FACULTY OF SCIENCE AND ENGINEERING

DEPARTMENT OF MATHEMATICS AND STATISTICS

MID-TERM ASSESSMENT EXAMINATION 1

INSTRUCTIONS TO CANDIDATES

- This exam will start at 12:05, and will last 45 minutes.

- Each question will be worth either 1 or 2 Marks. There are 15 Marks worth of questions.

- All questions must be attempted (LENS students please see below)

- Write all of your answers in the exam script. Write the script number on any other documents you submit.

- It is your responsibility to return the script to collection box. An audit of scripts will take place immediately after the exam. If your script is account for in that audit, you are deemed to be absent, and will receive no marks.

- **IMPORTANT for LENS Student:** Specifically approved LENS students have to answer any selection of questions that have an aggregate mark of 12 Marks.

  - They may skip any three of the 1-Mark Questions
  - OR - They may skip a 1-Mark Question and a 2-Mark Question
  - The mark will be rescaled by 125 %.
  - They are advised to skip questions that are indicated by an asterisk symbol ("∗"), but it is not compulsory that they do so.

Attempt ALL questions

Q1. Descriptive Statistics A (3 Marks)

Consider the following data set of seven numbers:

$$29 \ 14 \ 17 \ 30 \ 19 \ 25 \ 13$$

For this sample, compute the following descriptive statistics:

    a. (1 Mark) The mean,

    b. (1 Mark) The variance,

    c. (1 Mark) The standard deviation.

Q2. Descriptive Statistics B (2 Marks)

The heights for a group of forty rowing club members are tabulated as follows:

117	136	136	143	146	146	146	147	150	153
155	160	161	161	163	164	166	166	167	168
168	171	171	172	172	172	172	174	175	176
178	179	180	180	182	183	184	186	186	192

    a. (1 Mark) The median,

    b. (1 Mark) The inter-quartile range.