties currently employ a multiple-choice/extended matching question format for this purpose. The general histopathology Part 1 MCQ is also taken by trainees in cytopathology, neuropathology, forensic pathology and paediatric pathology. Medical microbiology and virology share a common Part 1 MCQ examination. The advantages of the MCQ/EMQ format are well known. Although difficult to set up, they are easy to mark, and can test a large number of elements in the curriculum in one examination. With sufficient candidates, they are statistically reliable and so marker questions can be carried from exam to exam to provide continuity and enable standard comparison. From 2007, the haematology Part 1 examination included an MCQ/EMQ paper in place of one essay paper.

Essays, on the other hand, are easy to set but difficult to mark objectively and consistently. However, for small specialties, they may be the only format which can meet the practicability of setting an examination when there are too few examiners to mount the effort needed for writing and standard setting an MCQ exam. Essays, by their nature, can only test small areas of the curriculum, however, they can do this in depth and require a degree of analysis and critical appraisal, which is difficult to capture in an MCQ. One of the significant features of the practice of pathology as a whole is that pathologists have to develop the skill of writing their reports in a logical format in comprehensible language which renders their meaning unambiguous to the average medical reader who is not a specialist in their area.

This makes testing their ability to write logical, well-reasoned responses to questions about their specialty relevant to their future practice. At the same time, essay-style questions are a challenge for those for whom English is not their first language.

A half way house is the structured short answer question. This format is used in many public and university examinations as it can enable a larger number of different subjects to be tackled than when setting essays, but provides some of the objectivity of marking of MCQ tests. Clinical biochemistry has run a short answer question paper successfully in place of one essay paper and other specialties have adopted this in 2008.

Practical examination formats are as different as the different specialties. Most require a simulation of situations where laboratory and interpretive skills are tested. Thus candidates for the cellular pathology disciplines may be provided with slides of material from pathological specimens with a short clinical history of the patient from the specimen were taken, and asked to make a diagnosis. Candidates in haematology may similarly be provided with blood films or a bone marrow smear. Candidates in subjects such as immunology and clinical biochemistry are asked to make a diagnosis based on the results of tests, which may be numerical or material such as chromatograms, electrophoresis strips etc. Common to all specialties is the requirement to provide clinically relevant, accurate and informative comments on the results of pathological tests. Most practical examinations test this to a greater or lesser extent. As with essay questions, this may provide challenges for those for whom English is not their first language but the examination is to test capability for consultant practice in the UK situation, where pathologists are asked to provide written reports for their clinical colleagues, so this is a valid test.

Many examinations include an oral examination, which can be a simulation where, for example, an examiner may act as a surgeon wanting a frozen section, or may test the ability of the candidate to react quickly to a laboratory scenario requiring swift management action. Although the oral examination is less robust method of examining, there are some types of scenario it is very difficult to test in any other way. Objectivity is enhanced by clear grade descriptors and a matching marking scheme, such as that employed in the haematology examinations.

The particular methods used in each specialty are described in the specialty regulations for the examinations on the College website.

Content validity

PMETB require all examinations to be blueprinted to the agreed curriculum. The curricula for all the JCPT specialties has been approved by PMETB but this only covers 8 of the specialties for which the College runs examinations. The curricula are major documents running to 60 to 80 pages. The curricula for other specialties are either governed by other bodies such as JRCPTB or has not yet been prescribed in the same detail, for example in some of the clinical science specialties. The blueprinting of the assessment system for the JCPT specialties has been approved by PMETB for these specialties and these can be found on the PMETB website: <http://www.pmetb.org.uk/index.php?id=approvedcurricula>. The blueprints check that the subjects tested in written examinations are in the curriculum. The content validity of the practical assessments is often determined by the fact that they are simulations of the day-to-day work of the pathologist and use real patient material and results in the tests.

Standard setting

The College has used a close marking scheme in the past. With an increasing number of multiple choice or short answer question papers, the College is moving to standard setting for each examination where this can reasonably be achieved with the numbers involved. With the MCQ papers this is set using modified Angoff methodology, which relates the pass mark to the perception by a group of examiners, of the percentage of a group of borderline candidates that would supply the correct answer. Standard setting for the short answer questions uses either the Angoff or the limen method. Some papers, notably essay papers and some practical examinations still require a categorical marking scheme, for which the College uses a system which allocates nominal marks to a question with 6 categories: bad fail, clear fail and borderline fail, or excellent, clear pass and borderline pass.

Oral examinations are set using standardised scenarios with marks allocated to grade descriptors for responses according to a number of criteria. These can then be summed to give an overall mark for the candidate.

Standard setting in practical exams is complex, particularly for those specialties where there are only a few candidates, and even fewer examiners. Under these circumstances the normal statistical checks cannot be used and the College has to rely on the judgement of the examiners as to whether the candidate meets the appropriate professional standard or not.

Reliability

Standard measures of consistency such as “Chronbach’s coefficient alpha” require a homogenous examination with sufficient participants for the statistical tests to be applied. This only applies to the MCQ papers set in histopathology and medical microbiology/virology. The College is looking at other statistical techniques for assessing marking consistency. The College employs recognised methods of avoiding bias where possible, such as double, blind marking. It is increasingly using standard setting techniques where they can be used, and objective marking systems for oral examinations. It employs the services of acknowledged experts in examination and standard setting techniques to advise in these areas. The consistency of practice across specialties and in different examination systems has been assisted by the development of a code of practice for examiners and the conduct of examinations which was adopted at the beginning of 2007.

Examiner selection and training

The College has a standard method for the recruitment of examiners by advertisement and recommendation. Applicants are scrutinised by existing examiners and the chair of the panel. In certain circumstances, a suitable examiner is required to be associated with a particular location to stage an examination, or an examiner with particular expertise is needed to maintain a complete portfolio of expertise in the panel of examiners. In these cases, the chair of the relevant panel of examiners, or the SAC may nominate an examiner. Examiners are confirmed by the examinations committee and formally appointed by Council. Further details are available on the College website www.rcpath.org/index.asp?PageID=299.

Examiners are given a job description with their duties clearly spelt out. They are required to undergo training which commenced in 2007 for all examiners and will continue in subsequent years for new examiners. The initial training consists of equality and diversity training as required by PMETB, and an introduction to standard setting, marking schemes and giving feedback. They are also introduced to the code of practice. Examiners are asked to sign a copyright agreement to prevent unauthorised disclosure of examination material.

Incidents and complaints policy

The Examinations Department has an incident policy which logs all untoward incidents occurring during examinations. The records are scrutinised at each examinations committee to try to prevent recurrence of preventable problems.

The Examinations Department is committed to providing a good service to candidates and examiners. It recognises however, that it does not always get things right and so has instituted a procedure to assist in the resolution of complaints as speedily as possible. The details are available on the website at:

<http://www.rcpath.org/resources/pdf/ExaminationsComplaintsOnlineVersion07.pdf>

Feedback to candidates and examiners

The College provides as much feedback as is practicable to candidates on their performance as required by PMETB. However, as the FRCPath examination is a summative process, this has to be limited in some circumstances. General feedback from trainees on the examination process is also provided through the participation of trainee representatives in the examination committee. Further, the Director of Examinations and Assessment appears regularly before the trainees committee to answer queries about the examinations system. This provides a valuable line of communication between the examination system and the candidates.

Examination developments 2009-10

Postgraduate Medical Education and Training Board

The principal challenge over the next year will be to ensure that the College curricula and assessment systems are approved by PMETB. The College is due to submit these in December 2009 and will meet with the Assessment Committee in January 2010.

Learning Environment for Pathology Training (LEPT)

The College is developing a web-based system for trainees to access workplace-based assessment and provide them with an on-line portfolio. It is expected to become live during the summer of 2009. Further details will be made available on the College website as soon as the system is live.

Modernising Scientific Careers

The Director of Education and Training, Prof. Shelley Heard is leading the Department of Health initiative to reorganise and standardise training for clinical scientists in all branches of the health service. The College is involved in drawing up curricula and assessment systems for those clinical science specialties in laboratory medicine. This will inevitably impact on the work of the examinations department although trainees working under the new arrangements will not be recruited for some time (though pilots are due to start later in 2009) and therefore not come through for examination for some years.

List of authorised documentation which supports the examination department

Most documents are available on the College website: www.rcpath.org and follow links to the examinations section.

- General examination regulations
- Specialty regulations
- Complaints procedure
- Guidelines for dissertations
- Guidelines for casebooks
- Code of practice for examiners and the conduct of examinations
- Terms of reference of the Examinations Committee

T.A. Gray
Director of Examinations and Assessment
May 2009