

Oxford University, Mathematical Institute  
Final Honour School Mathematics and Philosophy Part A:  
First Notice to Candidates  
Trinity Term 2010

This Notice gives details of Mathematics and Philosophy second year examinations in Mathematics.

- Full particulars of the syllabus and the examination are contained in the *Examination Decrees and Regulations* together with the relevant *Supplements* (including the Part A synopses) to the *Handbook for the Undergraduate Mathematics and Philosophy Courses*.
- You will receive a second notice later with information about the examination timetable and practical arrangements in the Schools, including information about examination numbers, handing in of scripts, and so on. I am expecting the examination to be held in week 9 in Trinity Term, June 21st to 25th 2010. These dates should be regarded as provisional at this stage.
- A note about examination conventions relating to marking of papers in Part A is attached, together with the revised Qualitative Class Descriptors. Your marks will be reported to you in the University's standard format which consists of a mark in the range 0-100 for each paper.
- The examiners are planning to hold their final meeting on Friday 9<sup>th</sup> July 2010, and hope to distribute results to Colleges soon afterwards.

Dr Audrey Curnock  
Chair of Part A Examiners  
Mathematics and Philosophy  
Mathematical Institute

cc Senior Maths Tutors  
Senior Tutors

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## Part A 2010 Mathematics and Philosophy: Marking of papers

### Standardized Marks

The University wishes all examiners to adopt a uniform system of reporting marks. This means that each candidate will receive a numerical mark on each paper in the range 0-100, such that

- a First Class performance (on that paper) is indicated by a mark of 70 to 100;
- an Upper Second Class performance (on that paper) is indicated by a mark of 60 to 69;
- a Lower Second Class performance (on that paper) is indicated by a mark of 50 to 59;
- a Third Class performance (on that paper) is indicated by a mark of 40 to 49;
- a Pass performance (on that paper) is indicated by a mark of 30 to 39;
- a Fail performance (on that paper) is indicated by a mark of 0 to 29.

In order to arrive at such University standardized marks (or USMs) for each paper, the examiners will mark and assess papers in the way described below.

### Papers in Part A

**AC1(P)** is a 2 hour exam. This exam will contain 6 short questions, 3 on Algebra and 3 on Analysis. Candidates are expected to answer all questions. Each question is worth 10 marks.

**AC2(P)** is a 2 hour exam. This exam will contain 3 questions on Algebra and 3 on Analysis, and each question is worth 25 marks. Candidates may submit answers to as many questions as they wish of which at least one must be in Algebra and one in Analysis. The best answer in Algebra and the best answer in Analysis will count, together with the best of the remaining answers.

The options papers, AO1(P) and AO2(P) will contain questions on each of the options listed in the supplement (Part A synopses) together with any option for which special approval has been obtained. Papers AO1(P) and AO2(P) will each contain 1 question on each 8 hour lecture course and 2 questions on each 16 hour lecture course.

**AO1(P)** This is a 1.5 hour exam. Candidates may submit answers to as many questions as they wish. **The best 4 answers will count for the total mark of this paper.** Each question is worth 10 marks.

**AO2(P)** This is a 1.5 hour exam. Candidates may submit answers to as many questions as they wish. **The best 2 answers will count for the total mark of this paper.** Each question is worth 25 marks.

### Front cover sheets

You will have a Front cover sheet to complete for each examination, where you need to state which answer booklets are submitted.

## **Marking of Papers**

Mark schemes for questions out of 10 will aim to ensure that the following qualitative criteria hold:

9-10 marks: a completely or almost completely correct answer, showing good understanding of the concepts and skill in carrying through arguments and calculations; minor slips or omissions only.

5-8 marks: a good though not complete answer, showing understanding of the concepts and competence in handling the arguments and calculations.

Mark schemes for questions out of 25 will aim to ensure that the following qualitative criteria hold:

20-25 marks: a completely or almost completely correct answer, showing very good understanding of the concepts and skill in carrying through the arguments and/or calculations; minor slips or omissions only.

13-19 marks: a good though not complete answer, showing understanding of the concepts and competence in handling the arguments and/or calculations. In this range, an answer might consist of a very good answer to a substantial part of the question, or a good answer to the whole question which nevertheless shows some flaws in calculation or in understanding or in both.

These mark schemes should be regarded as a guide conveying the intentions of the examiners.

## **USMs**

At the end of the Part A examination, a candidate will be awarded a University Standardised Mark (USM) for each of the four papers. The Examiners will recalibrate the raw marks to arrive at USMs reported to candidates. In arriving at this recalibration, the examiners will principally take into account the sum of the marks for each question, subject to the rules above on numbers of questions answered, and the performance of all candidates in Part A Mathematics on the corresponding papers. The examiners aim to ensure that all papers and all subjects within a paper are fairly and equally rewarded, but if in any case a paper, or a subject within a paper, appears to have been problematical, then the examiners may take account of this in calculating USMs.

The USMs will be carried forward for consideration when classification is made.

The object of the USM is to allow direct comparison between the results of the examination in different subjects. This means that the USM will not correspond to the raw mark. In the case of mathematics the conversion tends to exaggerate small differences at the top and at the bottom of the scale. It is usually true that the USM conversion makes the performance of a weak candidate appear better than the raw marks would suggest. It is often, but not always true that the effect is reversed for strong candidates.

(Extract from Handbook p38)

### **Qualitative Class Descriptors**

The average USM ranges used in classifications reflect the following descriptions:

- First Class: the candidate shows excellent skills in reasoning, deductive logic and problem-solving. He/she demonstrates an excellent knowledge of the material, and is able to use that in unfamiliar contexts.
- Upper Second Class: the candidate shows good or very good skills in reasoning, deductive logic and problem-solving. He/she demonstrates a good or very good knowledge of much of the material.
- Lower Second Class: the candidate shows adequate basic skills in reasoning, deductive logic and problem-solving. He/she demonstrates a sound knowledge of much of the material.
- Third Class: the candidate shows reasonable understanding of at least part of the basic material and some skills in reasoning, deductive logic and problem-solving.
- Pass: the candidate shows some limited grasp of at least part of the basic material.

[Note that the aggregation rules in some circumstances allow a stronger performance on some papers to compensate for a weaker performance on others.]

- Fail: little evidence of competence in the topics examined; the work is likely to show major misunderstanding and confusion, coupled with inaccurate calculations; the answers to questions attempted are likely to be fragmentary only.

(Supplement to Handbook)