



The Royal College of **Pathologists**

Pathology: the science behind the cure

College examinations for Fellowship

Regulations and guidelines for 2010

Candidates undertaking written projects for the Part 2 examination

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(superseding all previous editions)

Guidance for candidates undertaking written projects for the Part 2 examination

General guidance applicable to all written projects

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All communications and enquiries should be addressed to:

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General guidance applicable to all written projects

1 Introduction

This document must be read in conjunction with the current Regulations & Guidelines available on the College website exams@rcpath.org

Candidates for certain specialties are required to undertake a written project for the Part 2 examination. There are six options:

- dissertation
- casebook
- published papers
- PhD/MD thesis
- professional doctorate research thesis
- portfolio

Candidates should read carefully the specific instructions in the relevant specialty section for guidance on which of the six options is appropriate for their specialty.

2 Initial Proposal

Candidates **must** submit **an initial proposal** for their dissertation, casebook and published papers (or, if possible, before commencing a course leading to a PhD/MD thesis) for approval **prior to commencing the project**.

The initial proposal should outline the project (background, aims, methods and significance of the study) and include approval of a relevant ethics committee where appropriate. It must be no more than 1500 words.

Candidates should note that there will now be a six month gap between the written and practical exams for those specialties retaining a Part 1 practical. However, if they need to undertake a project and dissertation for Part 2, they should begin organising this prior to the Part 1 practical. A project proposal for a dissertation will be accepted before completion of Part 1 but after success in the Part 1 written papers.

Project proposals can be submitted by e-mail (exams@rcpath.org) or by post to the Examinations Department.

3 Submitting the project

The **finished project** can only be submitted to the College **after** success in the Part 1 examination with a completed 'Part 2 written project' application form, available from the Exams section of the College website (www.rcpath.org/exams). Candidates must submit their finished project no more than three years after the original proposal was accepted. Candidates who do not submit within this time will be required to apply for an extension (giving reasons why the work has not been submitted within this time) or submit a new proposal.

The finished project must be submitted at least four months before the entry closing date of the Part 2 examination for which the candidate wishes to enter. However, the College cannot guarantee that an amended submission (if required) will be marked in time for the candidate to undertake the examination if it is submitted less than six months before the beginning of the examination period for which the candidate wishes to enter.

Further information on examination periods and dates is available on Exams section of the College website (www.rcpath.org/exams).

Initial proposals and finished projects must be submitted to the Examinations Department and **not** to an individual examiner.

All written projects will be subject to scanning for improper citation or plagiarism using source-matching software.

4 Marking systems used for written projects

Written projects are marked by assigning to it one of three grades:

A = pass

B = modification or additional work is required (this usually means that the candidates will be unable to get the work approved before the deadline for the next examination sitting and so may mean there will be a delay before they can sit Part 2 final examination.

C = unacceptable.

Candidates will be informed of the grade awarded as soon as possible after the examiners have reached their decision. A candidate awarded a grade C will be contacted by the Chair of the Panel of Examiners and required to seek the advice of their speciality advisor.

Further information on marking written projects is available in Exams section (candidate information) of the College website (www.rcpath.org/exams).

5 Entering the Part 2 examination

Applications for the compulsory oral component (or practical and oral, where appropriate) of the Part 2 examination may be submitted whilst the written option is still under consideration by examiners, but entry to the examination will **not** be confirmed until the written option has been awarded a pass mark. Candidates who withdraw from their Part 2 examination while their written option is under consideration will not forfeit their fee.

6 Communication about submitted written projects

Candidates must direct all communications and enquiries about their submitted written project to the Examinations Department. Candidates must not contact any member of the panel of examiners unless specifically instructed to do so by the Examinations Department. To attempt to do so will be regarded as possible misconduct.

Specific requirements for each written project option

7 Dissertation

A dissertation is an option for the Part 2 examination in Clinical Biochemistry, Clinical Embryology, Genetics, Haematology (clinical scientists), Histocompatibility and Immunogenetics, Toxicology, Veterinary Clinical Pathology (old style examination) and Veterinary Pathology (old style examination).

The purpose of the dissertation is to allow assessment of the practical ability of candidates, based on work performed in the department in which they are employed, and of their ability to report and assess the significance of their findings. It is a test of the ability to analyse, criticise and present data.

It follows that the project should arise from the normal work and interests of the department in which the candidate is employed. Medical candidates may wish to choose a topic that relates laboratory data to the investigation and management of patients, whilst non-medical candidates may wish to choose a topic oriented towards analytical work. In either case, there should be a considerable input of the use of results obtained in the course of the ordinary work of the candidate's laboratory.

The overall standard of the dissertation should be such that it is suitable for publication in a professional scientific journal.

A word-processed proposal describing the background to, and the object of the intended study, together with details of the proposed experimental work and the name and address of the proposed supervisor, **must be submitted to the College for approval, prior to commencing the project.** Acceptance of the project by the College at this stage will prevent time being wasted on a project that is not acceptable.

The College currently asks for modifications to a substantial number of projects, so approval is advisable prior to performing any practical work.

Projects that are not relevant to the specialty, lack an adequate element of practical work or are so ambitious as to be unrealistic **will not** be approved. A copy of the approved proposal will be sent to the assessors with the dissertation.

The project and the writing of the dissertation should normally be carried out under the supervision of a Fellow of the College. Where this is not possible, the candidate should give the name of the head of department for consideration by the Chair of the Panel of Examiners. Supervisors are required to certify that the candidate has personally carried out the investigative work. This requirement should not be taken to exclude the possibility of using or including results of tests produced in the course of the normal work of the laboratory, provided this is acknowledged in the dissertation.

The dissertation must be written in English and must be 4000–6000 words in length (excluding bibliography), with relevant illustrations and tables interleaved appropriately with the text. It must be word-processed in double-spacing (except for the references) and must be bound, preferably with a plastic spine, to allow for removal of individual sheets in case alteration is required. Two printed copies of the dissertation must be submitted to the College as well as an electronic version.

The dissertation should be prefaced by a short abstract of the contents and a declaration stating what part, if any, of the work has been submitted in support of an application for another qualification and the personal contribution of the candidate to the practical work presented. It should normally state the problem that has been investigated, indicate the scope of the enquiry, include a relevant history of the subject, describe the methods used for exploring the problem, set out the data collected, include an analysis of the findings and attempt to deduce conclusions.

A dissertation may include published material or be based on work done for a higher degree, provided that the work was done during the candidate's period of training and he/she made a major contribution to it. Findings from publications or theses must not be reported verbatim, but presented in a different way and augmented by further work. Reprints of the relevant publications must be appended. The examiners attach great importance to the quality of presentation and dissertations containing more than occasional typographical errors will be returned for correction.

See appendix 1 for additional advice about submitting a dissertation.

8 Casebook

A casebook may be presented as an option for the Part 2 examination in Clinical Embryology, Genetics, Haematology (clinical scientists), Histocompatibility and Immunogenetics, Immunology, Toxicology and Veterinary Pathology (old style examination), and is compulsory in Forensic Pathology.

Candidates should read carefully the specific instructions in the relevant specialty section for the number of cases required.

The standard of writing should be equivalent to that expected for publication as a case report in a professional scientific journal. **Two** printed copies must be presented as well as an electronic version. It must be typed in English on A4 paper, on one side only, double-spaced apart from the references. Further guidance about the length of the casebook and the detail required is given in the relevant specialty sections. Relevant photographs, illustrations and tables should be interleaved appropriately with the text. It should be presented in a strong binder, allowing the removal of individual sheets if alterations are required. Word limits are specified in the relevant speciality guidelines.

Supervisors are required to confirm that the candidate has made a major contribution to the cases and candidates will be expected to make clear their personal involvement in each case.

References to other publications and any scientific or technical help should be acknowledged.

The casebook should include discussion of the significance of various findings and a survey of the relevant literature.

The College appreciates that it may be desirable to publish work before it is submitted to the College. There is no objection to this, provided that:

- a statement is included in the casebook indicating which parts of the work have been published and giving appropriate references
- the major part of the work has been carried out by the candidate during the training period
- the casebook does not simply reproduce the published work, but incorporates the published material in a revised, amplified or extended form
- the candidate is the major contributor to the relevant publications (this usually means that the candidate is the first named author).

9 Published papers

Published papers may be submitted as an option for the Part 2 examination in Clinical Biochemistry, Clinical Embryology, Genetics, Histocompatibility and Immunogenetics, Immunology, Toxicology, Veterinary Clinical Pathology (old style examination), and Veterinary Pathology (old style examination). Papers in press may be accepted.

As a general guide, a minimum of three papers is expected. Three publications by the candidate as sole author might be sufficient, but proportionately more multi-author papers will be required. Papers will be judged on their quality and on the candidate's contribution and, in cases of multi-author papers, the extent and nature of the candidate's contribution should be clearly indicated and certified by the sponsor.

Published papers submitted for the Part 2 examination in any specialty must be in English and must demonstrate original research by the candidate, reflecting a theme or themes. They should be linked by a critical commentary, written by the candidate. A collection of unrelated case reports is not acceptable. The bulk of the work should have been undertaken during the five-year training period in pathology. When multi-author papers are submitted, the sponsor is required to comment specifically on the contribution by the candidate to each paper.

Two copies of all publications must be submitted, with a full list in chronological order of the publications, together with a full CV of the applicant. The reprints of the papers submitted should be numbered to correspond with the list.

10 PhD/MD thesis

A PhD/MD thesis or equivalent may be submitted, together with confirmation of the award from the relevant university, as an option for the Part 2 examination in Clinical Biochemistry, Clinical Embryology, Genetics, Haematology (clinical scientist), Histocompatibility and Immunogenetics, Immunology, Toxicology, Veterinary Clinical Pathology (old style examination) and , Veterinary Pathology (old style examination). Candidates who intend to submit a higher degree for the Part 2 written requirement are advised to submit the abstract of the thesis as a proposal as soon as possible after registering for the Part 1 examination, to ensure that, should it not be acceptable, there is sufficient time to plan and undertake a dissertation.

A thesis submitted as part of the Part 2 examination in any specialty should normally have been awarded during, or immediately before entering, training in the specialty and must demonstrate an ability to make use of laboratory and/or clinical techniques that are of relevance to the specialty'.

The following notes apply.

- a) Candidates are strongly advised that, before commencing a course leading to a PhD/MD thesis, they should submit the title and summary of the project to the College for approval as to its suitability as an option for the Part 2 examination. The completed project must be submitted as in (b) below.
- b) Candidates who have already completed their thesis should submit **one** copy of it together with confirmation of the award from the relevant university and a full CV, to the Examinations Department so that it may be considered by the Chair of the appropriate Panel of Examiners at the College for approval as to its suitability as an option for the Part 2.

11 Professional doctorate research thesis

A research thesis completed during study for a professional doctorate may be submitted together with confirmation of the award from the relevant university, as an option for the Part 2 examination in Histocompatibility and Immunogenetics. The subject and content of the research project must be approved as relevant to the specialty and candidates must seek advice from the Examinations Department on their project proposal before proceeding.

12 Portfolio

Candidates for the new style Virology examination are required to submit a portfolio as a compulsory part of the Part 2 examination. The details for the submission of this written work are given in the specialty section of the regulations.

Appendix 1

Additional advice for candidates submitting a dissertation

The following notes are designed to help candidates avoid common pitfalls in the design of dissertation projects and in the finished document.

General notes

- a) Candidates are strongly advised to consult their supervisor at all stages of the project to ensure that time is not lost on projects turned down by a Research Ethics Committee or by the College because of inadequate submission or poor design.
- b) Candidates are strongly advised to have their dissertation read through by their supervisor or another experienced scientist, to ensure that errors are corrected and the dissertation is of an appropriate quality for submission.

Dissertation proposal

- a) Candidates should note that the dissertation proposal is an essential element of preparing the work for the dissertation. It should provide at least as much information as would be required for a research proposal for a grant.
- b) Proposals including laboratory work for the dissertation should include reasonable detail of methods, especially if these are new. These should be referenced where possible.
- c) Proposals including the use of patient samples should give details of the patient groups selected, inclusion and exclusion criteria, and details of clinical assessments that will be undertaken on the patients.
- d) Candidates are advised that research involving patients will require the approval of an Ethics Committee. Candidates are strongly advised to take advice from the local Ethics Committee on this before submitting dissertation proposals.
- e) Where methods are being compared, each of the samples needs to be subjected to all methods being compared without prior selection to ensure there is no bias through sample selection.
- f) Where the utility of a test for diagnosis or to guide treatment is being assessed in relation to a gold standard, ideally all patients should be submitted to both the gold standard assessment and the test under investigation. Selecting only patients for the gold standard test who prove positive by the candidate test assumes 100% sensitivity for the test, which is usually an unwarranted assumption.
- g) Candidates are reminded that although previously published work can be included within a dissertation, this publication should not be repeated verbatim but presented in a different way and accompanied by additional work that the candidate has undertaken.

Submission of the dissertation

- a) Candidates should note that the most common reason for rejection of dissertations is poor quality of the written work.
- b) Candidates should check that their dissertation complies with the recommendations on format contained in these guidelines.
- c) Dissertations with anything more than the occasional spelling mistake, misplaced word or other errors of presentation will be returned for correction.
- d) Candidates should take care to ensure that, in the finished document, figures are not divorced from their legends, titles of sections do not appear at the bottom of pages and the size of figures and tables renders them legible.
- e) Candidates are especially advised to check all references in the text very carefully, to ensure that the numbers refer to the correct reference listed at the end.
- f) Candidates are reminded that where they have used a new method or adapted an existing method, sufficient details should be included for the method to be followed exactly by a scientist in another laboratory.