Final Honour School of Mathematics and Statistics
Part C 2009

Fourth Notice to Candidates

This notice contains information about:

1. Standardised marks (USMs) and classification
2. The format of papers in Part C
3. The use of calculators.

A further notice will be sent out later with information about practical arrangements in the Examination Schools, including examination numbers, handing in of scripts and so on.

The timetable for the examination will be set by the Examination Schools and they will send it to you.

The full regulations for the Part C examination are contained in the Examination Regulations (the Grey Book).

Full particulars about the syllabus and other information can be found in the Mathematics and Statistics Undergraduate Handbook and Supplements (available at http://www.stats.ox.ac.uk/current_students/bammath/course_handbooks).

The examining conventions for Mathematics and Statistics (which are summarised in this notice) are given in full in the Examination Conventions (available at http://www.stats.ox.ac.uk/current_students/bammath/examinations).

Neil Laws
Chairman of Examiners
Department of Statistics
6 March 2009

Standardised marks

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

- a First Class performance (on that paper) is indicated by a mark of 70 or over
- 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 below 30.

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

The Board of Examiners in Part C will assign USMs for full unit and half unit papers taken in Part C and they may recalibrate the raw marks to arrive at university standardized marks reported to candidates. The papers are designed so that the raw marks on a full unit sum to 100 and the raw marks on a half unit sum to 50. The USMs on both full units and half unit will be out of 100. However, Examiners will take into account the relative difficulty of papers when assigning USMs; in order to achieve this, Examiners may use information on candidates' performances on the Part A examination when recalibrating the raw marks. They may also use other statistics to check that the USMs assigned fairly reflect the students' performances on a paper.

In order to ensure fair treatment, Examiners may exercise individual consideration in assigning USMs for candidates whose marks lie outside the standard pattern, or when assigning USMs to papers where the number of candidates involved is small or untypical. The Examiners may also adjust USMs to take account of any special circumstances affecting individual candidates.

The USMs awarded to a candidate for papers in Part C will be used to arrive at a classification for Part C of the MMath.

Classification

Successful candidates for the 4-year degree will receive a classification for Part C of the MMath degree based on Part C alone. Let AvUSMC denote the weighted average USM for the papers at Part C, rounded up to the nearest integer. [Note: Half unit papers count as half a paper when determining the weighted average AvUSMC.] The formulae for classification for candidates taking Part C are as follows:

- First Class: AvUSMC >= 70
- Upper Second Class: 60 <= AvUSMC < 70
- Lower Second Class: 50 <= AvUSMC < 60
- Third Class: 40 <= AvUSMC < 50

A ‘Pass’ will not be awarded for Part C. Candidates achieving AvUSMC < 40 may supplicate for a BA.

The examiners aim to ensure that all papers are fairly and equally rewarded, but if in any case a paper appears to have been problematical, then the examiners, in their classification, will give special consideration to candidates taking that paper. The examiners will take particular care in assigning classes to those candidates whose marks fall near each Class boundary.

Candidates leaving after four years who satisfy the Examiners may supplicate for an MMath in Mathematics, with two associated classifications; one for Years 2 and 3 together, and one for Year 4.

Format of Examination Papers

Statistics units and half units

The Statistics exam papers are:

- MS2b Stochastic Models in Mathematical Genetics
- MS3b Lévy Processes and Finance

The half papers MS2b and MS3b are **1 1/2 hour papers**. They each contain **three questions**. Each question is marked out of 25. Candidates may hand in as many answers as they wish: the best 2 answers will count for a candidate's total mark.

[For MS4b/C11.1b Probabilistic Combinatorics, which counts as a statistics half unit for Mathematics and Statistics candidates, see under Mathematics papers below.]

The Statistics half units:

- MS1b Statistical Data Mining
- MS2a Bioinformatics and Computational Biology

are each examined by mini-project this year – see the earlier Notices to Candidates.

Dissertation on a statistical topic: see the earlier Notice to Candidates.

Mathematics papers C1.1 − C12.2 (excluding C7.4)

These are whole unit papers, and each contains **three questions** on Michaelmas Term work and **three questions** on Hilary Term work. Each question is marked out of 25. Most of these papers may also be taken as half unit papers either on Michaelmas Term work (three questions) or on Hilary Term work (three questions).

The whole unit papers last for 3 hours, and the rubric states "You may submit answers to as many questions as you wish. The best two answers in each section will count." The whole unit papers are C1.1, C2.1, C3.1, …, C12.1; also C1.2, C6.3, and C12.2.

The half unit papers last for **1.5 hours**, and the rubric states "You may submit answers to as many questions as you wish. The best two answers will be counted". The half unit papers are labelled C1.1a, C1.1b, …C12.1a, C12.1b, where the suffix 'a' denotes the MT course and 'b' the HT course.

Note that C6.1a, C6.2b, C7.1b and C7.2b are available as half units only.

Calculators

For the papers **C8.1 and C9.1 only,** basic scientific calculators which have features such as exp and log, but which are NOT programmable, will be allowed. For these papers any of the following will be permitted:

Casio fx-82, fx-83 (with any suffix, such as ES, MS), fx-85 (with any suffix, such as ES, MS), or fx_992 S,
Sharp EL-530 LB, EL-520 or EL-531 (with any suffix),
Hewlett Packard hp 9s, hp 10s or hp 30s,
Texas Instruments TI 30X (and any suffix) or TI 36X (and any suffix).

Candidates should note that no calculators will be available in the examination room.