



Department of Electrical and Electronic Engineering

## ELEN90055 Control Systems

Semester 2 Assessment, November 2022

Reading Time = 30 minutes; Writing Time = 180 minutes; Scan/Upload Time = 30 minutes

This paper has 6 pages including this page and the formula sheet

### This is a hand-written, Zoom-supervised exam. Permitted Materials:

- Printed copy of this exam paper and/or an offline electronic PDF reader.
- Blank, lined, square-patterned, log-log and semi-log paper (A4-sized or Letter-sized) with **no** numbers, characters or labels printed or pre-written; blue or black pens; pencils; ruler; eraser.
- Electronic devices may **not** be used for writing or drawing your answers.
- CASIO FX-82xx, FX-100xx (any suffixes), FX-3650P, FX-570ES, FX-570ES PLUS, FX-570 MS, FX-570W, FX-991ES, FX-991ES PLUS, FX-991EX, FX-991 CN X calculators may be used. Other calculators require **prior written approval** from subject coordinator.
- Three sheets of hand-written notes on A4-sized or Letter-sized paper. Both sides of the sheet may be used. **No** electronic device should have been used to prepare or print these hand-written notes.
- A printed hard-copy of the 2-page formula sheet at the end of this exam paper. **No** additions, annotations or amendments are allowed on these two pages if printed in advance.

### Instructions to Students

- This exam comprises 3 questions totalling 70 marks and is worth 70% (with hurdle) of the assessment for this subject. To obtain full marks, attempt all questions, justify your answers and show your working.
- During **Reading Time**, you are **NOT PERMITTED** to do any writing of any kind. You may print out a hardcopy of the exam. Alternatively, you may download the exam to an electronic PDF reading device, which must then be disconnected from the internet.
- During **Writing Time**, you are permitted to write. You may only interact with the device running the Zoom session with supervisor permission. The printed test paper (or offline device containing the test paper) and any other working sheets must be visible to Zoom invigilators.
- Write and draw your answers on your supply of permitted paper using blue or black pens. Start each question on a new sheet of paper. Only write on one side of each sheet of paper.
- Write the question number and your student number at the top of each page.
- During **Scan/Upload Time**, you immediately must **CEASE WRITING**, assemble your pages in question number order, and use a mobile phone or tablet to scan and combine them into a single PDF file. Check that all pages are included and clearly readable.
- Submit your PDF file to the Gradescope Assignment link corresponding to this exam. Confirm with your Zoom supervisor that you have received confirmation of your submission.
- **Collusion** is **not allowed under any circumstances**. Collusion includes, but is not limited to, talking to, phoning, emailing, texting or using the internet to communicate with other students.
- **Plagiarism**, through the use of sources without proper acknowledgement or referencing, **is not permitted** and can attract serious penalties. Plagiarism includes copying and pasting from the Internet without clear acknowledgement and paraphrasing or presenting someone else's work as your own.
- Students are NOT permitted to share the exam paper with other people or to post exam questions to any external source, including social media and online tutorial services.

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