

About the exam:

Most of the exam questions will be questions about the methods --- such as:

What is a p-value of a statistical test?

State the general hypotheses, null hypotheses, and alternative hypotheses of i) one sample t-test, ii) one sample sign test and iii) one sample Wilcoxon signed-rank test. Discuss differences between these tests and their assumptions.

Explain how to construct a 95 % bootstrap confidence interval for a parameter estimate that is calculated using a random sample of n iid observations.

Explain the following terms: random sampling, cluster sampling and stratified sampling.

You do not have to calculate much. You may have a pocket calculator, but if you have to calculate something it will be something very easy.

There may also be questions where you are given some R-output and then you have to interpret that.

There is a high probability that there will be questions about: reliability and variability, central limit theorem, p-values, bootstrap confidence intervals, sampling, biased samples, box plots and other graphics, t-tests, sign tests, rank tests, normality tests, chi-square tests, ANOVA, two-way ANOVA, Bonferroni correction and/or Kruskal-Wallis test. However, exam questions are not necessarily limited to these listed topics.

There will be no questions about regression analysis.

In the exam you may have your pens and pencils, a ruler and an eraser plus a pocket calculator (empty the memory!!!). On top of that you may have one A4 of notes. The rules for the note are: size A4, text on one side only, it must be hand-written, your name has to be on the top right corner of the note. Please take an id-card with you to the exam. The exam organizers do not know you.