## A Level Psychology H567/01 Research methods

## Sample Question Paper <br> Date - Morning/Afternoon

Time allowed: 2 hours

## You must have:

- A scientific or graphical calculator
- No additional materials are required for this Question Paper



## INSTRUCTIONS

- Use black ink.
- Answer all the questions.
- Write your answer to each question in the space provided.
- Do not write in the bar codes.


## INFORMATION

- The total mark for this paper is 90 .
- The marks for each question are shown in brackets [ ].
- Quality of extended responses will be assessed in questions marked with an asterisk (*).
- This document consists of $\mathbf{2 4}$ pages.


## SECTION A: Multiple choice

Answer all the questions.

1 Which is the name of a type of interview?
A closed
B likert
C quasi
D structured


2 Look at the following academic reference:
Piliavin, I.M., Rodin, J.A. \& Piliavin, J. (1969) Good Samaritanism: An underground phenomenon? Journal of Personality and Social Psychology 13.

What is the error in this Harvard style reference?
A the date of the study should be at the end of the reference
B the page numbers are missing
C the surnames of the researchers should be listed in alphabetical order
D the title should give the aim of the investigation


3 Which two groups were compared in Chaney et al.'s (2004) study into operant conditioning?
A children being praised for using their inhaler and children being ignored when using their inhaler

B children using a standard inhaler and children using a modified inhaler
C children using an inhaler and children using no inhaler
D children with asthma and children without asthma

Your answer $\square$

4 Look at the following data set from a condition where participants were timed (in seconds) completing a task in a crisis situation.
$\left.\begin{array}{llllllllllll}36 & 45 & 51 & 67 & 54 & 19 & 50 & 45 & 27 & 76 & 54 & 45\end{array}\right\}$
What is the range of this data set?
A 45
B 47.5
C 58
D 76

Your answer $\square$

5 Read the following hypothesis.
$\mathrm{H}_{1}$ : "Women who earn above average salaries will score significantly higher on a confidence test than women who earn below average salaries."

What is the independent variable in this hypothesis?
A earnings above or below average salaries
B high or low average salary
C high or low score on a confidence test
D women or men

Your answer $\square$

6 Which group of people were included as participants for Maguire's (2000) study into the hippocampi of taxi-drivers?

A females
B left-handed people
C people above 32 years of age
D people with health problems

Your answer

7 What is meant by the term 'socially desirable responses' in psychological research?
A responses which are personal even if they are subjective
B responses which are reliable even if they are invalid
C responses which reflect the participants' wishes even if they are unacceptable to others
D responses which the participants think they ought to give even if they are not true

Your answer $\square$

8 Which is an example of qualitative data?
A the diary entries of six patients suffering from schizophrenia
B the length of time each participant spent reading a list of words
C the modal colour chosen by extroverts
D the percentage of respondents who agreed with capital punishment

Your answer $\square$

9 What is the probability of a significant result occurring by chance where the significance level is $\mathrm{p} \leq 0.025$ ?

A $2.5 \%$ or less
B $25 \%$ or less
C at least $97.5 \%$
D less than 2.5\%

Your answer $\square$

10 Which inferential test should a researcher use to decide whether a correlation is significant?
A Binomial Sign test
B Mann-Whitney U test
C Spearman's Rho test
D Wilcoxon Signed Ranks test

Your answer

11 Which one of the following is a feature of all experiments?
A direct manipulation of the independent variable
B measurement of a dependent variable
C random allocation of participants to conditions
D use of controlled environment

Your answer $\square$

12 How was one of the dependent variables measured in Grant et al.'s (1998) study into contextdependent memory?

A the amount of time taken to recall ten key details from a written passage
B the number of details recalled from a commentary played through headphones
C the number of written words recognised from a commentary played through headphones
D the score from multiple-choice questions based on a written passage

Your answer $\square$

13 Look at the following scatter diagram:

A graph to show the relationship between participants' map
reading score and parking score.


Which is the best estimate of the correlation coefficient for the above data?
A 0.7
B 0.4
C 0.3
D 0.8

Your answer $\square$

14 What is a weakness of using a mode as a measure of central tendency?
A it can generate a number not in the data set
B it is easily affected by outliers
C it is not suitable for nominal data
D it relies on a score occurring more than once

Your answer

15 Which is a requirement of a parametric test?
A data is at least ordinal level
B mean scores are significantly different
C sample is drawn from a skewed population
D standard deviations are not significantly different

Your answer $\square$

16 In Bandura's (1961) Bobo doll study, the participants were pre-tested to assess their aggression levels.

What was the main purpose of his procedure?
A to allow for a matched pairs design
B to exclude children who were especially aggressive
C to help to decide on the sex of the role model for each participant
D to measure the change in aggression before and after the experiment

Your answer $\square$

17 Which feature of science refers to the importance of being able to refute a psychologist's claim?
A deduction
B face validity
C falsification
D verification

Your answer

18 Which is an example of interval level data?
A the mass, in grams, of the brain of an individual with schizophrenia
B the number of nightmares experienced by an individual with schizophrenia
C the number of times an individual with schizophrenia has been admitted to hospital
D the rating of the severity of the delusions experienced by an individual with schizophrenia

Your answer $\square$

19 What was Milgram (1963) unable to control in his experiment into obedience?
A how Mr Wallace interacted with the participant
B the comments used as prods
C the confederate acting as the experimenter
D the increments in voltage

Your answer $\square$

20 What is meant by induction in psychological research?
A where a theory is tested through observations
B where observations contradict a theory
C where observations generate a definitive theory
D where observations generate a likely theory

Your answer

## SECTION B: Research design and response

## Answer all the questions in Section B.

A psychologist used an observation to investigate the effect of environment on individuals' need for personal space. They decided to carry out a covert observation in three settings: a nightclub, a college library and the changing room in a leisure centre. Members of the public using the facilities made up the sample. The psychologist observed key behaviours, such as reduced eye contact, defensive body posture and movement away from people.

21 Outline one strength of using an observation compared to self-report.
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$\qquad$
$\qquad$
$\qquad$

22 Identify three ethical issues that would need to be considered when carrying out this observation.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

23 The psychologist used an opportunity sample for their research.
(a) Explain one strength and one weakness of using an opportunity sample for this study.
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$\qquad$
$\qquad$
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$\qquad$
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$\qquad$
$\qquad$
$\qquad$
$\qquad$
(b) Name and outline one other sampling technique for selecting participants.
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$\qquad$
$\qquad$
$\qquad$
(c) Describe one strength and one weakness of the sampling technique you have chosen in question 23(b).
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$\qquad$
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You have been asked to carry out a further observational study to investigate the differences in use of personal space between rural and urban environments. This will be part of a quasi experiment using one village and one city.

24 Write an alternative hypothesis for your investigation.
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$\qquad$

25* Explain how you would carry out an observation to investigate the differences in use of personal space between rural and urban environments. Justify your decisions as part of your explanation.

You must refer to:

- structured or unstructured observations
- participant or non-participant observations
- time or event sampling
- collection of data.

You should use your own experience of carrying out an observation to inform your response.
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$\qquad$
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$\qquad$

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## Turn over for the next question

## SECTION C: Data analysis and interpretation

Answer all of the questions in Section C.

A psychologist tested the effects of expectations on people's perceptions by carrying out the following experiment. The test item was an ambiguous image - an image that had been purposefully drawn to be perceived in one of two ways - either as a monkey or as a teapot. Participants had to say what they saw after they had viewed the image for one second.

Before carrying out the experiment, the psychologist had checked that the ambiguous image could be perceived in one of two ways. His findings, from this check, are presented in the bar chart below:


26 (a) Identify two findings from the bar chart.
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$\qquad$
$\qquad$
$\qquad$
(b) Explain why a bar chart is appropriate for presenting this data.
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$\qquad$
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(c) Calculate the percentage number of times that the image was identified as neither a monkey nor a teapot. Show your workings.
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$\qquad$
$\qquad$
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Fifty participants were recruited and then randomly allocated into two groups. In one condition, five drawings of other animals were presented, one after the other, before the ambiguous image. Participants had to name each one of these. In the second condition, the set up was the same but five images of kitchen items were used.

27 (a) Name and briefly describe the experimental design used in this study.
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$\qquad$
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(b) Explain how the psychologist would have randomly allocated participants to each group
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$\qquad$
$\qquad$
(c) Discuss why this experimental design was appropriate for this study.
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The findings from the study are presented below:
A table to show the number of participants who perceived the ambiguous image as a monkey or as a teapot from both conditions: image presented with animals and image presented with kitchen items

|  | Perceived as monkey | Perceived as teapot |
| :--- | :---: | :---: |
| Presented with animals | 15 | 10 |
| Presented with kitchen items | 5 | 12 |

28 (a) Identify and simplify the ratio of the number of participants who perceived a monkey in the first condition and the number who perceived a monkey in the second condition.
(b) Identify and simplify the ratio of the number of participants who perceived a teapot in the first condition and the number who perceived a teapot in the second condition.
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$\qquad$
$\qquad$
$\qquad$

29 The psychologist analysed the data using the Chi Squared test. Give two reasons for this choice of test with reference to the study.
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$\qquad$
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$\qquad$

30 Explain how the psychologist would determine the appropriate degrees of freedom (df) for this test.
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$\qquad$
$\qquad$
$\qquad$

The Chi Squared gave an observed (calculated) value of 3.80
Levels of significance for a one-tailed test

| Significance <br> Level | 0.05 | 0.025 | 0.01 |
| :--- | :---: | :---: | :---: |
| Critical Value | 2.71 | 3.84 | 5.41 |

31 Using the above critical values, explain whether the psychologist has found a significant difference or not.
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32 Outline what is meant by each of the following features of science and state how they apply to this experiment into perception.
(a) Cause and effect
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$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$
(b) Objectivity
$\qquad$
$\qquad$
$\qquad$
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$\qquad$

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