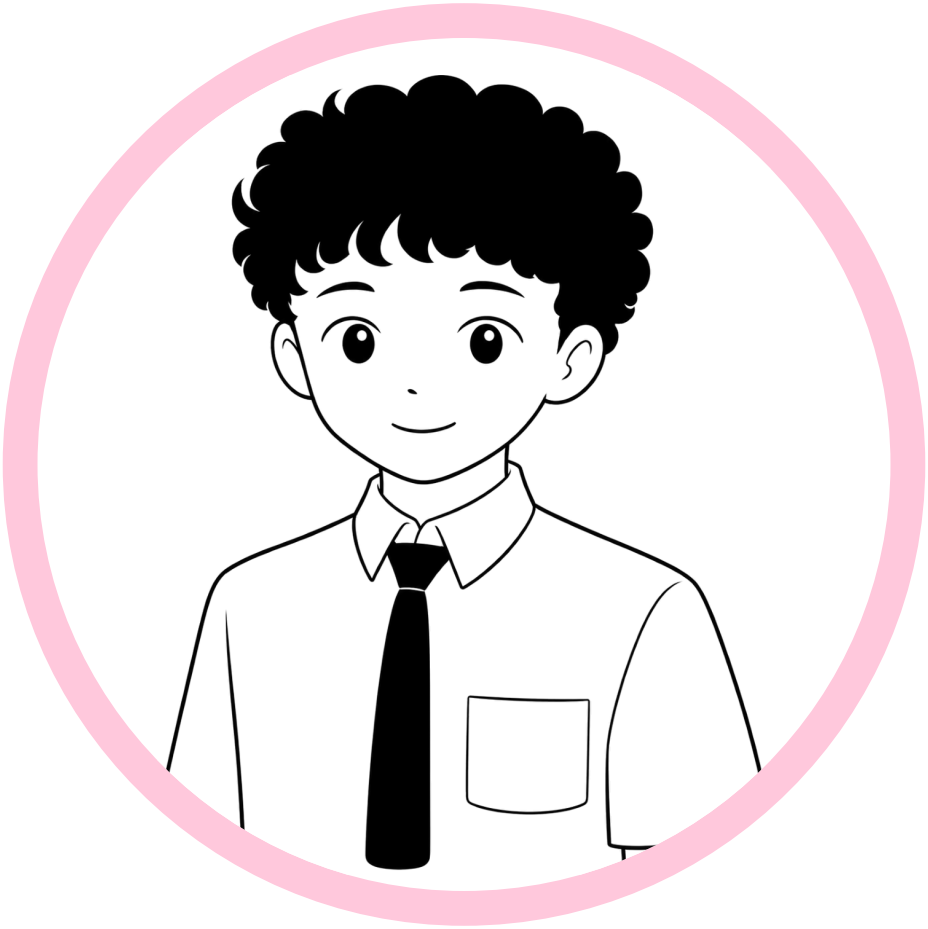
AQA A-LEVEL PSYCHOLOGY · 7182

PSYCHOLOGY



EXAM QUESTION PACK

3.2.3.1 QUESTIONNAIRES

SCORE	PERCENTAGE
/161	%

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Q1.

A researcher was interested in the relationship between the number of hours a course was taught using a computer program and the satisfaction of the students on the course.

As part of his research he conducted a pilot study as follows. A topic from a business studies course was divided into 10 equal one-hour sessions.

Eleven students who were matched for their high level of interest in business studies took part in the study.

All 11 students completed all 10 hours of the topic. They were taught either completely online, with a combination of online teaching and classroom teaching, or just in a classroom.

Each student was allocated a letter, from A to K randomly. This determined the number of hours they studied online and the number of hours they studied in a classroom. The combinations are shown in **Table 1**.

Table 1: The numbers of hours each student (labelled A – K) studied the topic online and in a classroom with a teacher

	A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**
Number of online hours	10	9	8	7	6	5	4	3	2	1	0
Number of classroom hours	0	1	2	3	4	5	6	7	8	9	10

(a) Explain why it was important to match the students on their high level of interest in business studies.

_____

_____

_____

_____

(2)

(b) Suggest **one** other variable for which the researcher should have matched the students. Explain how this might have affected the satisfaction scores if it was not controlled.

_____

_____

_____

_____

(2)

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(c) Outline **one** benefit of allocating the students randomly to the different numbers of online hours and classroom hours as seen in **Table 1**.

(2)

(d) The sample used in this pilot study was an opportunity sample. Briefly explain how using a stratified sample when the final study is conducted might be an improvement to the design.

(3)

(e) The researcher designed a questionnaire to collect data from the students about how satisfied they felt when they had completed the course.
Give an example of an appropriate question that the researcher might use to collect qualitative data on the questionnaire.

(1)

(f) Briefly explain **one** problem the researcher might have in analysing the qualitative data collected from the questionnaires.

(2)

(g) Outline **one** ethical issue that should have been taken into account when carrying out the questionnaire.

(1)

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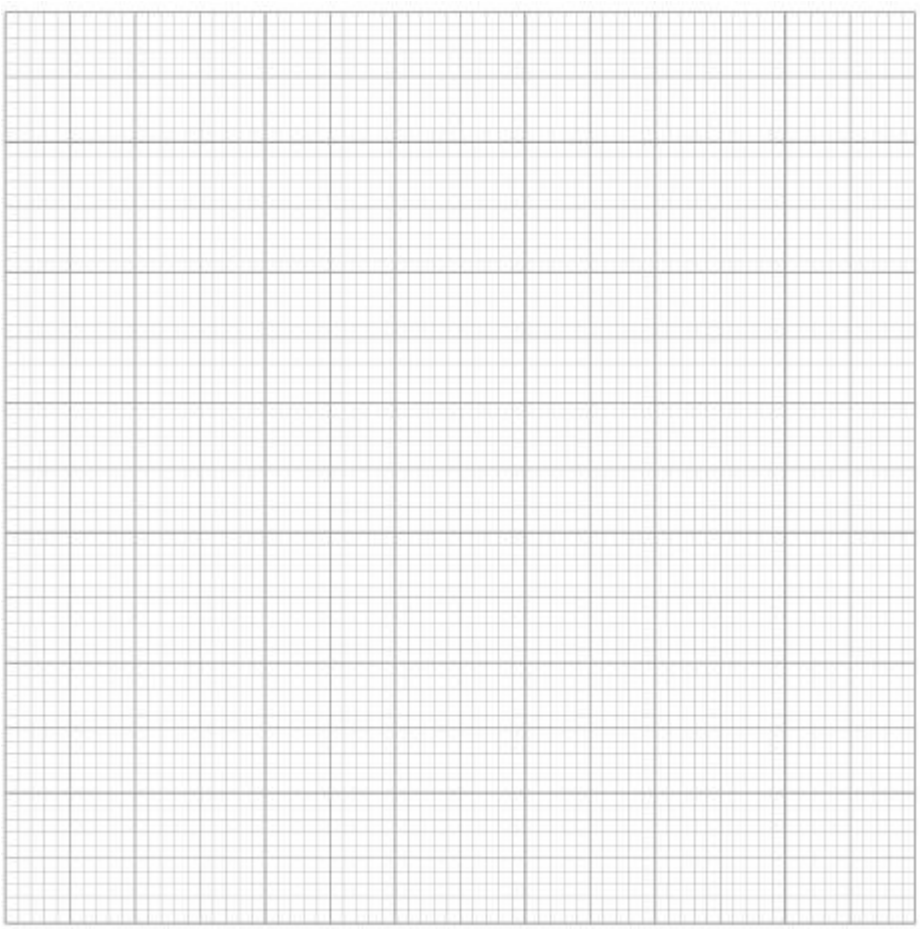
In order to analyse all the responses to the questionnaire, each response was given a score by the researcher. The maximum score on the questionnaire was 20, where a score of 0 meant dissatisfied and a score of 20 meant very satisfied.

The following data was collected by the researcher.

Table 2: The numbers of hours each student (labelled A – K) studied the topic online and the satisfaction scores of each student.

	A	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**J**	**K**
Number of online hours	10	9	8	7	6	5	4	3	2	1	0
Satisfaction scores	5	6	8	7	10	12	13	15	17	19	19

(h) Using the data in **Table 2** and the graph paper provided below, draw an appropriate scattergram. Fully label your display.



(4)

(i) What conclusion might the researcher draw, based on the results of the study?

_____

_____

_____

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(2)

(j) The researcher looked at the mode and median satisfaction scores of the students. Calculate these two descriptive statistics.

(2)

(k) Explain why the median would be more suitable than the mode to represent the average score for satisfaction for the students.

(2)

(l) Another researcher looked at the data for the satisfaction scores and commented that they suggested a negative skew in the data.

Look at the following sets of descriptive statistics from a different study. Which of the sets (A or B or C) would indicate a negative skew in the distribution of the data?

Shade **one** box only.

A Mean: 7.3, median: 7.5, mode: 7.0 ⬭

B Mean: 7.3, median: 10.5, mode: 16 ⬭

C Mean: 7.3, median: 6.5, mode: 5 ⬭

(1)

(Total 24 marks)

Q2.

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)

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

(4)

(Total 6 marks)

Q3.

A researcher wants to investigate the effectiveness of physiotherapy in the recovery of stroke patients with brain damage. Carers of stroke patients will be sent questionnaires to produce quantitative data.

(a) Explain **one** disadvantage of obtaining quantitative data in this study.

_____

_____

_____

_____

(2)

(b) Write **one** question that could be used in the researcher's questionnaire to produce quantitative data and **one** question that could be used in the researcher's questionnaire to produce qualitative data.

Quantitative question: _____

_____

_____

Qualitative question: _____

_____

_____

(2)

(Total 4 marks)

Q4.

A researcher wanted to compare the effectiveness of two therapies for young offenders who had been identified as having anger management issues. Offenders, who were all sentenced to two years in a Young Offenders' Institution, were asked to volunteer to take part in an anger management programme. Fifty volunteers were randomly allocated to Group 1 (Therapy A) or Group 2 (Therapy B).

Each participant's anger was assessed before and after therapy. For the **pre-therapy anger score** they completed an Anger Scale questionnaire and their responses were scored. A high score indicated extreme anger and a low score indicated mild anger.

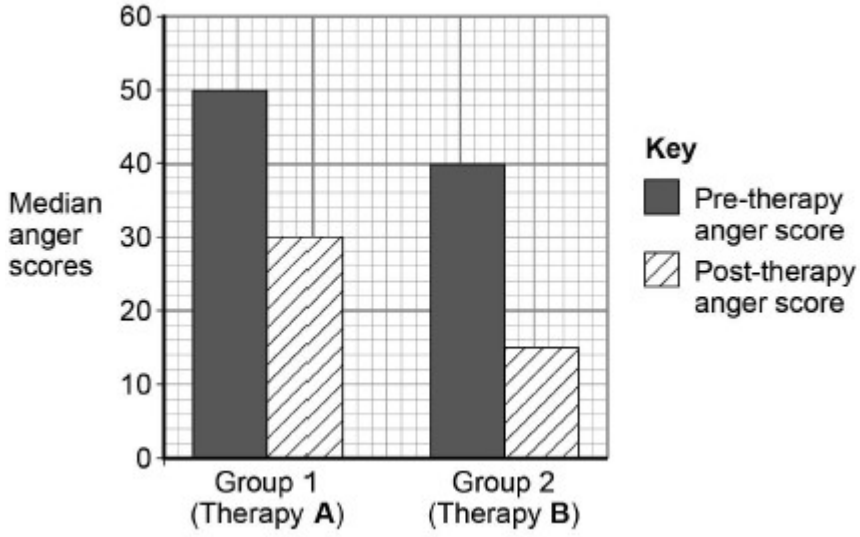
For the next eight weeks, participants attended weekly sessions for either Therapy A or Therapy B.

For the **post-therapy anger score**, at the end of the treatment period, participants completed the same Anger Scale questionnaire.

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The data obtained are shown in the figure below.

Median anger scores before and after therapy for Group 1 (Therapy A) and Group 2 (Therapy B)



(a) The researcher used volunteers for this study. Outline **one** disadvantage of using volunteers to take part in this study.

(2)

(b) Explain how the researcher could allocate the volunteers randomly to the conditions of the experiment.

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(3)

(c) Write a suitable hypothesis for this study.

(3)

(d) What do the data in the figure above seem to suggest?

(3)

(e) Explain how the study might be improved by using a matched pairs design.

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(4)

(f) Outline **one** ethical issue that might have occurred in this study and explain how the researcher could have dealt with this issue.

(4)

(g) Give **one** disadvantage of using median values as seen in the figure above to represent the anger scores of participants.

(1)

(h) Explain how demand characteristics might have occurred in this study.

(2)

(i) The researcher used a questionnaire to assess the anger scores of the offenders. Briefly discuss **one** strength of using questionnaires in research.

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(Total 24 marks)

Q5.

Read the text below and then answer the questions that follow.

Two researchers obtained a sample of ten people whose ages ranged from 20-years-old to 60-years-old.

Each participant was asked to take part in a discussion of social care issues. This included discussion about who should pay for social care for elderly people and how to deal with people struggling with mental health problems. A confederate of the researchers was given a script to follow in which a series of discussion points was written for the confederate to introduce.

Each participant then came into a room individually and the discussion with the confederate took place. The maximum time allowed for a discussion was 30 minutes.

The researchers observed the discussions between the confederate and participants and rated the active engagement of the participants in the discussion. The ratings were between 1, (not at all interested) and 20, (extremely interested.) The researchers believed that the rating provided a measurement of the participants' attitudes towards social care issues.

The following data were obtained in the study:

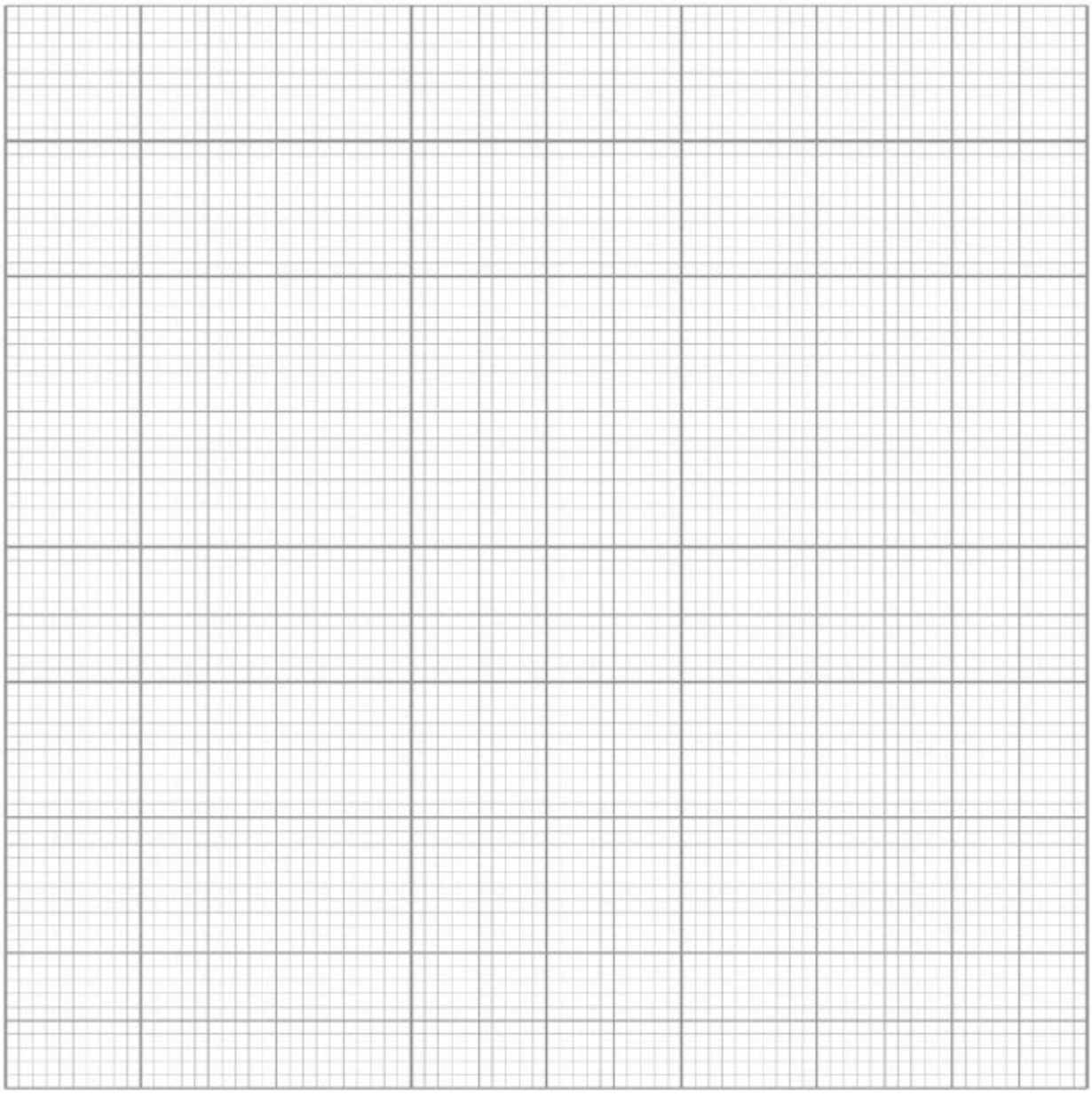
The relationship between age and attitude to social care.

Age of participant	Attitude to social care issues rating
21	5
23	3
34	8
36	12
40	10
47	13

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52	17
53	15
58	18
60	20

(a) Use the graph paper below to sketch a display of the data given in the table above. You do not need to give your display a title.



(3)

(b) What does the display you have drawn in your answer in part (a) suggest about the relationship between age and attitude to social care issues? Explain your answer.

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(2)

(c) The researchers rated the active engagement of the participants in the discussion on social care. They used this rating as a measure of each participant's attitude to social care issues.

Briefly explain how investigator effects might have occurred in this study.

(2)

(d) Outline how the researchers could have avoided investigator effects having an impact on the study.

(2)

The researchers thought it might be interesting to investigate further the attitudes of the participants in the study. They decided to interview each participant. The researchers devised a questionnaire in order to collect the data they required. The questionnaire included both open and closed questions.

(e) Briefly discuss the benefits for the researchers of using **both** closed **and** open questions on their questionnaire about attitudes to social care.

(4)

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(f) Write **one** question that you think the researchers might have put on their questionnaire. Explain which type of question you have written and why you think this would be a suitable question for this study.

(3)

The researchers have obtained both qualitative and quantitative data in the observations and interviews they have conducted.

(g) Identify the qualitative and quantitative data collected in this study. Explain your answer.

(4)

(h) Explain how the researchers should have addressed **two** ethical issues in the investigation.

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(4)
(Total 24 marks)

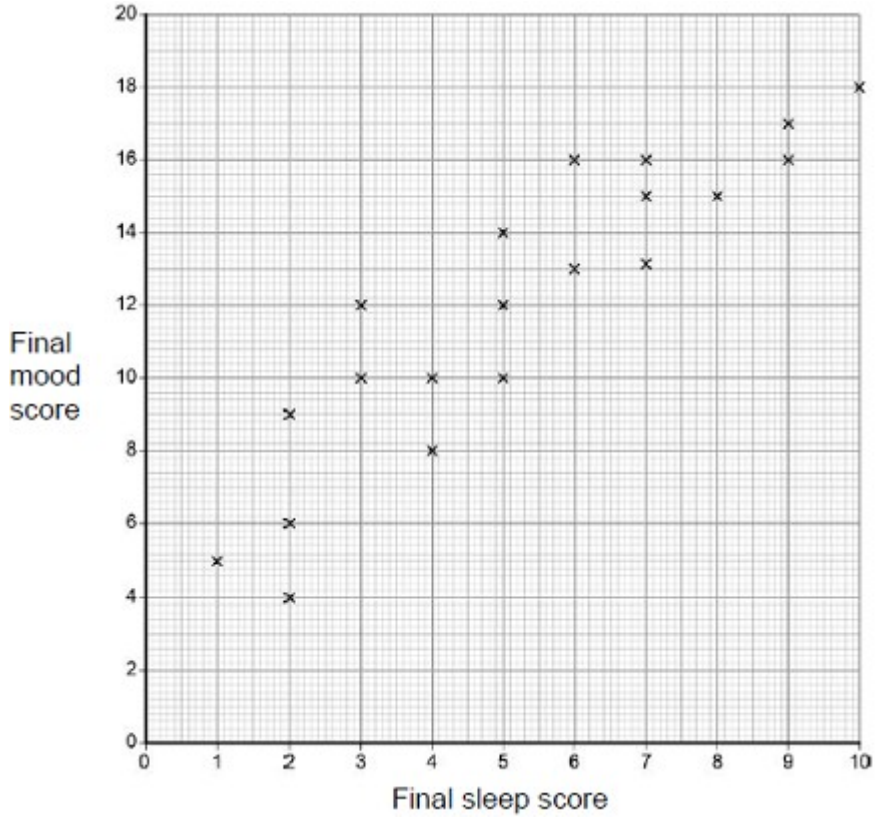
Q6.

Read the item and then answer the questions that follow.

Twenty depressed patients were treated using cognitive behavioural therapy. Over the course of the six-week treatment, each patient's mood was monitored every week using a self-report mood scale (where a score of 20 = extremely positive mood and a score of 0 = extremely negative mood). Each week they also completed a quality of sleep questionnaire which was scored from 10 = excellent sleep to 0 = very poor sleep.

At the end of the study the researchers correlated each patient's final mood score with his or her final sleep score. The results are shown in the graph below.

Scattergram to show the relationship between final mood scores and final sleep scores for 20 patients at the end of therapy



(a) Outline the type of relationship shown in the graph above and suggest why it would not be appropriate for the researchers to conclude that better sleep improves mood.

_____

_____

_____

_____

(2)

(b) Outline **one** way in which the researchers should have dealt with ethical issues in

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this study.

(2)

(c) The sleep questionnaire used by the researchers had not been checked to see whether or not it was a reliable measure of sleep quality.

Explain how this study could be modified by checking the sleep questionnaire for test-retest reliability.

(4)

(Total 8 marks)

Q7.

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.

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Extra space _____

(4)

(Total 12 marks)

Q8.

Type A personality can be measured by using a questionnaire. Explain **two** strengths of using questionnaires.

Strength One _____

Extra space _____

Strength Two _____

Extra space _____

(Total 4 marks)

Q9.

A group of researchers conducted a survey about helping behaviour. They asked an opportunity sample of 200 university students to complete a questionnaire. The questionnaire contained open and closed questions. The following are examples of questions used in the questionnaire:

A Do you think that you are generally a helpful person? Yes No

B What do you think most people would do if they were driving in the rain and saw a woman standing alone next to her broken-down car?

C How would you react if someone walking in front of you slipped and fell over?

(a) Identify an open question from **A**, **B** or **C** above. Give **one** advantage of using open

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questions.

Example of open question (write **A**, **B** or **C**) _____

(1)

Advantage _____

_____

_____

(1)

The researchers then categorised the responses given to question **C** above. The results are shown in **Table 1**.

Table 1: The number of participants who gave the following responses to question C

Help the person	Ignore the person	Laugh at the person	Other reactions
137	23	31	9

(b) What conclusion might the researchers draw from the responses given in **Table 1** above? Justify your answer.

_____

_____

_____

_____

(2)

On the basis of the responses to question **C**, the researchers decided to conduct a further investigation. The aim was to see whether an individual's helping behaviour might be affected by the presence of other people.

The participants were an opportunity sample of 40 first-year students. The students were told that they would be interviewed about university life. Each student was met by an interviewer and asked to wait. The interviewer then went into the next room. After two minutes there was a loud noise and a cry of pain from the next room.

Twenty participants took part in **Condition 1** and the other 20 participants took part in **Condition 2**.

Condition 1 Each participant waited alone.

Condition 2 Each participant waited with another person who had previously been told by the researchers not to react to the sounds from the next room.

The researchers counted the number of participants in each condition who went to help the interviewer in the next room.

(c) Write a suitable experimental hypothesis for the further investigation.

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(2)

(d) Suggest **one** extraneous variable that might be present in the further investigation. Explain why this variable should be controlled and how it could be controlled.

(3)

(e) Identify the experimental design used in the further investigation. Explain why this is a suitable experimental design for this study.

(3)

(f) Explain how random sampling might have been used to select the participants in the further investigation.

(2)

The results of the further investigation are given below.

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Table 2: Number of participants who went to help the interviewer in Condition 1 and Condition 2

Condition 1 (Participant waiting alone)	Condition 2 (Participant waiting with another person)
20	9

(g) Suggest a suitable graphical display that could be used to represent the data in **Table 2**. Justify your choice.

(2)

(h) After the further investigation, the researchers debriefed the participants. Discuss **two** points that the researchers should have included when they debriefed the participants.

(4)

(Total 20 marks)

Q10.

A psychologist carried out a research study to investigate the effects of institutional care. To do this, she constructed a questionnaire to use with 100 adults who had spent some time in an institution when they were children.

She also carried out interviews with ten of the adults.

(a) For this study, explain **one** advantage of collecting information using a

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questionnaire.

(3)

(b) In this study, the psychologist collected some qualitative data. Explain what is meant by qualitative data.

(2)

(c) Write **one** suitable question that could be used in the interviews to produce qualitative data.

(2)

(d) Identify **two** ethical issues that the psychologist would need to consider in this research.

Explain how the psychologist could deal with **one** of these issues.

Ethical Issue 1 _____

Ethical Issue 2 _____

How the psychologist could deal with one of these issues _____

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_____

_____

_____

_____

(5)

(Total 12 marks)

Q11.

A study was carried out to test the effectiveness of a new anger management programme. The programme had been designed by a team of psychologists working in a young offenders' institution.

Fifteen male offenders aged 17– 21 years took part in the programme. An anger score for each offender was obtained before the start of the programme. This score was based on a questionnaire designed by the psychologists. The questionnaire had 10 items. The maximum score was 50; the higher the score, the greater the level of anger.

The month-long programme of anger management involved 8 two-hour sessions.

Throughout the programme, the offenders were told to keep a diary of situations that made them angry and to record their anger in these situations. After the programme had ended, they were told to continue to keep their diary.

Two weeks later, after the programme had ended, a second anger score was obtained for each offender. The same questionnaire was used.

The data obtained are shown in **Table 1** below.

Table 1: Median anger scores and the ranges before and after the programme

	Before	**After**
Median	**35**	**24**
Range	**15**	**17**

(a) Explain why measures of dispersion are often used in addition to measures of central tendency to summarise data. Refer to the results of this study in your answer.

(2)

(b) A Wilcoxon signed ranks test was used to test for a significant difference between the anger scores at the start of the programme and after the programme had ended.

The calculated value of *T* was found to be 22.

Table 2: Critical values of *T*

Level of significance for two-tailed test	0.1	0.05	0.02

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Critical value of *T* (when *N* = 15)	30	25	19

T must be equal to or less than the critical value to be significant.

Using **Table 2** above, explain whether or not the result is significant.

(2)

(c) Explain why the psychologists decided to use a Wilcoxon signed ranks test to analyse the data.

(3)

(d) Explain **two** possible reasons for asking each offender to keep a diary.

(4)

(e) An independent researcher reviewed the design of the study and noted that there was no control group.

Explain how having a control group could have improved this study.

(3)

(f) The independent researcher was also concerned that the psychologists had not checked the reliability and validity of the questionnaire used to measure the level of anger.

Outline how the psychologists could check the reliability **and** the validity of the questionnaire.

(5)

(Total 19 marks)

Q12.

Psychologists sometimes use questionnaires to find out about stress. Explain **two** strengths of using questionnaires in research.

Strength one _____

_____

_____

_____

_____

Strength two _____

_____

_____

_____

_____

(Total 4 marks)

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