



**GCE A level**

1333/01

**PSYCHOLOGY – PY3**

**UNIT 3**

**PSYCHOLOGY: RESEARCH METHODS  
AND ISSUES IN RESEARCH**

A.M. FRIDAY, 28 January 2011

1½ hours

**ADDITIONAL MATERIALS**

In addition to this examination paper, you will need a 12 page answer book.

**INSTRUCTIONS TO CANDIDATES**

Use black ink or black ball-point pen.

Answer **all** questions in Section A and Section B and **two** questions from Section C.

Write your answers in the separate answer book provided.

**INFORMATION FOR CANDIDATES**

The number of marks is given in brackets at the end of each question.

Note the information given at the start of every section.

## SECTION A

1. *Read the following material and answer ALL the questions that follow.  
You are advised to spend at least 5 minutes reading the information provided.*

An investigation was carried out to see if there is a correlation between mathematical ability and self-esteem. Ninety pupils sat a mathematical test which was scored out of 100. They then completed a self-esteem questionnaire. Self-esteem was rated between 10 and 100 (a high score equalled high self-esteem). A Spearman's rank order correlation coefficient of +0.87 was found.

- 5 An Educational Psychologist warned the investigator that self-esteem research involving children may produce the ethical issues of lack of informed consent and the failure to protect participants from psychological harm.

- (a) (i) Define what is meant by the term 'correlation coefficient'. [2]  
 (ii) What is meant by 'correlation coefficient of +0.87' (line 4) in this study? [2]
- (b) (i) Define what is meant by the term 'co-variables'. [2]  
 (ii) Identify the two co-variables in this study. [2]
- (c) Define what is meant by the term 'operationalised'. [2]
- (d) Explain **one** advantage and **one** disadvantage of using a correlation. [4]
- (e) Explain **one** sampling method that could have been used in this study to select participants. [2]
- (f) Define what is meant by the term 'reliability'. [2]
- (g) Explain how **either** content **or** concurrent validity could be used to ensure validity in this study. [2]
- (h) Describe what is meant by:  
 (i) 'a lack of informed consent' (line 6); [2]  
 (ii) 'failure to protect participants from psychological harm' (lines 6-7). [2]

**Total Marks 24**

## SECTION B

2. *Read the following material and answer ALL the questions that follow.  
You are advised to spend at least 5 minutes reading the information provided.*

Ten participants were told that they were taking part in a study to see if learning is affected by the time of day. However the laboratory experiment was actually testing the hypothesis, 'loud noise affects memory recall'.

**Condition one:** Participants learned a list of 10 eight letter words. The words were randomly chosen. This was carried out in the morning in total silence. The participants were asked to recall the words after ten minutes.

**Condition two:** The same participants were given a different set of 10 eight letters words, also randomly chosen. This test was carried out in the afternoon, whilst loud music was played. The participants were asked to recall the words after ten minutes.

- (a) Explain the type of experimental design used in this study. [2]
- (b) (i) Explain **one** advantage of a laboratory experiment. [2]  
(ii) Explain **one** disadvantage of a laboratory experiment. [2]
- (c) Write an appropriate directional hypothesis for this study. [2]
- (d) Participants are often chosen using a volunteer self-selected sample.  
(i) Explain **one** advantage of this sampling method. [2]  
(ii) Explain **one** disadvantage of this sampling method. [2]
- (e) (i) Define what is meant by the term 'ordinal level data'. [2]  
(ii) A Wilcoxon matched pairs signed ranks test was used to analyse the data in this study. Explain why this test was used. [2]
- (f) Identify **one** confounding variable and explain how this variable may have affected this study. [2]
- (g) Describe **two** ethical issues that may have arisen within this study. [4]
- (h) Define what is meant by the term 'validity'. [2]
- (i) Identify:  
(i) the independent variable (IV) in this study; [1]  
(ii) the dependent variable (DV) in this study. [1]

**Total Marks 26**

**Turn over.**

**SECTION C**

*Answer **two** of the following questions.*

3. Discuss the advantages of the use of the scientific method in psychology. [15]
4. Comment on ethical issues in the use of non-human animals in research in psychology. [15]
5. Discuss ethical issues in the use of human participants in research in psychology. [15]