

## AS LEVEL

*Examiners' report*

# PSYCHOLOGY

**H167**

For first teaching in 2015

## **H167/01 Summer 2019 series**

Version 1

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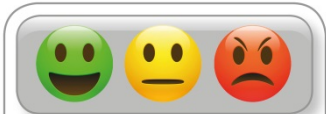
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## Introduction

Our examiners' reports are produced to offer constructive feedback on candidates' performance in the examinations. They provide useful guidance for future candidates. The reports will include a general commentary on candidates' performance, identify technical aspects examined in the questions and highlight good performance and where performance could be improved. The reports will also explain aspects which caused difficulty and why the difficulties arose, whether through a lack of knowledge, poor examination technique, or any other identifiable and explainable reason.

Where overall performance on a question/question part was considered good, with no particular areas to highlight, these questions have not been included in the report. A full copy of the question paper can be downloaded from OCR.

## Paper 1 series overview

This is the first of the two examined components for the OCR AS Psychology qualification. This component develops knowledge and understanding of planning, conducting, analysing and reporting psychological research across a range of experimental and non-experimental methodologies and techniques. Students carry out their own small-scale practical activities.

Students need to be familiar with the four main techniques for collecting/analysing data:


- Self-report
- Experiment
- Observation
- Correlation.

This is the fourth examination of the reformed Psychology AS specification, and overall the standard of responses was good. There was a wide range of responses, suggesting that the paper differentiated fairly.

This paper was accessible with most candidates attempting all questions. Candidates who did well on this paper were distinguished by their more extended, detailed responses that focused more specifically on the question rubric and, where appropriate contextualised their response to the stem scenarios provided on the question paper.

Some candidates found it difficult to use terminology appropriately and some were unable to give definitions of terminology from the specification. In order to be fully prepared for this examination it is important that all aspects of the specification are covered. Some candidates struggled with the concept of correlation in Section C (data analysis and interpretation) and gave responses more related to the use of the experimental method instead. This was also reflected in the specific questions relating to inferential statistics. Other terms and concepts from the specification content that many students struggled with were sample and sampling method or the 'respect' aspect of ethical considerations.

It is important to make sure that candidates have had practice in the design and implementation of their own practical activities (including an analysis of the data collected and conclusions reached from this). This would reinforce their knowledge and understanding of research methods in general, as well as some of the specific terms and concepts they could be assessed on and help them to comment on how conducting their own research has helped in the planning of a novel research area presented in the examination paper. Research methods can also be reinforced through the delivery of the Core Studies component, which will help students apply their understanding of research methods. Finally, the use of examples to illustrate points, convey understanding better thus enabling some elaboration should be encouraged.

	<p><b>AfL</b></p>	<p>Centres should encourage candidates to create a glossary of key research method terms and concepts and should promote using these terms in their responses.</p>
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## Section A overview

There was generally good knowledge and understanding shown across the range of questions asked. The occasional poorly answered question suggests that preparation was not complete across the whole specification. Some candidates would benefit by reviewing their responses again before the end of the exam as responses to extended questions in other sections might help trigger recognition and recall.

### Question 1

- 1 What is the name given when a researcher becomes a member of a group so they can study their behaviour more closely?
- A naturalistic observation
  - B overt observation
  - C participant observation
  - D unstructured observation

Your answer

[1]

Most answered this correctly

### Question 2

- 2 What type of experiment is conducted in a real life setting?
- A field
  - B lab
  - C natural
  - D quasi

Your answer

[1]

Mostly answered correctly but a small number gave C as their response.

### Question 3

- 3 What type of interview involves **no** preparation of questions beforehand?
- A open
  - B semi-structured
  - C structured
  - D unstructured

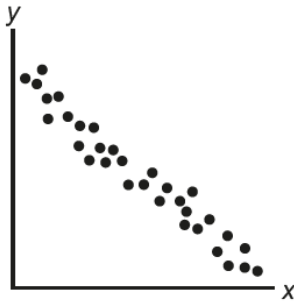
Your answer

[1]

Most answered this correctly

## Question 4

4 What can be said about the variables displayed in the scatter diagram below?



- A as one increases the other decreases
- B as one increases the other increases
- C they are significantly different
- D they are not significantly different

Your answer

[1]

A number of candidates found interpreting the scatter graph problematic and gave an incorrect response to this question. However later, on question 24, most candidates were able to draw a scatter graph correctly

	<b>AfL</b>	Centres should make sure that candidates can demonstrate knowledge and understanding of the process and procedures involved in collection, analysis and presentation of a range of different data (as outlined on page 7 of the specification)
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## Question 5

5 What does the alternative hypothesis in an experiment state?

- A there will be an effect of the IV on the DV
- B there will not be an effect of the IV on the DV
- C there will be a relationship between the IV and the DV
- D there will not be a relationship between the IV and the DV

Your answer

[1]

Many candidates were unable to give correct response experimental question. Option C being given wrongly as response by quite a number of candidates

	<b>Misconception</b>	Many students were not clear on the concept of alternative hypothesis
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## Question 6

6 Which of these indicates the research is significant at the 1% level of probability?

- A  $p < 1.0$
- B  $p < 0.1$
- C  $p < 0.01$
- D  $p > 0.01$

Your answer

[1]

A minority were not clear on significance level statements with B or D being given as a response.

## Question 7

7 What is the name given to the technique that allows verbal or visual information/data to be converted into numerical data for the purpose of analysis?

- A coding frame
- B classifying frame
- C qualitative frame
- D quantifying frame

Your answer

[1]

The least well answered question in this section probably due to less familiarity with this aspect of the Specification. D a popular wrong response. This could be avoided by promoting use of key terms and concept glossary lists.

## Question 8

8 Which of these is a type of sampling technique in which participants provide the names of other people who could also take part in the research?

- A random
- B snowball
- C systematic
- D self-selected

Your answer

[1]

Answered correctly by most candidates.



## Question 9

9 What type of data is obtained from other (often already existing) sources, rather than directly by the researchers?

- A nominal
- B primary
- C secondary
- D qualitative

Your answer

[1]

Answered correctly by most candidates.

## Question 10

10 In which type of distribution is the mean, median and mode all the same score?

- A a negatively skewed distribution
- B a normal distribution
- C a positively skewed distribution
- D an asymmetrical distribution

Your answer

[1]

A number of candidates were unable to give a correct response to this question.

## Question 11

11 Why is the Casey et al. study (neural correlates of the delay of gratification) regarded as a quasi experiment?

- A because an MRI brain scanner was used to measure biological differences
- B because the classification of participants as 'high delayers' or 'low delayers' already existed
- C because the participants were male or female
- D because there was no independent variable

Your answer

[1]

. Answered correctly by most candidates. A minority of candidates chose option D incorrectly.

## Question 12

- 12 Which of these was **not** one of the independent variables in Bandura et al.'s study of the imitation of aggression?
- A sex of the bobo doll
  - B sex of the model
  - C sex of the children
  - D type of behaviour exhibited by the model

Your answer

[1]

Most answered this correctly

## Question 13

- 13 What was the dependent variable in Chaney et al.'s (Funhaler) study?
- A age of the children
  - B adherence to asthma medication
  - C improvement of child's asthma
  - D type of asthma inhaler used

Your answer

[1]

Most answered this correctly

## Question 14

- 14 What is Na in the formula for the Mann Whitney U test below?



$$U_a = NaN_b + \left[ \frac{Na(Na + 1)}{2} \right] - Ra \quad U_b = (NaN_b) - U_a$$

- A mean of condition a
- B number of participants in condition a
- C the number of participants in condition a multiplied by the number of participants in condition b
- D total of the ranks for condition a

Your answer

[1]

A significant number of candidates were unable to give a correct response to this question

	<b>Misconception</b>	A significant number of candidates answered this question on correctly, offering a range of answers. It is therefore important to that candidates recognise equations and what the symbols within a formula mean.
	<b>OCR support</b>	<a href="https://www.ocr.org.uk/Images/260143-inferential-statistics-parametric-and-non-parametric-student-workbook.docx">https://www.ocr.org.uk/Images/260143-inferential-statistics-parametric-and-non-parametric-student-workbook.docx</a>

## Question 15

15 What is the median for this set of scores? 21, 14, 20, 21, 12, 17

- A 17
- B 17.5
- C 18.5
- D 20.5

Your answer

[1]

A minority miscalculated this and gave 17.5

## Section B overview

Section B: In this section on Research Design candidates must present their responses based on a study they design in response to the scenario presented. The design question (Q16) is fundamental and carries 12 marks other questions in this section ranged from 1-3 marks. There was good understanding shown of 2 of the required features in the design question and also of writing an aim, strengths and weaknesses of open questions, interviews and generalisation. To improve, candidates need to ensure they are familiar with all of the terminology in the specification so that they can address all questions. Many would have benefitted from a little more detail and ensuring they are consistently and appropriately contextualised when required.

### Question 16

**A question of morality**

How do young children know right from wrong, what is good or bad or kind or unkind? Are there some things that are common to all children that underpin our sense of morality and shape the way we think about such things? The only way psychologists can investigate people's thoughts about such things is to ask them questions using the self-report method.

16\* Explain how you would use the self-report method to investigate morality.

You must refer to:

- the use of a structured interview
- one question that uses a semantic differential rating scale
- one question that would produce nominal data

You should use your own experience of practical activities to inform your response.

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..... [12]

This question elicited a variety of responses, although few candidates achieved the highest band marks. The best responses were characterised by taking each of the three required features in turn. Firstly, demonstrating understanding of what was involved and how to address it for the research presented. They would then justify the decisions made regarding how to address it. Finally, the candidate would draw on their own experiences of conducting research and how that could explicitly inform the planned study presented. All these required features (RF) needed to be discussed in context to obtain marks in the highest band.

RF 1 : . Issues with the structured interview were mainly related to simply not providing enough description of key features and examples:

RF 2: Of the three required features, the least understood was semantic differential rating scale (RF 2). Rating scales or Likert scales were proposed without any bipolar dimension. Those that provided a clear contextualised example with justification and specific link to their own studies gained the highest marks.

RF 3: Candidates were better at explaining, presenting and showing knowledge of nominal data, with many justifying their decisions too.

Exemplar 1

In my investigation on <sup>the</sup> morality of children, I would use a structured interview consisting of questions such as, 'Do you know right from wrong?' This would mean that every child will be given the same questions, making their answers comparable. It would also mean that only relevant data is collected regarding the child's sense of morality. In previous research, I used an unstructured interview to research ~~teache~~ how stressful teachers find their job. Because it was unstructured, I found that the data ~~wasn't~~ couldn't easily be compared, affecting the conclusions I drew from the study.

Exemplar 1 provides an example of a good response in relation to the structured interview (RF 1) It is brief but demonstrates good understanding and application to the stem scenario.

Question 17

17 Write a research aim for this study.

.....

.....

.....

..... [2]

Many candidates performed well on this question with few presenting hypotheses. The key differentiation here came from some simply not stating a fully contextualised aim clearly enough. Some made it far more complex and convoluted than it needed to be.

Question 18 (a)

18 (a) Identify an appropriate sample for this study.

.....

..... [1]

This was poorly answered by a minority who confused sample for sampling method (opportunity/random etc). Good responses provided a clear description of a sample appropriate for the investigation of the development of morality. Most samples were based on children but some cited parents and justified it well in next linked question (18b)

### Question 18 (b)

(b) Justify the choice of sample you have identified.

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.....  
.....  
.....  
.....  
..... [3]

This was well done by those who had identified their appropriate sample rather than sampling method.

### Question 19 (a)

19 (a) Outline **one** strength of the use of open questions in this study.

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.....  
..... [3]

Most candidates were able to earn 1 or 2 of the marks here demonstrating some level of knowledge and understanding about the strengths of open questions. The lack of detail or context penalised some in terms of accessing the full marks. Candidates needed to go beyond "they give you more information".

### Question 19 (b)

(b) Outline **one** weakness of the use of open questions in this study.

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.....  
.....  
.....  
.....  
..... [3]

When candidates were asked for one weakness of open questions, many candidates did not offer enough detail/elaboration or were not related to the item enough to gain the full 3 marks available.

#### Exemplar 2

One weakness of using open questions in this study of morality on children is that it makes answers harder and more time consuming to analyse and quantify.

Exemplar 2 demonstrates a good response with enough detail and context to merit full marks.

### Question 20

20 Outline **two** ways that you would address the ethical consideration of 'respect' in the design of this self-report study.

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..... [6]

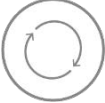
Candidates who scored well on this question were able to identify two ways 'respect' could be addressed in this study. They could distinguish 'respect' from 'responsibility' and provided context.

### Question 21

21 Outline **one** strength of the use of an interview rather than a written questionnaire in this study.

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.....  
..... [3]

Generally answered well but many candidates did not contextualise and could not attain the full 3 marks available.

	<b>AfL</b>	Centres should encourage candidates to ensure they always contextualise their answers when a question includes the phrase "in this study"
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### Question 22

22 Identify **one** thing that may lower the generalisability of the findings from this study.

.....  
.....  
.....  
..... [2]

Most candidates seemed to have a broad understanding of generalisation but did not link it explicitly enough to the context of the findings of this particular study, therefore capping their marks at 1 out of a possible 2 marks available.

### Exemplar 3

A small sample size would lower generalisability as population validity would be reduced, for the results collected on ~~partipen~~ participants view on morality [2]

Exemplar 3 provides a brief but good enough response to meet the criteria for full marks.



### Section C – overview Data analysis and interpretation

A good understanding was shown by many candidates of scatter-graphs, influences on validity and citing data to appropriate number of figures. Most of the responses referred to the context of the study when required. Weaker responses tended to be brief and/or not in context. This section of the examination had the most questions that were not attempted by candidates due to lack of understanding of Spearman's Rho and the use of standard deviation.

#### Question 23

**Exercise your stress**

Stress affects many people, probably everyone at some stage of their life, and can be damaging to our health if it reaches a high level over a continuous period. Psychologists interested in finding ways to control and manage stress have investigated the correlation between exercise and stress by getting a group of ten volunteers to record the average amount of exercise taken each month and comparing this to the amount of stress experienced during the same period. The data obtained is presented in the table below.

Participant	Average number of hours exercise taken each month	Stress rating (0 = 'none' to 100 'high')
a	55	10
b	25	50
c	30	25
d	0	90
e	40	30
f	50	30
g	20	80
h	45	20
i	15	60
j	60	100

**23** Outline **two** conclusions that can be made from the data collected in this study.

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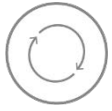
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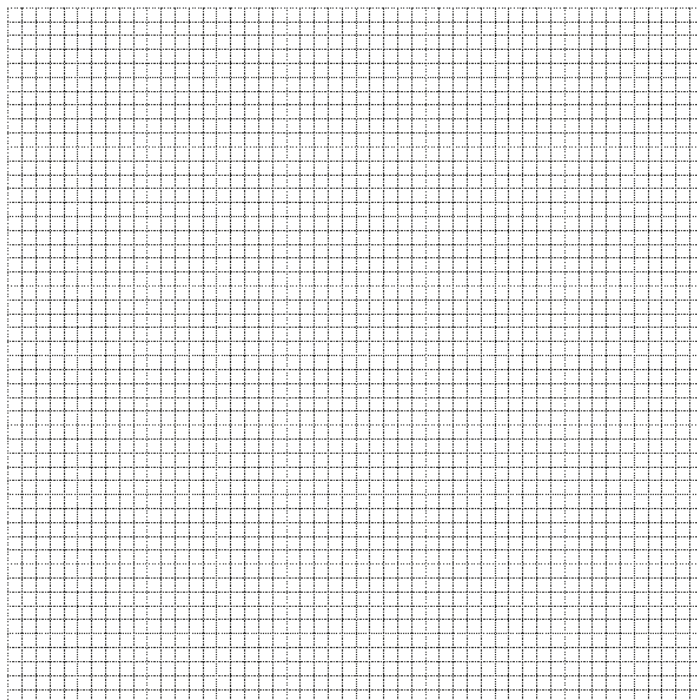
**[6]**

This question elicited a variety of responses. It required candidates to interpret a table of data and go beyond merely restating an individual finding, as there are 6 marks available. . The most common error was stating that more exercise causes less stress. Some candidates correctly stated one could conclude that there were clear individual differences in the data presented and at best one could conclude there was a weak or no correlation between exercise and stress as another conclusion.

	<b>AfL</b>	Candidates would benefit from being given opportunities to examine raw data tables and practice extrapolating what conclusions could be drawn from them by looking at the nature of the data and any patterns that can be discerned. These skills can also be illustrated through practical work data gathered in preparation for this exam.
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### Question 24

24 Draw a fully labelled scatter diagram displaying the data from this study.



[4]

This was the best answered question on the paper with most candidates presenting a fully labelled and scaled scattergraph with correct plotting of data.

### Question 25

25 Outline **two** things that could have affected the validity of the data collected in this study.

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.....

[6]

There was good engagement with this question with a range of different issues offered. These popularly included interpretation bias, social desirability, demand characteristics, and extraneous variables. Having presented the 'thing' the biggest weakness was making it specifically link to validity and the nature of the impact it has "in this study".

**Question 26**

**26** Explain why the Spearman's Rho would be the appropriate non-parametric inferential statistical test to use to analyse the data from this study.

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 .....  
 .....  
 .....  
 .....  
 .....  
 ..... **[3]**

There were quite a few non responders to this question. A very common response was to cite correlation but did not provide any link to the nature of the data collected. These responses achieved poorly on this question.

**Question 27**

**27** After carrying out a Spearman's Rho inferential statistical test the calculated value obtained was  $r_s = -0.37$ . Explain what this means.

.....  
 .....  
 .....  
 .....  
 .....  
 .....  
 ..... **[3]**

Non responders to Question 26 did same for this question. Those who gave good responses referred to both the direction and the strength of the correlation in context, to gain the full 3 marks available.. One common error was to respond regarding statistical significance.

**Question 28 (a)**

**28** The standard deviation was calculated for the average number of hours exercised each month and found to be 18.275666882497

(a) What is this written to two significant figures?

.....  
 ..... **[1]**

Most candidates presented this correctly, but a minority did not reduce to two significant figures

### Question 28 (b)

(b) Explain what this informs us about the average number of hours exercised each month by participants in this study.

.....  
.....  
.....  
..... [2]

The concept of standard deviation appears to be poorly understood as the majority of candidates did not provide a correct response. Many candidates related it to 18 being the average figure rather than relating it to an indication of spread. Those that did mention spread/dispersion sometimes implied they thought all scores would lie within that range.

#### Exemplar 4

Its a dispersion of the mean. meaning that  
the average hours exercised over each month  
disperses over 18.

Exemplar 4 provides a typical response where the candidate has the idea of spread but is confused as to what standard deviation really informs us in relation to this study. It gained 1 mark as it is an example of a weak attempt.

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