



THE UNIVERSITY OF ADELAIDE

14702 -- HONOURS PSYCHOLOGY (PSYCHOL 4000A)

RESEARCH METHODS AND STATISTICS

SCHOOL OF PSYCHOLOGY

JUNE 2007

Time: 3 hours

(In addition, candidates are allowed ten minutes before the examination begins to read the paper.)

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ANSWER THREE (3) QUESTIONS: INCLUDE ONE FROM EACH SECTION

ALL QUESTIONS ARE OF EQUAL VALUE

**SECTION A**

1. You are working as a psychology researcher in Sydney and are asked to find out what women think and know about mammography screening.
  - (a) How might you best sample to minimise sampling bias?
  - (b) Describe and justify your data collection method
2. As an editor of a Psychology journal, you have been asked to give a seminar to help Psychology Honours students write up their research for publication. What key points would you include in your seminar?
3. Interviews have traditionally been a popular form of data-gathering in qualitative research work. Discuss the problems and possibilities associated with using interviews as a research tool in Psychology.

**SECTION B**

1. Give a quick introduction to Structural Equation Modeling using a single example to provide a focus.
2. Repeated Measures Analysis of Variance and Analysis of Covariance are two ways of attempting to make an experimental design more sensitive to some effects.
  - (a) Briefly describe a hypothetical study that could be analysed by either repeated measures analysis of variance or analysis of covariance. Specify the variables and present the design in table form if this helps to display the relationship between the factors.
  - (b) Indicate the general structure of the two analysis of variance tables and say which effects are likely to be tested more sensitively by being tested against smaller mean squares.
  - (c) In the context of your hypothetical experiment, briefly discuss the advantages and disadvantages of each method.
3.
  - (a) We imagine that unemployment causes psychological harm but we are not too sure how, or the type of harm produced. Nonetheless, there is money to fund a study available from a new government, so we go ahead and undertake the study employing a number of outcome measures. Describe the advantages that might result from analysing the data using multivariate of variance than univariate analyses.
  - b) Describe the main features of the output obtained from running multivariate analysis using SPSS.
  - c) Imagine that one of the multivariate effects was significant. Briefly discuss how you would interpret the significant multivariate effect and present that information to a reader.

**END OF EXAMINATION**