

National University of Ireland, Galway
Ollscoil na hÉireann, Gaillimh

Summer Examinations 1998

B.A. in Economic and Social Studies

Research Methods

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Time Allowed 3 hours

This examination paper is comprised of two sections - Section A and Section B.
Carefully follow the instructions for each section of the paper.

Section A

Please answer three questions from Section A

- 1. Discuss the importance of research methods in their contribution to the development of scientific knowledge.**
- 2. Answer both parts of this question.**
 - a) Describe the process of developing a research question in relation to its role in the research process.**
 - b) Provide an example of the formulation of a research question.**
- 3. Indicate the levels of measurement for variables, providing examples for each one of the scales.**
- 4. Discuss the process of hypothesis testing in relation to research methods.**

5. Characterise the following four research designs:

- a) Experimental
- b) Quasi-Experimental
- c) Non-Experimental
- d) Historical / Comparative

6. Define and discuss reliability and validity in relation to research methodology and questionnaire development.

7. Answer both parts of this question.

- a) Discuss the importance of sampling in research design.
- b) Outline the characteristics of three sampling methods.

Section B

Please answer two questions from Section B

8. Indicate what is meant by **four** of the following terms:

- a) Confidence Intervals
- b) Statistical Significance
- c) The Normal Distribution
- d) Ho and H1
- e) Type I and Type II Errors
- f) Causation

9. You have collected data on age in years for a sample of 12 individuals: their ages are as shown below

48, 44, 39, 50, 22, 55, 70, 58, 41, 27, 42, 55

- a) Provide the descriptive statistics of central tendency, variability and skewness for this data.
- b) Draw an appropriate graph to represent this data.

10. A cross-tabulation of the variables of sex and health status was conducted, as shown below in the table.

Gender	Throat Infection	No Throat Infection
Male	65	190
Female	40	215

a) Calculate the Chi Square value for this cross-tabulation

The p-value for this 2 X 2 table was shown to be 0.0062.

b) In terms of hypothesis testing, what do you conclude concerning the relationship between sex and health status ?