



University College Dublin  
An Coláiste Ollscoile, Baile Átha Cliath

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**SEMESTER II R LAB EXAMINATION**

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**STAT 20060**

**STATISTICS FOR ENGINEERS**

**PAPER B**

Professor Brendan Murphy  
Mr Adrian O' Hagan, MSc \*

**Time Allowed: 1 hour 15 minutes**

**STUDENT NUMBER :** \_\_\_\_\_

**Instructions for Candidates**

**Attempt all 4 questions.**

**You may use class notes, lab worksheets and other relevant materials.**

**Include details of all R code used to complete the questions, as well as the final answers.**

[illegible]

(b) Perform a linear regression on the data, reporting all relevant results.

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2. (a) The random variable  $X$  is Normally distributed with mean 3 and standard deviation 2. What is  $P(X < 4)$  ?

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[4]

(b) What is  $P(2.5 < X < 3.5)$  ?

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[7]

(c) In a sample of 3 random  $X$  values, what is the probability that 2 or more of them are greater than 2 ?

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[14]

[illegible][illegible]

- [illegible]

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[5]

(c) Plot separate histograms of the times for the two different genders and analyse the differences between them.

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