MONASH University

Semester One 2017
Examination Period

Faculty of Business & Economics

EXAM CODES: **ETCXXXX**

TITLE OF PAPER: **Advanced Bean Counting**

EXAM DURATION: 2 hours writing time

READING TIME: 10 minutes

THIS PAPER IS FOR STUDENTS STUDYING AT: (tick where applicable)

☐ Caulfield   ✓ Clayton   ☐ Parkville   ☐ Peninsula
☐ Monash Extension   ☐ Off Campus Learning   ☐ Malaysia   ☐ South Africa
☐ Other (specify)

During an exam, you must not have in your possession any item/material that has not been authorised for your exam. This includes books, notes, paper, electronic device/s, mobile phone, smart watch/device, calculator, pencil case, or writing on any part of your body. Any authorised items are listed below. Items/materials on your desk, chair, in your clothing or otherwise on your person will be deemed to be in your possession.

No examination materials are to be removed from the room. This includes retaining, copying, memorising or noting down content of exam material for personal use or to share with any other person by any means following your exam.

Failure to comply with the above instructions, or attempting to cheat or cheating in an exam is a discipline offence under Part 7 of the Monash University (Council) Regulations, or a breach of instructions under Part 3 of the Monash University (Academic Board) Regulations.

AUTHORISED MATERIALS

OPEN BOOK   ☐ YES   ✓ NO

CALCULATORS   ✓ YES   ☐ NO
  Only HP 10bII+ or Casio FX82 (any suffix) calculator permitted

SPECIFICALLY PERMITTED ITEMS   ☐ YES   ✓ NO
if yes, items permitted are:

Candidates must complete this section if required to write answers within this paper

STUDENT ID: __ __ __ __ __ __ __ __   DESK NUMBER: __ __ __ __ __

The exam contains **FIVE** questions. **ALL** questions must be answered. The exam is worth 100 marks in total.

QUESTION 1

Show that the following expression is the MLE for the variance assuming a Gaussian distribution.

$$\hat{\sigma}^2 = \frac{1}{n} \sum_{i=1}^{n} (x_i - \bar{x})^2$$

<div align="right">

20 marks

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<div align="right">

Total: 20 marks

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— **END OF QUESTION 1** —

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QUESTION 2

Second question.

(a) Part a.

<div align="right">

4 marks
</div>

(b) More stuff.

<div align="right">

10 marks
</div>

(c) Final part.

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6 marks

Total: 20 marks
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— **END OF QUESTION 2** —