

THE UNIVERSITY OF NEW SOUTH WALES

COMP3151/9154

Foundations of Concurrency

Final Exam

Term 2, 2022

Time Allowed: 24 Hours. Submit by 8AM Sydney time on August 23.

Total Marks Available: 100

Brief answers are **strongly** preferred. Extreme verbosity may cost marks.

Produce a typeset PDF file, via L^AT_EX or otherwise, with your answers.

Submit with `give cs3151 exam exam.pdf` or with the `give` web interface.

The exam is open-book. You may read anything you like, and in general use any passive resource.

You **may not** use active resources—don't solicit, offer, or accept help of any kind, with one exception: you may ask private questions on Ed. Johannes will monitor Ed regularly, except when he sleeps (around 10PM–6AM).

Include the following statement in your PDF file:

I declare that all of the work submitted for this exam is my own work, completed without assistance from anyone else.

You must adhere to the UNSW student conduct requirements listed at <https://student.unsw.edu.au/conduct>.

Part I

Question 1 (x marks)

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Solution: You can put your solutions in `solution` environments like this.

Question 2 (x marks)

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Solution: You can put your solutions in `solution` environments like this.

Question 3 (x marks)

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Solution: You can put your solutions in `solution` environments like this.

Question 4 (x marks)

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Solution: You can put your solutions in `solution` environments like this.

Part II

These questions are about the paper *Simple, Fast, and Practical Non-Blocking and Blocking Concurrent Queue Algorithms* by Maged M. Michael and Michael L. Scott (PODC 1996: 267-275).

Question 5 (x marks)

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Solution: You can put your solutions in `solution` environments like this.

Question 6 (x marks)

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Solution: You can put your solutions in `solution` environments like this.

Question 7 (x marks)

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Solution: You can put your solutions in `solution` environments like this.

Dont forget to submit your work and include the statement given on the front page.

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