

Past Paper Qs on Research Methods

Section A: 2019

- 1 What type of distribution refers to a situation in which the majority of participants score highly on the measure on which they are assessed?

A bimodal
B negatively skewed
C normal
D positively skewed

Your answer

[1]

- 2 Which of these best describes what a 'Type 2' error refers to?

A incorrectly accepting the null hypothesis
B incorrectly rejecting the null hypothesis
C use of the incorrect inferential statistical test
D use of the incorrect tables of critical values

Your answer

[1]

- 3 When would it be best to use the median rather than the mean?

A when there are a few scores much lower than the rest
B when there are a few scores very similar to each other
C when there is a large number of scores overall
D when there is a small number of scores overall

Your answer

[1]

- 4 Which of these inferential statistical tests is the only one that does not involve ranking of the data at some stage?

A Chi-square
B Mann Whitney U test
C Spearman's Rho
D Wilcoxon Signed Ranks test

Your answer

[1]

- 5 A study investigating the difference in aggression between boys and girls recorded the number of times a child shouted at someone during playtime. Which of the following would be the appropriate inferential test to use to analyse the data from this study?

A Binomial sign test
B Chi-square
C Mann Whitney U test
D Wilcoxon Signed Ranks test

Your answer

[1]

- 6 Which symbol in statistics means 'approximately'?

A α
B $<$
C \sim
D Σ

Your answer

[1]

- 7 What type of validity refers to the extent to which the scores on one measure are able to predict the outcome on another related measure?

A criterion
B ecological
C face
D population

Your answer

[1]

- 8 Which of these is the name of an interviewing technique where the researcher has no pre-planned questions?

A free form
B open
C unplanned
D unstructured

Your answer

[1]

- 9 For which of the following would it be appropriate to use a line graph to display the data?
- A differences in the ability of males and females to identify six emotions displayed on the face
 - B number of acts of aggression displayed by boys and girls
 - C preference for four different learning styles displayed as percentages
 - D self-ratings of aggression (1 to 10) at different times of day (10am to 10pm)

Your answer

[1]

- 10 In the study by Simons and Chabris investigating inattention blindness, how was the dependent variable operationalised?
- A detection of 'gorilla'
 - B duration of video clip played
 - C estimation of number of players present
 - D number of passes of basketball counted

Your answer

[1]

- 11 In the study by Baron-Cohen *et al.*, what sampling technique was used to obtain the high functioning adults with autism (HFA)?
- A opportunity
 - B self-selected
 - C snowball
 - D random

Your answer

[1]

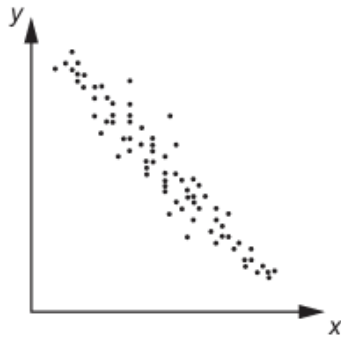
- 12 What fraction is represented by the decimal 0.05?

- A $\frac{1}{2}$
- B $\frac{1}{5}$
- C $\frac{1}{20}$
- D $\frac{1}{50}$

Your answer

[1]

- 13 Which of the calculated values from a Spearman's Rho test best reflect the correlation displayed in the scatter diagram below?



- A $r_s = +0.2$
- B $r_s = +0.8$
- C $r_s = -0.2$
- D $r_s = -0.8$

Your answer

[1]

- 14 Which of these is the name of a section of the write-up of a practical report that provides a summary of the research conducted?

- A abject
- B ablate
- C absinth
- D abstract

Your answer

[1]

- 15 What name is given to the type of data collected directly by the researchers?

- A preliminary
- B precursor
- C principal
- D primary

Your answer

[1]

- 16 What type of data is displayed in a histogram?

- A anomalous
- B continuous
- C nominal
- D ranked

Your answer

[1]

17 Which is true of a field experiment?

- A** has an independent variable
- B** has an independent variable that cannot be manipulated
- C** has an independent variable that is always naturally occurring
- D** has no independent variable

Your answer

☐

[1]

18 Which is true of a naturalistic observation?

- A** always conducted in an outdoor location
- B** conducted in a place where the behaviour studied usually occurs
- C** has a naturally occurring independent variable
- D** has data collected by someone who is part of the research team

Your answer

☐

[1]

19 What is a coding frame?

- A** a technique that enables qualitative data to be recorded as quantitative
- B** a technique that enables quantitative data to be recorded as qualitative
- C** a technique that enables ordinal data to be recorded as nominal
- D** a technique that enables interval data to be recorded as nominal

Your answer

☐

[1]

20 What does the term 'representativeness' refer to?

- A** the extent to which the findings can be applied to everyday life
- B** the extent to which the findings can be applied to other related research
- C** the extent to which the findings can be applied to the population
- D** the extent to which the findings can be applied to the sample

Your answer

☐

[1]

Section B: 2018

Travel log. How do people pass the time on a long journey? Some people seem to cope better than others and manage to keep themselves occupied or simply don't mind (perhaps even enjoy) the rest. Others find it more difficult and can become bored and restless. Psychologists want to use the naturalistic observation method to investigate this and find out if some types of behaviour and actions are more common than others.

21 Write an appropriate research aim for the study. **[2]**

22* Explain how you would use the naturalistic observation method to conduct this research. Justify your decisions as part of your explanation.

In your answer, the required features that you must refer to are:

- participant or non-participant observation
- behavioural categories
- time or event sampling
- how data will be recorded during the observation

You should use your own experience of practical activities to inform your response. **[15]**

23 Describe **two** things that may influence the inter-rater reliability of this study. **[6]**

24 Outline **one** strength and **one** weakness of using the naturalistic observation method in this study. **[6]**

25 Describe **two** ways you would address the ethical consideration of 'responsibility' in relation to this study. **[6]**

Section C: 2017

Stand to attention. An educational psychologist conducted a study to investigate if getting pupils to stand up when completing some of their work in class increased their performance by making them concentrate more. An independent measures design experiment was used testing a small group of 12 pupils. Half of the class stood up at their desks whilst completing a maths test whilst the others remained seated. The data obtained from the study is presented in the table below.

Score on maths test (max 20) when stood up or sat down when taking the test			
Stood up		Sat down	
participant	score	participant	score
1	18	1	14
2	20	2	8
3	17	3	20
4	15	4	4
5	18	5	15
6	19	6	12

- 26 Identify **two** findings from the data presented in this table. [4]
- 27 (a) Calculate the mean for the 'stood up' condition and present your findings to 2 decimal places. Show your workings. [2]
- (b) Calculate the mean for the 'sat down' condition and present your findings to 2 significant figures. Show your workings. [2]
- (c) Calculate the mean percentage number of words recalled in each condition. Show your workings. [2]
- 28 (a) Explain how you would calculate the standard deviation for each condition of this study. [5]
- (b) What information would the standard deviation provide if it was calculated for the data in this study? [2]
- (c) The standard deviation for each condition of this study is presented in the table below. What do these findings inform us about the effect of standing up or sitting down when performing a test?

Stood up	Sat down
1.72	5.60

[4]

- 29 (a) What would be the appropriate non-parametric inferential statistical test to use to analyse the data from this study? Give reasons for your answer. [2]
- (b) Outline how the data in this study would be ranked before using the inferential statistical test. [2]
- 30 Outline **one** advantage and **one** disadvantage of having quantitative data in this study. [4]
- 31 Outline what is meant by each of the following features of science and state how they apply to this study.
- (a) hypothesis testing [3]
- (b) manipulation of variables [3]
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Check individual mark schemes for answers

