

# Examiners' Report

## Oxford Masters in Mathematical Sciences (OMMS)

### Trinity Term 2025

## Part I

### A. STATISTICS

- **Numbers and percentages in each class.**

See Table 1, page 1.

Table 1: Numbers in each class

|             | Number |      |      |      |      |      |      | Percentages % |       |       |       |       |       |      |
|-------------|--------|------|------|------|------|------|------|---------------|-------|-------|-------|-------|-------|------|
|             | 2025   | 2024 | 2023 | 2022 | 2021 | 2020 | 2019 | 2025          | 2024  | 2023  | 2022  | 2021  | 2020  | 2019 |
| Distinction | 28     | 20   | 22   | 24   | 21   | 27   | 16   | 50            | 32.79 | 46.81 | 42.86 | 40.38 | 65.85 | 50.0 |
| Merit       | 14     | 13   | 11   | 18   | 9    | 7    | 6    | 25            | 23.40 | 32.14 | 21.31 | 17.31 | 17.07 | 18.8 |
| Pass        | 11     | 25   | 13   | 13   | 21   | 5    | 9    | 19.64         | 27.66 | 23.21 | 40.98 | 40.38 | 12.2  | 28.1 |
| DDM         | -      | -    | -    | -    | -    | 2    | -    | -             | -     | -     | -     | -     | 4.88  | -    |
| Fail        | 3      | 3    | 1    | 1    | 1    | 0    | 1    | 5.36          | 2.13  | 4.92  | 1.79  | 1.92  | 0     | 3.1  |
| Total       | 56     | 61   | 47   | 56   | 52   | 41   | 32   | 100           | 100   | 100   | 100   | 100   | 100   | 100  |

- **Numbers of vivas and effects of vivas on classes of result.**

Not applicable.

- **Marking of scripts.**

All Mathematics examination scripts were, as is the normal practice, single-marked according to carefully checked model solutions and a pre-defined marking scheme which is closely adhered to. The Mathematics dissertations and mini-projects were double-marked. A comprehensive independent checking procedure is also followed. (See the Part C Mathematics Examiner Report for details.)

### B. Exam errors affecting groups of students.

Three examinations were delayed due to technical difficulties at Exam Schools, affecting the group of students taking them, which led to three group Mitigating Circumstances Notices to Examiners. See the Part C Mathematics Examiner Report for details.

### **C. Changes in examining methods and procedures currently under discussion or contemplated for the future**

The Examiners are not aware of any changes the examining processes in the current year.

### **D. Notice of examination conventions for candidates**

The first notice to candidates was issued on 17th March 2025 and the second notice on 14th May 2025. These contain details of the examinations and assessments.

All notices and the examination conventions for 2025 are available online at:

<https://www.maths.ox.ac.uk/members/students/undergraduate-courses/teaching-and-learning/part-c-students/examinations-and-assessments/part-c-and-omms>

## **Part II**

### **A. General Comments on the Examination**

The examiners would like to convey their grateful thanks for their help and cooperation to all those who assisted with this year's examination, either as assessors or in an administrative capacity. The chair would like to thank Anwen Amos, Rosalind Mitchell, Charlotte Turner-Smith, Waldemar Schlackow, Matt Brechin, Jonathan Whyman, Hannah Harrison and the rest of the academic administration team for their support of the Part C and OMMS examinations.

In addition, the internal examiners would like to express their gratitude to Prof Rosemary Dyson, Prof Roger Moser and Prof. Ioanna Manolopoulou for carrying out their duties as external examiners in a constructive and supportive way during the year, and for their valuable input at the final examiners' meetings.

### **Mitigating Circumstances Notice to Examiners and other special circumstances**

A subset of the examiners (the 'Mitigating Circumstances Panel') attended a pre-board meeting to band the seriousness of the individual notices to examiners. The outcome of this meeting was relayed to the Examiners at the final exam board, who gave careful regard to each case, scrutinised the relevant candidates' marks and agreed actions as appropriate. See Section F for further details.

### **Setting and checking of papers and marks processing**

See the Part C Mathematics Examiner Report for details.

### **B. Equality and Diversity issues and breakdown of the results by gender**

Table 2, page 3, shows male and female candidate percentages for each degree class.

Table 2: Breakdown of results by gender

| Class       | Number     |       |       |       |       |       |       |       |       |      |       |       |       |       |       |       |       |       |      |      |       |
|-------------|------------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|-------|
|             | 2025       |       |       | 2024  |       |       | 2023  |       |       | 2022 |       |       | 2021  |       |       | 2020  |       |       | 2019 |      |       |
|             | F          | M     | Total | F     | M     | Total | F     | M     | Total | F    | M     | Total | F     | M     | Total | F     | M     | Total | F    | M    | Total |
| Distinction | 4          | 24    | 28    | 3     | 17    | 20    | 4     | 18    | 22    | 1    | 23    | 24    | 0     | 21    | 21    | 5     | 22    | 27    | 4    | 12   | 16    |
| Merit       | 3          | 11    | 14    | 2     | 11    | 13    | 2     | 9     | 11    | 1    | 17    | 18    | 4     | 5     | 9     | 3     | 4     | 7     | 1    | 5    | 6     |
| Pass        | 4          | 7     | 11    | 8     | 17    | 25    | 6     | 7     | 13    | 6    | 7     | 13    | 4     | 17    | 21    | 1     | 4     | 5     | 3    | 6    | 9     |
| DDM         | -          | -     | -     | -     | -     | -     | -     | -     | -     | -    | -     | -     | -     | -     | -     | 0     | 2     | 2     | -    | -    | -     |
| Fail        | 1          | 2     | 3     | 1     | 2     | 3     | 1     | 0     | 1     | 0    | 1     | 1     | 1     | 0     | 1     | 0     | 0     | 0     | 0    | 1    | 1     |
| Total       | 12         | 44    | 56    | 14    | 47    | 61    | 13    | 34    | 47    | 8    | 48    | 56    | 9     | 43    | 52    | 9     | 32    | 41    | 8    | 24   | 32    |
| Class       | Percentage |       |       |       |       |       |       |       |       |      |       |       |       |       |       |       |       |       |      |      |       |
|             | 2025       |       |       | 2024  |       |       | 2023  |       |       | 2022 |       |       | 2021  |       |       | 2020  |       |       | 2019 |      |       |
|             | F          | M     | Total | F     | M     | Total | F     | M     | Total | F    | M     | Total | F     | M     | Total | F     | M     | Total | F    | M    | Total |
| Distinction | 33.33      | 54.55 | 50    | 21.43 | 36.17 | 32.79 | 30.77 | 52.94 | 46.81 | 12.5 | 47.92 | 42.86 | 0     | 48.84 | 40.38 | 55.56 | 68.75 | 65.85 | 50.0 | 50.0 | 50.0  |
| Merit       | 25         | 25    | 25    | 14.29 | 23.4  | 21.31 | 15.38 | 26.47 | 23.40 | 12.5 | 35.42 | 32.14 | 44.44 | 11.63 | 17.31 | 33.33 | 12.5  | 17.07 | 12.5 | 20.8 | 18.8  |
| Pass        | 33.33      | 15.91 | 19.64 | 57.14 | 36.17 | 40.98 | 46.15 | 20.59 | 27.66 | 75   | 14.58 | 23.21 | 44.44 | 39.53 | 40.38 | 11.11 | 12.5  | 12.20 | 37.5 | 25.0 | 28.1  |
| DDM         | -          | -     | -     | -     | -     | -     | -     | -     | -     | -    | -     | -     | -     | -     | -     | 0     | 6.25  | 4.88  | -    | -    | -     |
| Fail        | 8.33       | 4.55  | 5.36  | 7.14  | 14.29 | 4.92  | 7.69  | 0     | 2.13  | 0    | 2.08  | 1.79  | 11.11 | 0     | 1.92  | 0     | 0     | 0     | 0    | 4.2  | 3.1   |
| Total       | 100        | 100   | 100   | 100   | 100   | 100   | 100   | 100   | 100   | 100  | 100   | 100   | 100   | 100   | 100   | 100   | 100   | 100   | 100  | 100  | 100   |

### C. Detailed numbers on candidates' performance in each part of the exam

See Table 3, page 4 for the number of candidates taking each Mathematics paper, together with statistics for the raw marks (average and standard deviation), and USMs (average and standard deviation) attained on each paper by this cohort. All papers listed are units except the Mathematics Dissertation, which is a double unit. The total maximum raw mark for a unit is 50 whilst the USMs are scaled to a maximum of 100. In accordance with University guidelines, statistics are not given for papers where the number of candidates was five or fewer in the public version of this report.

Table 3: Statistics by paper

| Paper   | Number of Candidates | AvgRaw | StdevRaw | AvgUSM | StdevUSM |
|---------|----------------------|--------|----------|--------|----------|
| C1.1    | -                    | -      | -        | -      | -        |
| C1.2    | -                    | -      | -        | -      | -        |
| C1.3    | -                    | -      | -        | -      | -        |
| C1.4    | -                    | -      | -        | -      | -        |
| C2.2    | -                    | -      | -        | -      | -        |
| C2.4    | -                    | -      | -        | -      | -        |
| C2.7    | -                    | -      | -        | -      | -        |
| C2.3 OS | -                    | -      | -        | -      | -        |
| C3.1    | -                    | -      | -        | -      | -        |
| C3.2    | -                    | -      | -        | -      | -        |
| C3.3    | 7                    | 28     | 3.74     | 56.71  | 25.07    |
| C3.5    | 8                    | 20.86  | 6.54     | 54     | 24.11    |
| C3.6    | -                    | -      | -        | -      | -        |
| C3.7    | 6                    | 30.4   | 5.13     | 56     | 27.8     |
| C3.8    | 9                    | 25.11  | 10.96    | 62.78  | 14.98    |
| C3.10   | 6                    | 24     | 9.84     | 63.17  | 12.29    |
| C3.11   | -                    | -      | -        | -      | -        |
| C3.12   | -                    | -      | -        | -      | -        |
| C4.1    | 6                    | 29     | 3.85     | 67.67  | 4.93     |
| C4.3    | 9                    | 25.78  | 10.4     | 57.22  | 18.21    |
| C4.6    | -                    | -      | -        | -      | -        |
| C3.8 OS | -                    | -      | -        | -      | -        |
| C4.9    | -                    | -      | -        | -      | -        |
| C5.1    | -                    | -      | -        | -      | -        |
| C5.2    | -                    | -      | -        | -      | -        |
| C5.5    | 7                    | 27.86  | 6.67     | 65.14  | 8.11     |
| C5.6    | -                    | -      | -        | -      | -        |
| C5.11   | 8                    | 24.5   | 8.05     | 57.38  | 10.85    |
| C5.12   | -                    | -      | -        | -      | -        |
| C6.1    | 17                   | 20.88  | 8.41     | 55.18  | 12.3     |
| C6.2    | 13                   | 26     | 9.95     | 57.08  | 14.55    |
| C6.4    | 8                    | 31.88  | 12.91    | 64.62  | 21.09    |

| Paper | Number of<br>Candidates | AvgRaw | StdevRaw | AvgUSM | StdevUSM |
|-------|-------------------------|--------|----------|--------|----------|
| C7.4  | -                       | -      | -        | -      | -        |
| C7.6  | -                       | -      | -        | -      | -        |
| C7.7  | 9                       | 30.11  | 11.33    | 62.89  | 17.01    |
| C8.1  | 10                      | 26.4   | 5.15     | 65.9   | 5.65     |
| C8.2  | 6                       | 26.5   | 5.24     | 62.17  | 7.47     |
| C8.3  | 14                      | 33.29  | 8.53     | 65.5   | 12.16    |
| C8.4  | 6                       | 25.67  | 11.91    | 61.5   | 19.22    |
| C8.7  | -                       | -      | -        | -      | -        |
| SC1   | -                       | -      | -        | -      | -        |
| SC2   | -                       | -      | -        | -      | -        |
| SC4   | 9                       | 29.56  | 5.5      | 68.56  | 2.83     |
| SC5   | -                       | -      | -        | -      | -        |
| SC6   | 7                       | 34     | 4.83     | 67.71  | 6.78     |
| SC7   | -                       | -      | -        | -      | -        |
| SC9   | -                       | -      | -        | -      | -        |
| SC10  | -                       | -      | -        | -      | -        |
| SC11  | -                       | -      | -        | -      | -        |

Table 3: Statistics by paper (USM only assessments)

| Paper | Number of<br>Candidates | AvgUSM | StdevUSM |
|-------|-------------------------|--------|----------|
| C2.6  | -                       | -      | -        |
| C3.9  | 7                       | 79.57  | 10.15    |
| C5.4  | 16                      | 73.44  | 4.27     |
| C6.5  | 30                      | 74.33  | 7.6      |
| C7.1  | -                       | -      | -        |
| CCD   | 55                      | 70.58  | 15.92    |
| SC8   | 9                       | 70     | 26.52    |
| CCS3  | -                       | -      | -        |
| CS3   | 7                       | 69.71  | 2.21     |
| CS5   | -                       | -      | -        |
| CS7   | -                       | -      | -        |
| CS8   | 9                       | 68.56  | 26.68    |
| CS11  | -                       | -      | -        |
| CS13  | -                       | -      | -        |

## **D. Recommendations for Next Year's Examiners and OMMS Supervisory Committee**

In line with the Part C Examiners report, the OMMS exam board would like to share the following recommendations.

The exam board recommends that the department introduces strong repercussions for markers who consistently do not meet the standards of marking required, or return their marking late. The examiners felt that there was a high volume of errors in marking. It was noted that the department offers thorough guidelines on marking, as well as a marking seminar. The examiners would encourage a review of all guidance to ensure consistency across markers.

Additionally, the examiners note their concern at the volume of mistakes within the exam papers and solutions this year. The exam board recommends that the guidance for paper setters should emphasise the importance in double checking formulas and mathematical aspects of questions to avoid mistakes.

The exam board would be in strong support of the removal or easing of the University regulation that prevents candidates from achieving a merit or distinction where one paper has been failed. For example, the board would ask that Teaching Committee consider whether this regulation could be reserved for cases where more than one paper has been failed, or alternatively whether results should be capped at a merit instead of a pass. Additionally, the exam board would welcome further guidance on when this regulation should be applied and when it can be waived by the examiners.

The board notes that the database should be updated to prevent candidates with excusals from being included in the difficulty rating of those papers.

Finally, the board would recommend that Teaching Committee review whether it is possible to introduce automated emails on Inspira to notify students when they have successfully submitted work. It is felt that this would reduce the amount of technical issues, and subsequent penalties, overall.

## **E. Comments on sections and on individual questions**

See the Part C Mathematics Examiner Report for details.

## **F. Comments on performance of identifiable individuals**

### **1. Prizes**

The following prizes was awarded:

Mathematical Institute Prize (OMMS exam performance)  
Johan Slettengren, Kellogg College

Mathematical Institute Prize (OMMS dissertation)  
Jazz Ee Ze Ooi, Reuben College

## **G. Names of members of the Board of Examiners**

Internal Examiners:

Prof. Philip Maini (Chair)

Prof. Emmanuel Breuillard

Prof. Jose Carrillo de la Plata

Prof. Massimiliano Gubinelli

Prof. Ehud Hrushovski

Prof. Geoff Nicholls

Prof. David Steinsaltz

External Examiners:

Prof. Rosemary Dyson

Prof. Ioanna Manolopoulou

Prof. Roger Moser