

Medical Sciences Divisional Board**Approved by Ros Whiteley on 19.03.21****Title of Programme/ Name of Regulation [if general]**

Preliminary Examination in Psychology, Philosophy, and Linguistics

Brief note about nature of change: minor amendment to assessment of the Introduction to Probability Theory and Statistics paper.**Location of change**In *Examination Regulations 2019*<https://www.admin.ox.ac.uk/examregs/2019-20/peip-philandling/administratorview/>**Effective date****For students starting from MT 2021****For first examination from 2021-22****Detail of change**^{1.26}(5) Introduction to Probability Theory and Statistics^{1.27} This examination is intended to test the candidate's understanding of the elements of probability theory and of the principles of statistics as applied to the design and analysis of surveys and experiments and to the interpretation of the results of such investigations. The topics below are more fully detailed in Definitions and Formulae with Statistical Tables for Elementary Statistics and Quantitative Methods Courses, which is prepared by the Department of Statistics. Copies of this will be available at the examination.^{1.28} Descriptive statistics and statistical presentation using graphs and simple measures of central tendency and dispersion. Frequency distributions. Samples and populations. The addition and multiplication laws of probability; conditional probability and Bayes' Rule. The binomial, Poisson and normal distributions: their properties and uses and the relationships between them. Statistical inference using sampling distributions, standard errors and confidence limits. Common uses of z, t, chi-square and F tests and nonparametric tests including tests of hypothesis for the mean, median or proportion of a single population or for the difference between two or more populations, goodness-of-fit tests and tests of

difference between two population distributions.

1.29 Parametric one-way Analysis of variance. Kruskal-Wallis non-Parametric analysis of variance. The analysis of 2-way contingency tables using chi-square tests. Linear regression and correlation. A conceptual understanding of, and interpretation of the results of, multiple regression and 2-way ANOVA.

1.30 A comprehensive list of formulae together with statistical tables will be available at the examination.

1.31 One three-hour paper will be set.

Explanatory Notes

Additional clarification to the Regs, to specify a further topic for assessment. This topic (ANOVA) is already covered in the lecture series, but is not currently listed as one of the topics for assessment, which leaves these unclear to the students.

The additional material is introduced on a theoretical level in the lecture course. Students are not required to carry out the statistical tests themselves, which would be very difficult without access to a computer, but should understand the results of such tests and issues of interpretation in relation to them.