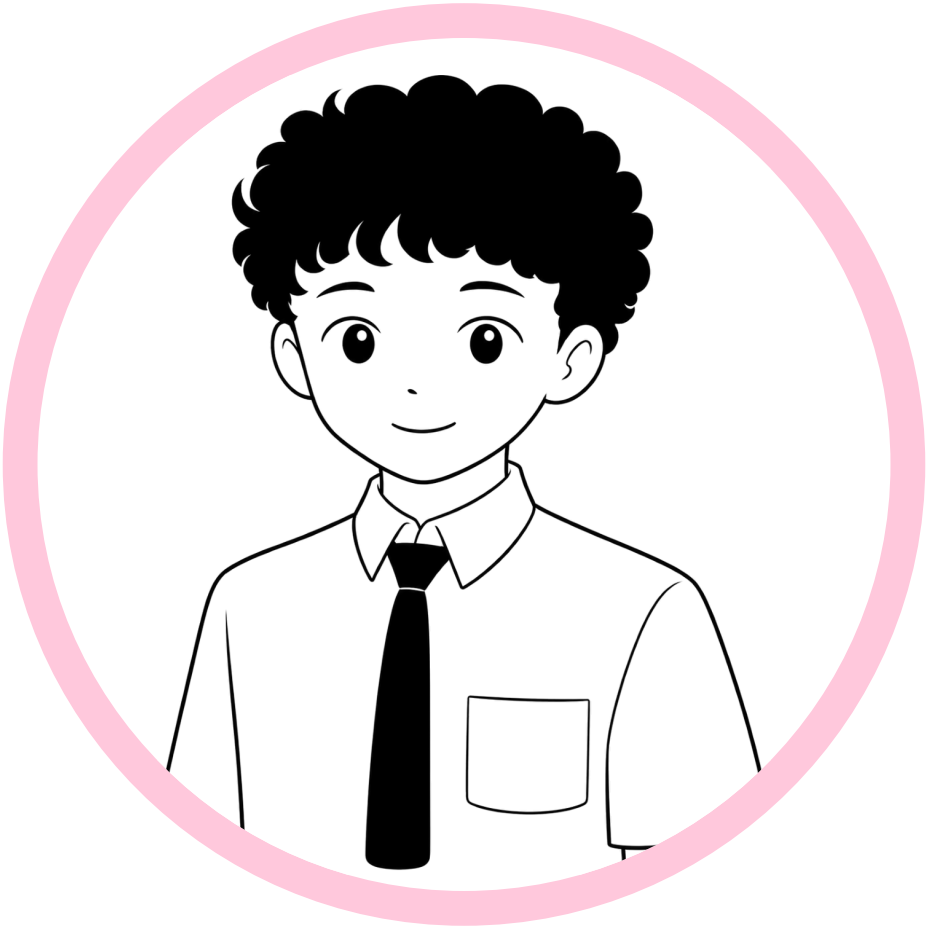
AQA A-LEVEL PSYCHOLOGY · 7182

PSYCHOLOGY



EXAM QUESTION PACK

3.2.3 OBSERVATIONAL TECHNIQUES

SCORE	PERCENTAGE
/196	%

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Q1.

A head teacher wanted to increase recycling in his school. He arranged for the canteen to have three bins, one for cardboard, one for plastic and one for food waste. A month later, a psychology teacher decided to see if the students were recycling. One lunch break she watched different students going to the bins. Each time, she wrote down which of the three types of waste they recycled. She positioned herself so that the students could not see her but so that she had a clear view of the bins.

(a) Identify **one** type of observation being used in this investigation.
Justify your answer.

(2)

(b) Explain the sampling technique the teacher used to record her observations.

(2)

As the different year groups had lunch at different times, the teacher was able to present her results as three year groups, as shown in the table below.

The number of items each year group recycled

Year group	Cardboard	Plastic	Food
7-9	20	35	10
10-11	18	25	7
12-13	12	15	5

(c) What do the results in the table suggest about the recycling initiative?
Refer to the data in the table above in your answer.

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_____

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(4)

(d) Explain **one** way in which the design of this observation could have been improved.

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(2)

(Total 10 marks)

Q2.

A researcher carried out an overt observation study of social learning. For one week the helping behaviour of children in a playgroup was recorded. All the children then saw a short film in which a child was praised for tidying up toys. For the following week the helping behaviour of the same children in the playgroup was recorded.

(a) Which of the following statements is the best description of an overt observation study?

Shade **one** box only.

A The researcher becomes a member of the group whose behaviour is being observed. ⬭

B The researcher uses a structured procedure in which behaviour is watched and recorded. ⬭

C The researcher watches and records behaviour in the setting it would normally occur. ⬭

D The researcher watches and records behaviour of a group that knows it is being observed. ⬭

(1)

(b) Briefly discuss **one** way in which a covert observation of children might be more beneficial than an overt observation.

_____

_____

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(3)

(c) At the end of the observation study the researcher used a sign test to see if the behaviour of the children was more helpful, less helpful or the same after seeing the film than it was before they had seen the film.

Explain why the researcher decided the sign test would be an appropriate statistical test to use on the data from this study.

(4)

(Total 8 marks)

Q3.

A psychology student carried out a study of excitement at a theme park. She measured the heart rate of people waiting in the queue for a roller coaster.

The student's tutor said, 'Using heart rate as a measure of excitement is an example of biological reductionism.'

(a) Explain why measuring heart rate in this situation could be an example of biological reductionism.

(2)

(b) Outline **two** non-biological ways of measuring excitement that the student could also use in this situation.

(4)

(Total 6 marks)

Q4.

People's perception of how they spend their time at the gym is often not very accurate. Some spend more time chatting than on the treadmill. A psychologist decides to observe the actual behaviour of an opportunity sample of gym users at a local gym.

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Explain why it is more appropriate for the psychologist to use an observation than a questionnaire in this case.

(Total 3 marks)

Q5.

Design an observational study to investigate how people spend their time at the gym.

In your answer you will be awarded credit for providing appropriate details of:

- type of observation with justification
- operationalised behavioural categories
- use of time and/or event sampling with justification
- how reliability of data collection could be assessed.

(Total 12 marks)

Q6.

Read the item and then answer the question that follows.

> Studies of attachment often involve observation of interactions between mother and baby pairs like Tasneem and Aisha. Researchers sometimes write down everything that happens as it takes place, including their own interpretation of the events.

Explain how such observational research might be refined through the use of behavioural categories.

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(Total 4 marks)

Q7.

Read the item and then answer the questions that follow.

A child psychologist carried out an overt observation of caregiver-infant interaction. She observed a baby boy interacting separately with each of his parents. Using a time sampling technique, she observed the baby with each parent for 10 minutes. Her findings are shown in the table below

Frequency of each behaviour displayed by the infant when interacting with his mother and when interacting with his father

	Gazing at parent	**Looking away from parent**	**Eyes closed**	**Total**
Mother	12	2	6	20
Father	6	10	4	20
Total	18	12	10	40

(a) Using the data in the table, explain the procedure used for the time sampling technique in this study.

(3)

(b) In what percentage of the total observations was the baby gazing at his mother? Show your calculations.

(2)

(c) Which **one** of the following types of data best describes the data collected in this study? Shade **one** box only.

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A Primary data ⬭

B Qualitative data ⬭

C Secondary data ⬭

D Continuous data ⬭

(1)

(Total 6 marks)

Q8.

Explain what is meant by ‘overt observation’.

_____

_____

_____

_____

(Total 2 marks)

Q9.

Read the item and then answer the questions that follow.

Twenty primary school teachers were sent by their individual head teachers to attend a training course in classroom behaviour management run by educational psychologists at a local university. Before the training course, and again after training, the teachers were asked to say how confident they were in managing difficult classroom behaviour.

The researchers compared the before and after answers to see how many teachers rated their confidence as ‘better’, ‘worse’, or ‘the same’ as it had been at the start of the course.

The results are shown in the table below:

	Confidence Better	**Confidence Worse**	**Confidence Same**
Number of teachers	16	2	2

(a) Which of A, B, C or D best describes this study? Shade **one** box only.

A laboratory experiment ⬭

B pilot experiment ⬭

C natural experiment ⬭

D controlled experiment ⬭

(1)

(b) What fraction of the teachers thought that their confidence was better after the

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course? Show your workings.

(2)

(c) What might the researchers conclude about the training course on the basis of the data in the table? Explain your answer.

(2)

(d) What is the operationalised dependent variable in this study?

(2)

(e) Which experimental design is being used in this study and why would it be an appropriate design in this case?

(3)

(f) The psychologists conducting the training decided to use the Sign Test to see whether there was a significant difference in confidence in managing difficult classroom behaviour before and after the course.

Give the calculated value of S in this study and explain how you arrived at this figure.

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(3)

(g) Explain why statistical testing is used in psychological research.

(2)

(h) Following the training course, one of the researchers carried out an overt classroom observation of each teacher's primary school class. The researcher wanted to record the frequency of difficult classroom behaviours shown by the pupils during a normal lesson.

He identified six categories of disruptive behaviour and decided to record the frequency of each of the six behaviours during the first ten minutes and the last ten minutes of the lesson.

Suggest **two** behavioural categories that the researcher could record during his observation.

(2)

(i) Design a tally chart/record sheet the researcher could use to record his observations.

Show your tally chart/record in the box below.

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(3)

(j) Identify **one** problem that might have occurred during this observation and explain how the observation would be improved by addressing this problem.

_____

_____

_____

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_____

_____

_____

_____

(4)

(Total 24 marks)

Q10.

Read the item and then answer the question that follows.

A group of researchers used ‘event sampling’ to observe children’s friendships over a period of three weeks at break times and lunchtimes during the school day.

Explain what is meant by ‘event sampling’.

_____

_____

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(Total 2 marks)

Q11.

Briefly discuss how observational research might be improved by conducting observations in a controlled environment.

(Total 4 marks)

Q12.

Read the item and then answer the question that follows.

> The psychologist focused on fluency in spoken communication in her study. Other research has investigated sex differences in non-verbal behaviours such as body language and gestures.

Design an observation study to investigate sex differences in non-verbal behaviour of males and females when they are giving a presentation to an audience.

In your answer you should provide details of:

- the task for the participants
- the behavioural categories to be used and how the data will be recorded
- how reliability of the data collection might be established
- ethical issues to be considered.

(Total 12 marks)

Q13.

Read the item and then answer the questions that follow.

> Following previous research indicating the social benefits of green space in urban areas, two psychology students decided to observe social behaviour in public spaces. They focused on two neighbouring towns, Greensville where most public spaces were

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planted with flowers and vegetables, and Brownton where most public spaces were paved with concrete.

The students compared the instances of considerate behaviours in the two towns. Considerate behaviour categories included putting litter in the bin, having a dog on a lead and riding a bike with care.

The observations were carried out in four different areas of a similar size in each town on weekdays between the hours of 4.30pm and 6.00pm. The students worked together to ensure inter-observer reliability, recording each target behaviour whenever it occurred.

(a) Should the hypothesis for this research be directional or non-directional? Explain your answer.

(2)

(b) Before the observation could begin, the students needed to operationalise the behaviour category 'riding a bike with care'.

Explain what is meant by operationalisation and suggest **two** ways in which 'riding a bike with care' could have been operationalised.

(4)

(c) The students thought that having a dog on a lead was a useful measure of considerate behaviour because it had face validity. Explain what is meant by face validity in this context.

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(3)

(d) Identify and briefly outline **two** other types of validity in psychological research.

(4)

(e) Identify the behaviour sampling method used by the students. Shade **one** box only.

A Time sampling ⬭

B Pair sampling ⬭

C Event sampling ⬭

D Target sampling ⬭

(1)

(f) Explain how inter-observer reliability could be ensured by working as a pair.

(3)

(g) The data for considerate behaviours is shown in the **Table 1**.

Table 1

Considerate behaviours

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	Litter in bin	Dog on lead	Riding bike with care
Greensville	23	23	10
Browntonn	10	17	9

The students noted that overall more considerate behaviours occurred in Greensville than in Brownton.

Calculate the ratio of considerate behaviours observed in Greensville to considerate behaviours observed in Brownton. Show your workings and present your answer in the simplest form.

(3)

(h) The students carried out a Chi-square test on their data.

Explain why the Chi-square test was an appropriate test to use in this case.

(3)

(i) In order to interpret the results of the Chi-square test the students first needed to work out the degrees of freedom. They used the following formula.

Degrees of freedom (df) = (r–1) x (c–1)
r = number of rows and c = number of columns

Calculate the degrees of freedom for the data in **Table 1**. Show your workings.

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(2)

(j) The calculated value of Chi-square was 6.20. Referring to the **Table 2** below, state whether or not the result of the Chi-square test is significant at the 0.05 level of significance. Justify your answer.

Table 2

df	*Levels of significance for a one-tailed test*			
	0.10	**0.05**	**0.025**	**0.01**
	Levels of significance for a two-tailed test			
	0.20	**0.20**	**0.05**	**0.02**
1	1.64	2.71	3.84	5.41
2	3.22	4.60	5.99	7.82
3	4.64	6.25	7.82	9.84
4	5.99	7.78	9.49	11.67

To be significant at the level shown the calculated value of Chi Square must be equal to or greater than the critical/table value

(3)

(k) In the discussion section of their report of the investigation the students wanted to further discuss their results in relation to levels of significance.

Write a short paragraph the students could use to do this.

(4)

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(l) As a follow-up to their observation the students decided to interview some of their peers about inconsiderate behaviours in their 6th Form Centre. The interviews were recorded.

Explain how the students could develop their interview findings by carrying out a content analysis and why content analysis would be appropriate in this case.

(3)

(m) Suggest **one** inconsiderate behaviour that the students might focus on in their content analysis.

(1)

(Total 36 marks)

Q14.

A psychologist wanted to investigate the effects of age of adoption on aggressive behaviour. He compared children who had been adopted before the age of two with children who had been adopted after the age of two. The children were observed in their school playground when they were six years old.

(a) Suggest **two** operationalised behavioural categories the psychologist could use in his observation of aggressive behaviour. Explain how the psychologist could have carried out this observation.

Behavioural Category 1 _____

Behavioural Category 2 _____

Explanation of how the observation could have been carried out _____

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(4)

(b) Explain **one** ethical issue the psychologist would have needed to consider when carrying out this research. How could the psychologist have dealt with this issue?

Extra space

(4)

The psychologist wanted to investigate how aggressive the children were when they were at home. He interviewed a sample of their parents to investigate this.

(c) Explain why using interviews might be better than using questionnaires in this situation.

Extra space

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_____

_____

_____

(4)

(Total 12 marks)

Q15.

In an observational study, 100 cars were fitted with video cameras to record the driver's behaviour. Two psychologists used content analysis to analyse the data from the films. They found that 75% of accidents involved a lack of attention by the driver. The most common distractions were using a hands-free phone or talking to a passenger. Other distractions included looking at the scenery, smoking, eating, personal grooming and trying to reach something within the car.

(a) What is content analysis?

(2)

(b) Explain how the psychologists might have carried out content analysis to analyse the film clips of driver behaviour.

(4)

(c) Explain how the two psychologists might have assessed the reliability of their content analysis.

The psychologists then designed an experiment to test the effects of using a hands-free phone on drivers' attention. They recruited a sample of 30 experienced police drivers and asked them to take part in two computer-simulated driving tests. Both tests involved watching a three-minute film of a road. Participants were instructed to click the mouse as quickly as possible, when a potential hazard (such as a car pulling out ahead) was spotted.

Each participant completed two computer-simulated driving tests:

- Test A, whilst chatting with one of the psychologists on a hands-free phone
- Test B, in silence, with no distractions.

The order in which they completed the computer tests was counterbalanced.

(3)

(d) Explain why the psychologists chose to use a repeated measures design in this experiment.

(3)

(e) Identify **one** possible extraneous variable in this experiment. Explain how this variable may have influenced the results of this experiment.

(3)

(f) Explain **one or more** ethical issues that the psychologists should have considered in this experiment.

(4)

(g) Write a set of standardised instructions that would be suitable to read out to

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participants, before they carry out Test A, chatting on a hands-free phone.

The computer simulator measured two aspects of driver behaviour:

- the number of hazards detected by each driver
- the time taken to respond to each hazard, in seconds.

The mean scores for each of these measures is shown in the table below.

Table to show the mean number of hazards detected and mean reaction times in seconds for Test A and Test B

Mean scores	Test A: with hands-free phone	Test B: in silence
Number of hazards detected	26.0	23.0
Reaction time in seconds	0.45	0.27

The psychologists then used an inferential statistical test to assess whether there was a difference in the two conditions.

(5)

(h) Identify an appropriate statistical test to analyse the difference in the number of hazards detected in the two conditions of this experiment. Explain why this test of difference would be appropriate.

They found no significant difference in the number of hazards detected ($p > 0.05$), but there was a significant difference in reaction times (p . 0.01).

(3)

(i) Explain why the psychologists did not think that they had made a Type 1 error in relation to the difference in reaction times.

(2)

(j) Replication is one feature of the scientific method. The psychologists decided to replicate this experiment using a larger sample of 250 inexperienced drivers.

Explain why replication of this study would be useful.

(3)

(Total 32 marks)

Q16.

Observation in a Strange Situation has been used to investigate cultural variations in attachment.

Give **one** advantage of using observation in psychological research.

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(Total 2 marks)

Q17.

Read the text below and answer the questions that follow.

A psychologist is using the observational method to look at verbal aggression in a group of children with behavioural difficulties. Pairs of observers watch a single child in the class for a period of one hour and note the number of verbally aggressive acts within ten-minute time intervals. After seeing the first set of ratings, the psychologist becomes concerned about the quality of inter-rater reliability. The tally chart for the two observers is shown in the table below.

Table: Observation of one child – number of verbally aggressive acts in ten-minute time intervals

Time slots	0–10	11–20	21–30	31–40	41–50	51–60
Observer A	2	5	0	6	4	3
Observer B	4	3	2	1	6	5

(a) Use the data in the Table above to sketch a scattergram. Label the axes and give the scattergram a title.

(4)

(b) Using the data in the Table above, explain why the psychologist is concerned about inter-rater reliability.

(4)

(c) Identify an appropriate statistical test to check the inter-rater reliability of these two observers. Explain why this is an appropriate test.

(3)

(d) If the psychologist does find low reliability, what could she do to improve inter-rater reliability before proceeding with the observational research?

(4)

(Total 15 marks)

Q18.

One situation in which disruption of attachment can occur is when a mother of a young child is admitted into hospital. A researcher decided to study the behaviour of a two year old boy who experienced this disruption of attachment.

She decided to use naturalistic observation of the boy both before his mother was admitted into hospital and after she returned home. Each period of observation lasted for one hour.

(a) Suggest **two** suitable behavioural categories the researcher could use to record the boy's behaviour.

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(2)

(b) How might the researcher record the boy's behaviour during the one-hour observation?

(2)

(c) Explain why the psychologist might want to carry out a pilot study before the main observation.

(2)

(Total 6 marks)

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