

**AS and A LEVEL**  
*Teacher Guide*

# PSYCHOLOGY

H167/H567  
For first teaching in 2015

## **Component 1** **Research Methods** **Question** **Bank**

Version 1



# AS and A LEVEL PSYCHOLOGY

## Introduction

This booklet is intended to be a guide only to the types of questions students may face in either the AS or A level examination for Psychology Component 1 Research methods. It is not example specimen papers. The questions are adaptations from the legacy papers that fit the content of the new specification.

It contains a variety of questions for each content area which you may wish to use as a form of assessment for your students. You may wish to give this booklet to your students as a revision or independent study aid.

Alternatively you may wish to use a section of questions from each content area to create your own assessments that fit with the current question requirements and sections of the new specification.

Component 1 examination

Page 3

Specification summary

Page 4

1.1 Research methods and techniques

Page 6

1.2 Planning and conducting research

Page 7

1.3 Data recording analysis and presentation

Page 10

1.4 Report writing

Page 14

1.5 Practical activities

Page 15

1.6 How Science works

Page 18

## Component 1 examination

- The content for AS and A level is **the same**.
- The A level paper is greater overall in **assessment difficulty**.
- AS level – 75 marks (1.5 hours), 50% of total AS level.
- A level – 90 marks (2 hours), 30% of total A level.

A reminder about the **format of the Paper**:

### AS Level – 75 marks

<b>Section A</b>	15 Multiple choice questions. These contain four options each (one correct answer) and are worth one mark per question. These can assess any part of the component.	15 Marks (20%)
<b>Section B</b>	Research design and response: Students are required to answer all questions relating to a novel source. Students will be required to design their own piece of research and relate it to a practical they have conducted.	35 marks (47%)
<b>Section C</b>	Data Analysis and Interpretation: Students are required to answer all questions relating to a novel source.	25 marks (33%)

### A Level – 90 marks

<b>Section A</b>	20 Multiple choice questions. These contain four options each (one correct answer) and are worth one mark per question. These can assess any part of the component.	20 Marks (22%)
<b>Section B</b>	Research design and response: Students are required to answer all questions relating to a novel source. Students will be required to design their own piece of research and relate it to a practical they have conducted.	35 marks (39%)
<b>Section C</b>	Data Analysis and Interpretation: Students are required to answer all questions relating to a novel source.	35 marks (39%)

This paper challenges students to plan, conduct, analyse, and report psychological research across a range of experimental and non-experimental methodologies and techniques.

It promotes an understanding of the methods of scientific enquiry used in empirical research and aims to develop relevant knowledge and skills for this process.

It also encourages the acquisition of a range of evaluative concepts, reviewing and discussing the design outcomes of research and the application of such knowledge to the wider community, society and economy.

Competency and confidence in a variety of mathematical procedures and problem solving skills should also be gained through involvement with practical work.

## Specification summary

<b>1.1 Research methods and techniques</b>	<b>Learners should have knowledge and understanding of the following research methods and techniques and their associated strengths and weaknesses.</b>
Experiments	<ul style="list-style-type: none"> <li>• Lab, field, quasi.</li> </ul>
Observations	<ul style="list-style-type: none"> <li>• Structured and unstructured, naturalistic and controlled, participant and non-participant, covert and overt.</li> </ul>
Self-reports	<ul style="list-style-type: none"> <li>• Questionnaires, Interviews (structured, semi structured and unstructured)</li> </ul>
Correlations	<ul style="list-style-type: none"> <li>• Obtaining data for a correlational analysis, positive, negative and no correlation.</li> </ul>

<b>1.2 Planning and conducting research</b>	<b>Learners should be familiar with the following features of planning and conducting research and their associated strengths and weaknesses.</b>
Aims and hypothesis and how to formulate	<ul style="list-style-type: none"> <li>• Research aim, research question, null hypothesis, alternate hypothesis, one tailed (directional) hypothesis, two tailed (non-directional) hypothesis.</li> </ul>
Populations, samples, and sampling techniques	<ul style="list-style-type: none"> <li>• Target population and sample, random sampling, snowball sampling, opportunity sampling, self-selected sampling.</li> </ul>
Experimental designs	<ul style="list-style-type: none"> <li>• Repeated measures, independent measures, matched participants design.</li> </ul>
Variables and how they are operationalised	<ul style="list-style-type: none"> <li>• Independent variables, dependent variables, control of extraneous variables.</li> </ul>
Designing observations	<ul style="list-style-type: none"> <li>• Behavioural categories, coding frames, time and event sampling.</li> </ul>
Designing self-reports	<ul style="list-style-type: none"> <li>• Open questions, closed questions, rating scales: Likert rating scale, semantic differential rating scale.</li> </ul>

<b>1.3 Data recording, analysis and presentation</b>	<b>Learners should be able to demonstrate knowledge and understanding of the procedures involved in the collection, analysis and presentation of data. This will necessitate the ability to perform some calculations.</b>
Raw data	<ul style="list-style-type: none"> <li>• Design of raw data recording tables, use of raw data recording tables, standard and decimal form, significant figures, make estimations from data collected.</li> </ul>
Levels and types of data	<ul style="list-style-type: none"> <li>• Nominal, ordinal and interval level data, qualitative and quantitative data, primary and secondary data.</li> </ul>
Descriptive statistics	<ul style="list-style-type: none"> <li>• Measures of central tendency (mean, median, mode), measures of dispersion (variance, range and standard deviation). Ratios, percentages, fractions, frequency tables, line graph, pie chart, bar chart, histogram, scatter diagram.</li> </ul>
Inferential statistics	<ul style="list-style-type: none"> <li>• Normal and skewed distribution curves, probability, significance levels, using statistical tables of critical values, criteria for using a parametric test, criteria for using a specific non parametric test (Mann Whitney U test, Wilcoxon signed ranks test, Chi square, binomial sin test and spearman's Rho), type 1 and type 2 errors, symbols: =, &lt;, &lt;&lt;, &gt;&gt;, &gt;, <math>\alpha</math>, ~.</li> </ul>
Methodological issues	<ul style="list-style-type: none"> <li>• Representativeness, generalisability, reliability (internal, external, inter rater, test – retest, split half). Validity (internal, external, face, construct, concurrent, criterion, population, ecological). Demand characteristics, social desirability, researcher/observer bias and effects. Ethical considerations including the British Psychological Society (BPS) code of ethics and conduct: <b>Respect</b> – informed consent, right to withdraw, confidentiality, <b>Competence, Responsibility</b> – protection of participant, debrief, <b>Integrity</b> – deception.</li> </ul>

<b>1.4 Report writing</b>	<b>Learners should have knowledge of the conventions of reporting research in a practical report and demonstrate understanding of the role and purpose of each of the main sections and sub sections.</b>
Sections and sub sections of a practical report	<ul style="list-style-type: none"> <li>• Abstract, introduction, method (design, sample, materials/apparatus, procedure), results, discussion, references, appendices.</li> </ul>
Citing academic references	<ul style="list-style-type: none"> <li>• A familiarity with citing academic research using the Harvard system of referencing.</li> </ul>
Peer review	<ul style="list-style-type: none"> <li>• Appreciate the role of the psychological community in validating new knowledge and ensuring integrity through the process of peer review.</li> </ul>

<b>1.5 Practical activities</b>	<b>Learners are expected to conduct and analyse their own small scale research practical's including appropriate risk assessment and management.</b>
	<p>Learners should have experience of the following practical activities:</p> <ul style="list-style-type: none"> <li>• Self reports</li> <li>• Experiments</li> <li>• Observations</li> <li>• Correlations.</li> </ul>

<b>1.6 How science works</b>	<b>Learners should understand how society makes decisions about scientific issues and how psychology contributes to the success of the economy and society. Learners should be aware of the nature and principles of scientific enquiry through knowledge and understanding of the following concepts:</b>
	<ul style="list-style-type: none"> <li>• The study of cause and effect, falsification, replicability, objectivity, induction, deduction, hypothesis testing, manipulation of variables, control and standardisation, quantifiable measures.</li> </ul>

## 1.1 Research methods and techniques

### Experiments

**A researcher has conducted an independent measures design experiment to investigate whether chewing gum influences concentration. She recorded how many changes were detected in a 'spot-the-difference' puzzle by people chewing gum when completing the task, compared to those who were not. The results are in the table below.**

Name two variables present in a lab experiment. (2)

Outline one strength and one weakness of using a lab experiment. (6)

Explain the difference between a lab experiment and a field experiment. (4)

What is a quasi experiment? (2)

Why would a quasi experiment not be appropriate for this study? (2)

State a strength and a weakness of using quasi experiments. (4)

### Observations

**A researcher wanted to covertly observe how mums at a play and stay interacted with each other. He planned to use a naturalistic structured observation.**

Outline one strength and one weakness of conducting observational research. (4)

Outline one strength and one weakness of conducting a covert observation. (4)

Explain how you would make this observation overt and what problems this might arise. (4)

Explain the difference between a participant and non-participant observation. (4)

What is a structured observation. (2)

State a strength and a weakness of using a naturalistic observation in this study. (6)

Identify one strength and one weakness of using a structured observation in this study. (4)

Why would an unstructured observation not be appropriate for this study? (2)

### Self reports

**Psychologists are interested in helping people overcome their fears, anxieties and phobias. One way about finding out about these is to ask people to fill out a questionnaire. In this way they can write about their fears, anxieties and phobias and how they can overcome them without having to talk about them.**

Outline one advantage and one disadvantage of using a questionnaire in this study. (6)

Give a strength and a weakness of using an interview instead of a questionnaire in this study. (6)

Describe what is meant by a semi structured interview. (2)

What is a strength of using a semi structured interview over a structured interview? (2)

Why has an unstructured interview not been chosen to carry out this study? (2)

### Correlations

**Researchers conducted a study investigating the correlation between amount of sleep and concentration. First, participants were asked how long they had slept the previous night in hours and minutes. This was then recorded as 'total minutes slept'. Concentration was then assessed using a letter cancellation task in which subjects had two minutes to read an extract from a book, counting the number of times that the letter 'f' appeared.**

Explain what is meant by a negative correlation. (1)

Explain what is meant by a positive correlation. (1)

Explain what is meant by no correlation. (1)

Identify one strength and one weakness of the correlational method. (4)

Describe two problems with the way the data was obtained in this correlation. (4)

## 1.2 Planning and conducting research

### Self reports

**A psychologist is interested in investigating people's beliefs in the paranormal (e.g. ghosts, telepathy, unidentified flying objects) and decides to use a self-report measure to conduct their study.**

Describe how a self-selecting sampling technique could be used to obtain participants for this study. (3)

State a strength and a weakness of using a self selected sampling technique for this study. (6)

Explain what is meant by an 'open question' and a 'closed question'. (4)

Outline **one** strength and **one** weakness of using open questions in a study investigating people's belief in the paranormal. (4)

Outline **one** strength and **one** weakness of using closed questions in a study investigating people's belief in the paranormal. (4)

Suggest a question that participants could be asked in this study, using a rating scale. (2)

Outline one advantage of using a question involving a rating scale in this study. (3)

What is a semantic differential rating scale? (2)

**A researcher is interested in finding out why students at a large sixth form college have decided to study Psychology. He is going to use a self-report questionnaire.**

Construct a research question for this study. (3)

Suggest **one** open and **one** closed question that could be used to investigate subject choice. (4)

Explain one strength in using closed questions in this study. (3)

Explain one weakness in using closed questions in this study. (3)

Suggest how the researcher could use an opportunity sampling technique to get 50 psychology students to complete the questionnaire. (2)

Evaluate the use of opportunity sampling in this study. (4)

**Psychologists used the self-report method to investigate gambling behaviour. They placed an advert in a local newspaper asking for men and women aged 16 to 50 to apply. Those who replied were sent a questionnaire in the post consisting of a number of open and closed questions. For example:**

**Give reasons why you gamble.**

**Which of the following gambling activities do you engage in?:**

national lottery    fruit machines    poker    horse racing    football

Identify which of the above questions is a closed question and explain why. (2)

Suggest **one** other closed question that could be used in this study. (2)

Give a strength and a weakness of the sampling method used in this study. (6)

Name and describe an alternative sampling method for this study. (3)

Explain how using leading questions could influence the results in this study. (3)

### Experiments

**Researchers conducted an *independent measures design* experiment in a local coffee bar, investigating whether receiving physical contact from someone increases their rating on friendliness. The experiment took place between 11am and 2pm on a Wednesday. As members of the public left the coffee bar after paying, some were touched lightly on the upper arm by the cashier, whereas others were not. Outside the coffee bar, members of the public were asked how friendly they thought the staff were on a scale of 1 ('not very friendly') to 10 ('extremely friendly').**

What is the independent variable in this study? (1)

Write a two tailed hypothesis for this study. (4)

Identify the sampling technique used to obtain participants for this study. (1)

Suggest **one** weakness with the sampling method used in this study. (2)

What is an '*independent measures design*'? (2)

Give one advantage and one disadvantage of using an independent measures design in this study. (6)

Describe how you would control one variable in this study. (2)

**A researcher has conducted a matched pairs design experiment to investigate whether chewing gum influences concentration. Participants were matched on age and gender. She firstly recorded how many changes were detected in a 'spot-the-difference' puzzle by people not chewing gum when completing the task, then compared this to the matched group who did chew gum during the task. The results were then compared.**

Write a research aim for this experiment. (2)

Write a null hypothesis for this experiment. (4)

Outline **one** strength and **one** weakness of using a matched pairs design in this experiment. (6)

Describe an alternative experimental design and one strength of using this design instead of a matched pairs design. (6)

What is the Independent variable and dependent variable in this investigation? (2)

Outline how you could select a sample that would be representative. (3)

Explain how participant variables could bias the sample in this study. (3)

**Psychologists wanted to investigate why we don't laugh when we tickle ourselves. One idea is that it is a social act that is out of our control and must be done to us by another person. To investigate this, participants had the soles of their feet tickled by another person at any time during a 30 second period. Later on the same participants had to tickle themselves. They put their feet on a tickling machine (a feather on a rotating turntable) at any time they chose during a 30 second period. The volume of laughter was recorded in decibels.**

Identify the experimental design used in this study. (1)

Explain the difference between an independent measures design and a repeated measures design. (4)

Give a strength and a weakness of the experimental design used in this study. (6)

Give an advantage of using an alternative experimental design in this study. (3)

Write an alternative tailed hypothesis for this study. (4)

Outline **one** strength and **one** weakness of the dependent variable in this study. (6)

Identify one extraneous variable in this study and how it could be controlled. (3)

**Psychologists wanted to investigate if smiling makes people feel happy. Participants were each shown a short video clip of a cartoon. Half the participants were asked to watch it whilst holding a pencil between their teeth, not touching their lips, so forcing them to smile. The other half were asked to watch it whilst holding the pencil just with their lips, not touching their teeth, which prevented them from smiling. Afterwards participants had to tell the psychologist how happy they felt on a scale of 1 (not very happy) to 10 (very happy).**

Write a one tailed hypothesis for this study. (3)

What is a target population? (2)

Outline **one** strength and **one** weakness of using an independent measures design in this study. (6)

How could you make this study a matched pairs design? (2)

Outline one strength in using a matched pairs design in this study. (3)

What is the independent variable (IV) in this study and how has it been operationalised? (2)

Evaluate the way the dependent variable has been measured this study. (6)

## Observations

**Researchers want to conduct an observation study of competitive behaviour at a sports centre. They conducted a naturalistic covert participant observation using time sampling.**

What is participant observation. (2)

Identify **one** strength and **one** weakness of using the participant observation method in this study. (4)

Explain what is meant by time sampling. (2)

Suggest how the researchers could use time sampling in this study. (2)

Write an appropriate behavioural checklist for this study. (3)

Identify **one** strength and **one** weakness of using time sampling in this study. (4)

Identify one strength and one weakness of using a behavioural checklist in this study. (4)

Describe how you could present the data that would be collected in this study? (3)

**Psychologists want to investigate university lectures anxiety levels when presenting lectures to new classes. They used event sampling to collect their data.**

Suggest how the researchers could use a snowball sample to obtain participants for this study. **(2)**

State a strength and a weakness of using a snowball sample in this study. **(6)**

What is meant by event sampling? **(2)**

State a strength and a weakness of using event sampling in this study. **(6)**

If the research used a coding frame instead of event sampling what two suggestions might you make for him to observe? **(2)**

## **Correlations**

**Psychologists want to investigate if there is a correlation between how interested a person is in cars and their driving skills.**

Suggest an appropriate null hypothesis for this study. **(4)**

How could 'driving skills' be measured in this study? **(3)**

Evaluate the measurement of driving skills you suggested for this study. **(6)**

Suggest an appropriate sampling method to be used in this study, justify your answer. **(3)**

Give one strength and one weakness of the sampling method you have chosen for this study. **(4)**

**Psychologists want to investigate if there is a correlation between a person's ratings of how ugly snakes are and how much they fear them. They used an opportunity sample.**

Suggest an appropriate null hypothesis for this study. **(4)**

Suggest a research question for this study. **(2)**

Outline how fear could be measured in this correlation study. **(4)**

Outline **one** strength and **one** weakness of the way you would measure fear in this study. **(6)**

Suggest a more appropriate sampling method you could use to gain participants for this study, explain your answer. **(3)**

## 1.3 Data recording analysis and presentation

### Self reports

**A researcher is interested in finding out why students at a large sixth form college have decided to study Psychology. He is going to use a self-report questionnaire.**

Discuss the validity of a closed question that could be used to investigate subject choice. (3)

What is quantitative data? (2)

Outline **one** strength and **one** weakness of quantitative data being collected in this study. (4)

What is qualitative data? (2)

Assess the reliability of the measurement of why students chose to study psychology in this study. (3)

Would the data collected be primary or secondary? Explain your answer (2)

How could you obtain nominal level data in this study. (3)

Which measure of central tendency would be the most appropriate to analyse the results of this study and why? (2)

**A study investigating factors influencing inter-personal attraction was conducted by psychologists using the self-report method. This involved asking people questions about how important age, appearance, personality, occupation and money were when forming romantic relationships. People were approached in a local shopping centre one weekday morning and asked if they would take a questionnaire home to complete and return using a pre-paid envelope.**

Identify **one** ethical issue in this study. (2)

How could you ensure that the questionnaire would not cause too much stress to participants? (3)

Suggest how **one** of these ethical issues could be addressed. (3)

Evaluate the validity of this research. (4)

How could the researchers ensure this study had test re test reliability. (3)

What type of graph or chart would be the most appropriate to display the results of this questionnaire? (1)

**It seems that when we make a conscious effort not to think about something specific, we can't help but think of it! Researchers investigated this using a self-report. Participants were instructed, "Do not think of a white bear". Each participant was studied for a period of five minutes during which time they had to say aloud what they were thinking. Following this a short interview was conducted with each participant to ask them some questions about how they felt about the task.**

Participants	Number of times thoughts about a white bear were reported during a five minute period
1	8
2	14
3	2
4	15
5	16
6	12
7	21
8	11
9	7
10	10

Outline **two** findings from the data in this table. (4)

Describe how an appropriate descriptive statistic could be used with the data in this table. (4)

Give **one** strength and **one** weakness of the descriptive statistic you mentioned in the above question. (4)

Outline one strength and one weakness of having qualitative data in this study. (6)

Discuss the validity of using open questions in this study. (6)

How might social desirability be an issue in this study? (2)

## Correlations

A researcher has conducted a correlational study to investigate the relationship between how important a person thinks appearance is and how much they spend on clothes each month. The first variable was 'self rating of the importance of appearance' measured on a ten point scale (where 1 = not important and 10 = extremely important). The second variable was 'amount of money spent on clothes each month' measured by asking people to estimate to the nearest five pounds how much they spent in a typical month. The results are in the table below:

Participants (initials)	Self-rating of importance if appearance	Amount spent on clothes each month
HA	6	£80
EP	8	£120
SF	9	£100
PR	3	£110
MS	7	£75
JP	4	£35
AG	3	£15
BF	5	£50

Describe how data is presented in a scatter graph. (2)

Sketch an appropriately labelled scatter graph displaying the results of this study. (4)

What could this graph tell you about the relationship between the two variables. (3)

Outline **two** conclusions from the data in this scatter graph. (4)

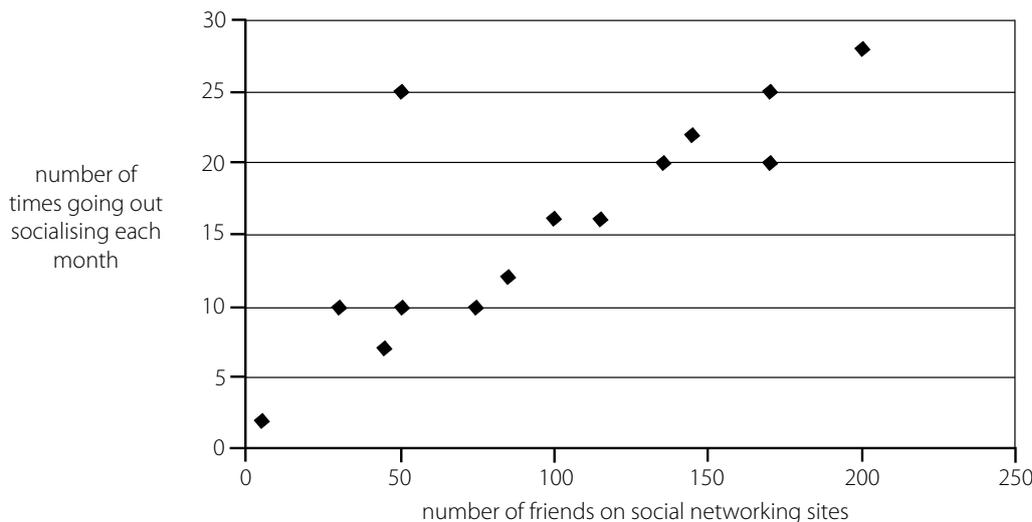
Explain what is meant by the descriptive statistic called the mean. (2)

When would the descriptive statistic called the 'median' be more appropriate and why? (4)

Which inferential (non parametric) test would you use to analyse the data – give reasons for your choice (3)

What is the range for the amount of money spent on clothes each month? (1)

A psychologist conducted a correlation study to investigate the relationship between the number of friends people claim to have on internet social networking sites and number of times they go out socialising each month. The data was obtained from students in a psychology class who left the classroom one at a time to provide details to a researcher sitting outside. The findings from the study are presented in the scatter graph below.



From the scatter graph presented above, what is the mode for 'the number of times going out socialising each month' and how do you know this? **(2)**

Outline **two** findings from the scatter graph. **(4)**

What is qualitative data? **(2)**

Suggest **two** examples of qualitative data that could have been collected in this study. **(4)**

What is a strength and a weakness of collecting quantitative data in this study? **(4)**

Identify **one** ethical issue in this study. **(2)**

Discuss a problem with demand characteristics in relation to this study. **(2)**

## Observations

Researchers want to conduct an observation study of shopping behaviour at a large local supermarket. The table below shows the number of times different behaviours were observed.

Reading magazine stand	Talking to other people	Queuing quietly for shopping	Using a mobile phone	Arguing with partner
10	11	18	28	8

Describe **one** ethical issue that the researchers need to consider when conducting this observation and suggest how this could be dealt with. **(4)**

Explain what is meant by inter-rater reliability in observational research. **(2)**

Suggest how the researchers could ensure that this observation has inter-rater reliability. **(4)**

Sketch an appropriate graph or chart to display the findings from this study. **(4)**

Outline **two** findings from the data displayed in this graph or chart. **(4)**

Outline **one** disadvantage of having quantitative data in the study. **(3)**

What level of data has been collected in this study? **(1)**

Couples sometimes imitate each other's behaviours usually without realising it, such as folding arms at the same time as each other. Psychologists call this 'postural echoing'. To study this, two researchers sat in a bar for one hour monitoring the behaviour of one couple at a time from the moment they entered until they left. Two couples were monitored and the data is presented in the table below.

Number of times the couples performed behaviours at the same time as each other					
Fold arms	Cross Legs	Rest head on hand	Drink	Touch Hair	Touch Nose
12	8	10	7	5	3

Identify **one** ethical issue that the researchers needed to consider when conducting this observation. (2)

Suggest how they could have dealt with this issue. (2)

Suggest how the researchers could have ensured that this observation had high inter-rater reliability. (4)

State an issue with the generalisability of the sample in this study. (2)

Explain how observer bias may influence the results in this study. (2)

Outline **two** findings from the data in this table. (4)

Evaluate validity of using a behavioural checklist in this study. (6)

Briefly outline what is meant by reliability in psychological research. (4)

## Experiments

**Psychologists are interested in the factors that influence effective learning. Any strategies that can aid students in their recall of information are always welcome. Memory can be improved during the process of registration, storage or recall, and factors that may improve it may be social, physiological, environmental or psychological. A psychologist plan to use a repeated measures design experiment to test learning strategies.**

Briefly discuss one ethical issue in relation to this study. (3)

Suggest how to measure the dependent variable in this study. (3)

Sketch a suitable raw data recording table the researcher could use to collect their data. (3)

What level of data would the researcher be collecting in this investigation? (2)

Which inferential (non parametric) test would you use to analyse the data in this study– give reasons for your choice. (3)

Suggest a form of secondary data the researcher could utilise to support their own data collection. (2)

What does  $P < 0.05$  level of significance mean? (2)

If you obtained this level of significance in this study explain what this would mean in relation to the null hypothesis (4)

Briefly discuss one practical issue in relation to this study (3)

**'A researcher conducts an investigation into short-term memory by presenting participants with items on a tray and then asking participants to recall the items after two minutes.'**

**Table of results showing the number of words recalled by participants.**

No. of words correctly recalled	1	2	3	4	5	6	7	8	9	10	11	12
Frequency	0	1	3	1	5	9	12	10	4	1	0	1

What level of data has the researcher collected in this investigation? (1)

Explain why the data in this study is an example of quantitative data. (1)

Outline how the mean is calculated in this research. (2)

Outline a conclusion that can be drawn from this study. Refer to the mode ratings as part of your answer. (2)

Sketch a histogram with four columns to represent this data. (4)

What is a type 1 error? (2)

Explain the difference between researcher bias and researcher effects. (2)

## 1.4 Report writing

Briefly outline what is meant by peer review in psychological research. **(4)**

What is the purpose of an abstract in psychological research? **(2)**

Where would apparatus and materials be placed in a written report? **(1)**

What style of referencing should be used in psychological research? **(1)**

What is written in an introduction in a psychological report? **(2)**

Name three things that are always included in an academic reference. **(3)**

Name the section on a psychological report where a graph would be presented. **(1)**

## AS Level

### 1.5 Practical activities

#### Experiments

**Psychologists wanted to investigate if the colour of food influenced how it tasted. Explain how you would carry out this experiment. Justify your decisions as part of your explanation, you must refer to:**

- Independent measures or repeated measures
- Cause and effect
- One tailed or two tailed hypothesis.

You should use your own experience of carrying out an experiment to inform your response. **(12)**

**Psychologists want to investigate if the colour of food influences how nice people think it tastes. Explain how you would carry out this experiment. Justify your decisions as part of your explanation, you must refer to:**

- Matched pairs or repeated measures
- Demand characteristics
- The sampling technique you would use.

You should use your own experience of carrying out an experiment to inform your response. **(12)**

#### Self reports

**A psychologist wanted to investigate why people exercise using the self-report method. Explain how you would carry out this self-report. Justify your decisions as part of your explanation, you must refer to:**

- Volunteer or opportunity sampling
- Validity
- Open or closed questions.

You should use your own experience of carrying out a self-report to inform your response. **(12)**

**Psychologists want to investigate using a questionnaire the rewards people gain from having a pet using the self-report method. Explain how you would carry out this self-report. Justify your decisions as part of your explanation, you must refer to:**

- Qualitative or quantitative data
- Social desirability bias
- Split half reliability.

You should use your own experience of carrying out a self-report to inform your response. **(12)**

#### Correlations

**Researchers want to conduct a study investigating the correlation between how tall a person is and how confident they are. Explain how you would carry out this correlation. Justify your decisions as part of your explanation, you must refer to:**

- Obtaining data for a correlational analysis
- Validity
- Ethics.

You should use your own experience of carrying out a correlation to inform your response. **(12)**

**A psychologist is interested in finding out the relationship between how well students do in exams and how many portions of fruit and veg they eat per day. Explain how you would carry out this correlation. Justify your decisions as part of your explanation, you must refer to:**

- One or two tailed hypothesis
- The statistical test you would use to analyse your results
- Reliability.

You should use your own experience of carrying out a correlation to inform your response. **(12)**

### Observations

**A group of psychologists are interested in conducting an observation study of how people behave on a beach when on holiday. Explain how you would carry out this observation. Justify your decisions as part of your explanation, you must refer to:**

- Covert or overt
- A behavioural checklist
- Time or event sampling.

You should use your own experience of carrying out an observation to inform your response. **(12)**

**Psychologists are interested in finding out how stressed people get when Christmas shopping with children. Explain how you would carry out this observation. Justify your decisions as part of your explanation, you must refer to:**

- A behavioural checklist
- Participant or non participant observation
- Observer bias.

You should use your own experience of carrying out an observation to inform your response. **(12)**

## A Level

### 1.5 Practical activities

#### Experiments

**Cognitive processes include memory and perception and just as our memories are likely to become distorted we are all susceptible to mistaken perceptions. Many of us are familiar with such classic illusions such as the Muller Iyer illusion, where the line with the outgoing fins, figure (a) appears longer than the line with the ingoing fins, figure (b). In fact they are the same length.**

(a) >-----<

(b) <----->

**Explain how you would carry out an experiment in to whether older people more susceptible to visual illusions than younger people? Justify your decisions as part of your explanation, you must refer to:**

- Field or lab experiments
- Independent measures or matched participants
- At least one control you would use
- Collection of data.

You should use your own experience of carrying out an experiment to inform your response. **(15)**

## Self reports

Questionnaires are often used to assess people attitudes to current events and to factors affecting attitude change. Psychologists have obtained information on such diverse topics as attitudes to body image and attitudes to drinking and driving this information has enabled research in to the factors affecting attitude to change. Explain how you would carry out a questionnaire into 'Attitudes to parental discipline'. Justify your decisions as part of your explanation, you must refer to:

- Open and closed questions
- At least one ethical issue
- Socially desirable answers
- Bar charts.

You should use your own experience of carrying out a self-report to inform your response. **(15)**

## Correlations

Psychologists use correlational designs to investigate relationships between variables that are difficult to investigate experimentally. Correlational designs are often used to investigate the relationship between environmental variables and human behaviour. For example research has examined environmental variables such as heat, sunshine, pollution and social density (crowding) and their relationships with happiness, aggression, helping behaviours, and performance on cognitive tasks. Explain how you would carry out a correlational analysis in to the relationship between levels of exposure to sunlight and happiness. Justify your decisions as part of your explanation, you must refer to:

- At least ordinal level data
- Data presentation
- Validly
- At least one ethical issue.

You should use your own experience of carrying out a correlation to inform your response. **(15)**

## Observations

Naturalistic observations are conducted by psychologists when they want to find out how people behave without experimental manipulation. Today psychologists should adhere to the BPS guidelines to avoid unethical treatment of participants. With sufficient training, psychologists can detect small differences in behaviour, such as facial expression and gesture, to infer how people are feeling and thinking. Explain how you would carry out a n observation in to eating behaviour. Justify your decisions as part of your explanation, you must refer to.

- A behavioural checklist
- Participant or non participant observation
- Time or event sampling
- Inter rater reliability.

You should use your own experience of carrying out an observation to inform your response. **(15)**

## 1.6 How Science works

What is meant by the term falsification? **(2)**

How can a psychologist ensure their research can establish cause and effect? **(2)**

Explain what is meant by the term cause and effect. **(2)**

Why is it important for psychological research to be replicable? **(2)**

What is meant by the term objectivity? **(2)**

What is meant by quantifiable measures in psychological research? **(2)**

Explain the process of induction. **(4)**

Explain the process of deduction. **(4)**

Explain how hypothesis testing works in experiments. **(3)**

Why is the manipulation of variables important in psychological research? **(2)**

How can psychologists ensure control in their research? **(2)**

What is the purpose of having a standardised procedure in psychological research? **(2)**

Why are quantifiable measures preferred in most psychological research than qualitative methods? **(2)**



We'd like to know your view on the resources we produce. By clicking on the 'Like' or 'Dislike' button you can help us to ensure that our resources work for you. When the email template pops up please add additional comments if you wish and then just click 'Send'. Thank you.

If you do not currently offer this OCR qualification but would like to do so, please complete the Expression of Interest Form which can be found here: [www.ocr.org.uk/expression-of-interest](http://www.ocr.org.uk/expression-of-interest)

**OCR Resources:** *the small print*

OCR's resources are provided to support the teaching of OCR specifications, but in no way constitute an endorsed teaching method that is required by the Board and the decision to use them lies with the individual teacher. Whilst every effort is made to ensure the accuracy of the content, OCR cannot be held responsible for any errors or omissions within these resources. We update our resources on a regular basis, so please check the OCR website to ensure you have the most up to date version.

© OCR 2016 – This resource may be freely copied and distributed, as long as the OCR logo and this message remain intact and OCR is acknowledged as the originator of this work.

OCR acknowledges the use of the following content:  
Square down and Square up: alexwhite/Shutterstock.com

Please get in touch if you want to discuss the accessibility of resources we offer to support delivery of our qualifications:  
[resources.feedback@ocr.org.uk](mailto:resources.feedback@ocr.org.uk)

We will inform centres about any changes to the specification. We will also publish changes on our website. The latest version of our specification will always be the one on our website [www.ocr.org.uk](http://www.ocr.org.uk) and this may differ from printed versions.

Copyright © 2016 OCR. All rights reserved.

**Copyright**

OCR retains the copyright on all its publications, including the specifications. However, registered centres for OCR are permitted to copy material from this specification booklet for their own internal use.

**ocr.org.uk/alevelreform**  
OCR customer contact centre

**General qualifications**

Telephone 01223 553998

Facsimile 01223 552627

Email [general.qualifications@ocr.org.uk](mailto:general.qualifications@ocr.org.uk)

OCR is part of Cambridge Assessment, a department of the University of Cambridge. For staff training purposes and as part of our quality assurance programme your call may be recorded or monitored. © OCR 2016 Oxford Cambridge and RSA Examinations is a Company Limited by Guarantee. Registered in England. Registered office 1 Hills Road, Cambridge CB1 2EU. Registered company number 3484466. OCR is an exempt charity.

