Final Honour Schools of Computer Science,  
Computer Science and Philosophy and 
Mathematics and Computer Science 

Part B Examination 2016 

Notice to Candidates 
from the Examiners in Computer Science 

Purpose of this notice 

Full particulars of the examinations are given in the Examination Regulations 2015, and the Examination Conventions for 2015/16 can be found at http://www.cs.ox.ac.uk/teaching/examconventions/bacompsci.html 

This notice is confined to matters that may need emphasis or amplification. It is addressed only to candidates in the Honour Schools of Computer Science, Computer Science & Philosophy and of Mathematics & Computer Science. If you are a candidate from another school (for example Mathematics) then you should refer for information to notices circulated by the chairmen of examiners in those schools. 

The marking and classification scheme for finals is described in the Examination Conventions. 

Independence of Examiners 

It must be stressed that to preserve the independence of examiners, candidates are not allowed to contact them directly about matters relating to the content or marking of papers. Any communication must be via the Senior Tutor of the candidate’s college, who will contact the Proctors if appropriate. The Proctors will in turn communicate with the Chairman of Examiners. 

Conduct of the examination 

Candidates will be required to produce their University cards at the start of each examination session. 

The marking of the examination - including practical work - is conducted as far as possible in ignorance of the candidates' names and colleges. To this end the following points are to be observed: 

**Scripts:** Every candidate will be provided with an examination number, and all work handed in must be attached to a cover sheet marked with that number. Even if the candidate submits no written work for an examination which he or she attends, a cover sheet should be submitted. Neither the name nor the college of the candidate should appear anywhere on the script. 

**Practicals:** Each separate report of practical work should be conspicuously labelled with the candidate's examination number only, and not with the candidate's name or college. Please also ensure that each report clearly indicates the subject and number of the exercise, e.g. Compilers, practical exercise 3. See also the section on "Practical work". 

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1 This regulation is designed for your own protection. However, it is not the policy of the examiners to penalise candidates who inadvertently break this rule when handing in practicals and projects.
Calculators: The Regulations (pp. 183, 186, 285) state that “The use of calculators is generally not permitted but certain kinds may be allowed for certain papers”. **There are no papers this year for which a calculator is allowed.**

Rough work: All work, including rough work, must be submitted on the paper provided, and must be handed in at the end of the examination. Candidates may not bring their own paper.

Legibility: Illegible scripts, if they are to be considered by the examiners, will be typed at the candidate's expense.

Handing in: Each candidate is responsible for handing in his or her scripts, appropriately bundled according to the instructions (if any) on the examination paper. Each bundle must have a completed cover sheet, and candidates should hand in an empty cover sheet for those sections of a paper from which they attempt no questions.

Timetable
The detailed timetable for the Examination has yet to be finalised by the Clerk of Schools. Candidates will receive a copy of this from the Clerk of Schools in due course.

Composition of papers
The details below are confined to Part B; similar details for papers under the control of other schools should be sought from those schools.

<table>
<thead>
<tr>
<th>Paper PART B1</th>
<th>Which Cohort?</th>
<th>Number of questions</th>
<th>Maximum number of questions to be answered</th>
<th>Marks per question</th>
<th>Duration of exam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Algorithms and Data Structures</td>
<td>CS, CSP, MCS</td>
<td>3</td>
<td>2</td>
<td>25</td>
<td>1.5 hours</td>
</tr>
<tr>
<td>Compilers</td>
<td>CS, CSP, MCS</td>
<td>3</td>
<td>2</td>
<td>25</td>
<td>1.5 hours</td>
</tr>
<tr>
<td>Computer Architecture</td>
<td>CS, MCS</td>
<td>3</td>
<td>2</td>
<td>25</td>
<td>1.5 hours</td>
</tr>
<tr>
<td>Computer Graphics</td>
<td>CS, CSP, MCS</td>
<td>3</td>
<td>2</td>
<td>25</td>
<td>1.5 hours</td>
</tr>
<tr>
<td>Computer Networks</td>
<td>CS, MCS</td>
<td>3</td>
<td>2</td>
<td>25</td>
<td>1.5 hours</td>
</tr>
<tr>
<td>Concurrency</td>
<td>CS, CSP, MCS</td>
<td>3</td>
<td>2</td>
<td>25</td>
<td>1.5 hours</td>
</tr>
<tr>
<td>Concurrent Programming</td>
<td>CSP only</td>
<td>3</td>
<td>2</td>
<td>25</td>
<td>1.5 hours</td>
</tr>
<tr>
<td>Databases</td>
<td>CS, CSP, MCS</td>
<td>3</td>
<td>2</td>
<td>25</td>
<td>1.5 hours</td>
</tr>
<tr>
<td>Intelligent Systems</td>
<td>CS, CSP, MCS</td>
<td>3</td>
<td>2</td>
<td>25</td>
<td>1.5 hours</td>
</tr>
<tr>
<td>Logic and Proof</td>
<td>CSP only</td>
<td>3</td>
<td>2</td>
<td>25</td>
<td>1.5 hours</td>
</tr>
<tr>
<td>Object Oriented Programming</td>
<td>CSP only</td>
<td>3</td>
<td>2</td>
<td>25</td>
<td>1.5 hours</td>
</tr>
<tr>
<td>Paper PART B2</td>
<td>Which Cohort?</td>
<td>Number of questions</td>
<td>Maximum number of questions to be answered</td>
<td>Marks per question</td>
<td>Duration of exam</td>
</tr>
<tr>
<td>---------------</td>
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</tr>
<tr>
<td>Computational Complexity</td>
<td>CS, CSP, MCS</td>
<td>3</td>
<td>2</td>
<td>25</td>
<td>1.5 hours</td>
</tr>
<tr>
<td>Computational Learning Theory</td>
<td>CS, CSP, MCS</td>
<td>3</td>
<td>2</td>
<td>25</td>
<td>1.5 hours</td>
</tr>
<tr>
<td>Computer Security</td>
<td>CS, CSP, MCS</td>
<td>3</td>
<td>2</td>
<td>25</td>
<td>1.5 hours</td>
</tr>
<tr>
<td>Computer-Aided Formal Verification</td>
<td>CS, CSP, MCS</td>
<td>3</td>
<td>2</td>
<td>25</td>
<td>1.5 hours</td>
</tr>
<tr>
<td>Computers in Society</td>
<td>CSP only</td>
<td>3</td>
<td>2</td>
<td>25</td>
<td>1.5 hours</td>
</tr>
<tr>
<td>Geometric Modelling</td>
<td>CS, MCS</td>
<td>3</td>
<td>2</td>
<td>25</td>
<td>1.5 hours</td>
</tr>
<tr>
<td>Knowledge Representation and Reasoning</td>
<td>CS, CSP, MCS</td>
<td>3</td>
<td>2</td>
<td>25</td>
<td>1.5 hours</td>
</tr>
<tr>
<td>Lambda Calculus &amp; Types</td>
<td>CS, CSP, MCS</td>
<td>3</td>
<td>2</td>
<td>25</td>
<td>1.5 hours</td>
</tr>
<tr>
<td>Principles of Programming Languages</td>
<td>CS, CSP, MCS</td>
<td>3</td>
<td>2</td>
<td>25</td>
<td>1.5 hours</td>
</tr>
</tbody>
</table>

On all Computer Science papers there will be an indication of how many marks out of the total of 25 are allocated to each part of each question. This is intended as a guide to candidates in allotting time and effort.

Where a candidate takes two option papers that are timetabled in a single three-hour session, he or she may work on both papers for the full three hours, but may answer at most 2 questions from each paper.

**Practical work**

**Presentation of Practical Work:** The practical work must be bound together in a single file (or packed in a single envelope) addressed to the Chairman of Examiners in Computer Science (or Computer Science & Philosophy or Mathematics and Computer Science as the case may be) and must be marked clearly on the outside with the candidate's name, examination number, and the Honour School in which the candidate is being examined (either Computer Science, Computer Science & Philosophy, or Mathematics and Computer Science).

The bundle must include the declaration form which is included with this notice; on it the candidate declares the work to be his or her own.

**Handing in Practical Reports:** Candidates must hand these reports in to the Chair of Examiners at the Department of Computer Science by noon on Monday of week 6 of Trinity Term. Details of the hand-in procedure will be sent to you in due course.

**Assessment of Practical Work:** The examiners will determine a mark for the practical work associated with each computer science paper, taking into account the provisional mark assigned by the demonstrator and their own assessment of the work submitted.

Practicals do not contribute to the classification of candidates but each candidate must pass the practical course in order to pass the examination.
The detailed procedure for assessing practical work is set out in the Examination Conventions but, broadly speaking, a candidate will pass the practical course if they have completed adequately (at Grade S) slightly more than half the practical work for the papers they have chosen.

Project work – Computer Science candidates only

The Form of a Project Report: Computer Science candidates should consult page 184 of the Examination Regulations for directions on the form of the report. An example outline of a project report can be found in the Handbook Supplement under Section 3 at http://www.cs.ox.ac.uk/files/7645/Handbook%20supplement%202015%20v2.pdf

Each project topic must have been approved by the Teaching Committee of the Department of Computer Science.

Software demonstrations: For projects that involve the production of software, supervisors will be asked to report whether or not they have seen the software working as intended. It is up to the supervisor and candidate to decide what form the demonstration of the program might take, and to ensure that time is set aside for a demonstration of the final outcome of the project.

Handing in Project Reports: Candidates must hand in two copies of their project report to the Examination Schools by noon on Monday of 5th week of Trinity Term, in an envelope addressed to the Chair of Examiners, Honour School of Computer Science. Please note that candidates should include their name, but not their candidate number, on the project report.

Late submission or failure to submit coursework

1. Under the provisions permitted by the regulations, late submission of coursework (i.e. project reports) where there are no extenuating circumstances may result in the following penalties:

<table>
<thead>
<tr>
<th>Lateness (where the deadline is Monday at 12pm, noon)</th>
<th>Cumulative penalty</th>
</tr>
</thead>
<tbody>
<tr>
<td>Up to 4 hours i.e. up to Monday 4pm</td>
<td>1%</td>
</tr>
<tr>
<td>4 – 24 hours i.e. up to Tues 12 noon</td>
<td>10%</td>
</tr>
<tr>
<td>24 – 48 hours i.e. up to Weds 12 noon</td>
<td>20%</td>
</tr>
<tr>
<td>48 – 72 hours i.e. up to Thurs 12 noon</td>
<td>30%</td>
</tr>
<tr>
<td>72 – 96 hours i.e. up to Fri 12 noon</td>
<td>40%</td>
</tr>
<tr>
<td>96 – 101 hours i.e. up to Fri 5pm</td>
<td>50%</td>
</tr>
</tbody>
</table>

The Proctors may also impose a late presentation fee on candidates for late submission of coursework. Failure to submit a required element of assessment will result in the failure of the whole of Part B.

Where permission for late submission has been granted by the Proctors (under clause (1) of para. 14.5 page 30), no penalty will be imposed.
Factors Affecting Performance

The board of examiners will use the following procedure for the consideration of medical and other special circumstances transmitted to them via the Examinations and Assessments Section:

a) A subset of the board will meet to discuss the individual applications and band the seriousness of each application on a scale of 1-3 with 1 indicating minor impact, 2 indicating moderate impact, and 3 indicating very serious impact. When reaching this decision, examiners will take into consideration the severity and relevance of the circumstances, and the strength of the evidence. Examiners will also note whether all or a subset of papers were affected, being aware that it is possible for circumstances to have different levels of impact on different papers.

b) The banding information will be used at the final Board of Examiners meeting to adjudicate on the merits of candidates;

c) A brief, formal record will be kept confirming (i) the fact that information about special circumstances has been considered by the examiners, (ii) how that information has been considered, and (iii) the outcome of the consideration with the reasons for the decisions reached.

Further information on how to make an application for consideration of factors affecting performance in an examination is available at http://www.ox.ac.uk/students/academic/exams

The examiners in Part A may adjust the marks of a candidate in some papers in the light of this evidence, but will in any case pass on the evidence to the Part B examiners in the following year. The examiners in Part B will consider evidence relating to a candidate's performance both in Part A and in Part B. They also may adjust the marks for certain papers, and may in addition deviate in a candidate's favour from the usual relationship between average marks and degree classes, particularly when there is medical evidence relating to Part A, and the candidate's performance in Part B is markedly improved.

Results

The examiners hope to be able to issue the class list by Friday 1st July 2016. Details of individual marks will be communicated to tutors shortly after.

Difficulties

Any candidate who encounters difficulties with any of the above should discuss the matter with his or her tutor without delay.

Prof. M. Goldsmith
Chairman of Examiners
Final Honour Schools of Computer Science,
Computer Science & Philosophy and
Mathematics & Computer Science
(Hilary Term 2016)
Declaration form for Practical Work

This form is to be handed in with practical work. The form must be signed.

I declare that the reports on practical work that I have handed in are all my own work except for marks and comments by demonstrators, and other material clearly indicated.

Name ............................................................................................................................

College .........................................................................................................................

Candidate no. .............................................................................................................

Honour school ...........................................................................................................

Signature: ..................................................................................................................... Date:
DECLARATION OF AUTHORSHIP

This certificate should be completed and submitted to the Examination Schools with two copies of your project report by noon on Monday of week 5 of Trinity Term (23rd May 2016).

Name (in capitals):                              Candidate number:
College (in capitals):                           Supervisor:
Title of Project (in capitals):

Word count: _________

Please tick to confirm the following:

I have read and understood the University’s disciplinary regulations concerning conduct in examinations and, in particular, the regulations on plagiarism (Essential Information for Students. The Proctors’ and Assessor’s Memorandum, Section 9.6; also available at www.admin.ox.ac.uk/proctors/info/pam/section9.shtml).

☐

I have read and understood the Education Committee’s information and guidance on academic good practice and plagiarism at www.admin.ox.ac.uk/edc/goodpractice.

☐

The project report I am submitting is entirely my own work except where otherwise indicated.

☐

It has not been submitted, either partially or in full, for another Honour School or qualification of this University (except where the Special Regulations for the subject permit this), or for a qualification at any other institution.

☐

I have clearly indicated the presence of all material I have quoted from other sources, including any diagrams, charts, tables or graphs.

☐

I have clearly indicated the presence of all paraphrased material with appropriate references.

☐

I have acknowledged appropriately any assistance I have received in addition to that provided by my supervisor.

☐

I have not copied from the work of any other candidate.

☐

I have not used the services of any agency providing specimen, model or ghostwritten work in the preparation of this thesis/dissertation/extended essay/assignment/project/other submitted work. (See also section 2.4 of Statute XI on University Discipline under which members of the University are prohibited from providing material of this nature for candidates in examinations at this University or elsewhere: http://www.admin.ox.ac.uk/statutes/352-051a.shtml#_Toc28142348.)

☐

The project report does not exceed 10,000 words in length, plus not more than 40 pages of diagrams, tables, listing, etc.

☐

I agree to retain an electronic copy of this work until the publication of my final examination result, except where submission in hand-written format is permitted.

☐

I agree to make any such electronic copy available to the examiners should it be necessary to confirm my word count or to check for plagiarism.

☐

Candidate’s signature: .................................................. Date: ................................