

# Candidate Marks Report

## *Series : 6 2018*

This candidate's script has been assessed using On-Screen Marking. The marks are therefore not shown on the script itself, but are summarised in the table below.

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Centre No :	Assessment Code :	H567
Candidate No :	Component Code :	01
Candidate Name :		

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Total Marks :

In the table below 'Total Mark' records the mark scored by this candidate.  
'Max Mark' records the Maximum Mark available for the question.

## SECTION A: Multiple choice

Answer all the questions.

- 1 Which of these is a weakness of a quasi experiment?
- A control of the dependent variable DV
- B control of the independent variable IV
- C control of the measurement of the dependent variable.
- D control of the measurement of the independent variable

Your answer

B

[1]

- 2 Which does not have both an IV and DV?

- ~~A~~ correlation
- B field experiment → *Alien? if so no.*
- ~~C~~ laboratory experiment
- D quasi experiment

Your answer

D

[1]

- 3 What is it best to do with extraneous variables?

- A eliminate them
- B ignore them
- C monitor them
- D record them

Your answer

A

[1]

- 4 What best describes the target population?

- A the people you want to study and apply the findings to
- B the people you want to study and conduct research on in a follow-up study
- C the people you want to study and obtain data from
- D the people you want to study and use in the research

Your answer

A

[1]



5 What is the name given to data before any analysis is performed?

- A interval
- B ordinal
- C quantitative

D raw

Your answer

D

[1]

6 What is the name for the type of reliability that involves dividing a test into two parts and comparing scores on both parts of the test?

- A semi-structured
- B split-half
- C test-retest *← maybe?*
- D two-tailed

Your answer

B

[1]

7 Which of these inferential statistical tests does not require the data to be ranked as part of the calculation?

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

Your answer

D

[1]

8 Which of these is an advantage of secondary data?

- A already-exists
- B easy to analyse
- C easy to interpret
- D ecologically valid

Your answer

~~A~~ A

[1]



9 What is meant by the term 'significant result'?

- A it is a figure that you compare the answer from an inferential statistical test with
- B it is an answer that exceeds a certain probability level
- C it is an answer that tells us something important
- D it is an approximate answer

Your answer

A

[1]

10 In research terms, what is meant by 'social desirability'?

- A responding in a way that is approved of by society
- B responding in a way to be perceived as more friendly
- C responding in a way to please the researcher
- D responding in a way to provide the researcher with what is expected

Your answer

D

[1]

11 In which section of a practical report write-up would you find details of standardised instructions given to participants?

- A abstract
- B appendices
- C discussion
- D introduction

Your answer

B

[1]

12 What is 'the Harvard system'?

- A a way of presenting results from an inferential statistical test in a practical report
- B a way of providing details of the materials used in a practical report
- C a way of summarising how participants were obtained in a practical report
- D a way of writing academic references in a practical report

Your answer

D

[1]



13 Which best describes what a semantic differential rating scale is?

- A selecting a point on a line to indicate your strength of opinion about something
- B selecting a point on a line to respond to how much you agree with something
- C selecting a point on a line with different numbers along it
- D selecting a point on a line with words that have opposite meanings at either end

Your answer

D

[1]

14 Who conducts a peer review?

- A a government minister
- B a statistician
- C fellow academics
- D lay persons

Your answer

C

[1]

15 Which of these different types of data would not include any information in the form of words?

- A interval
- B nominal
- C qualitative
- D secondary

Your answer

B

[1]

16 Which of these could not be the answer from a Spearman's Rho inferential statistical test?

- A -0.728
- B 0.3
- C 0.892
- D 1.52

Your answer

D

[1]



17. What is the mode in this set of data?

~~17, 18, 12, 23, 17, 25, 19, 17~~

- A 17  
B 17.5  
C 18  
D 19

12, 17, 17, 17, 19, 19, 23, 25

Your answer

A

[1]

18. The variance of a set of scores is 14.44. What is the standard deviation?

- A 1.4  
B 3.8  
C 14.0  
D 208.51

Your answer

A

[1]

19. Which variable was negatively correlated with length of time as taxi driver in the Maguire et al. study?

- A volume of grey matter in the anterior hippocampus  
B volume of grey matter in the central hippocampus  
C volume of grey matter in the hippocampus  
D volume of grey matter in the posterior hippocampus  $\rightarrow$  increased.

Your answer

A

[1]

20. What type of data was collected in the Piliavin et al. study for the dependent variable of length of time that it took for help to be offered?

- A interval  
B non-parametric  
C qualitative  $\rightarrow$  comments.  
D secondary

Your answer

C

[1]



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Turn over for the next question.



## SECTION B: Research design and response

Answer all the questions.

**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.
- To investigate the effects of travelling on behaviour  
~~To investigate the effects of travelling~~  
~~or and~~  
of people travelling  
to observe behaviour on long term transport  
(eg. a train/plane) and its effect on behaviour. [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 structured, interval of  $\frac{1}{2}$  hour slots.
- time or event sampling
- how data will be recorded during the observation newspaper/camera (recorded).  
 ↳ in person view gets obstructed.

You should use your own experience of practical activities to inform your response.

To observe peoples behaviour during travel,  
I would conduct a non-participant  
observation on the 26 August to the 27<sup>th</sup> August,  
in which the ~~confederate~~ confederate  
observing/researcher would conduct the  
observation covertly using an installed camera to observe.  
This is to ensure  
ecological validity and reduce any  
suspicion the participants have as to avoid order effects or participant bias.  
In my  
study on the effect of technology on behaviour,  
I found that there was a higher risk  
of social desirability when overtly observing,  
as my participants wanted to appear ~~not~~ better > portray





themselves in a better light, as evident in the results.

Behavioural categories would be put into a table and tallied to ensure ease when recording behaviours and replicability:

behaviour	No. times displayed: (tally.)
Biting nails	
humming	
talking to someone	
moving leg	
reading	
sleeping	

This method will make sure that the study can be <sup>(increasing concurrent validity in time);</sup> replicated, furthermore, with multiple researchers observing, it will allow peer-

reviews, increasing inter-rater reliability. In my study on mobile phones, I <sup>didn't</sup> compare my observations to anyone else, suggesting that I am prone to researcher bias, reducing my validity and reliability.

I would make use of time ~~sampling~~ sampling, recording ~~the~~ 2 hour behaviours

every 30 minutes on the 12 hour trip

from London <sup>Gatwick</sup> airport to South Africa's

Johannesburg <sup>airport</sup>. This will mean that a

range of behaviours can be recorded,

as well as a <sup>variation</sup> range of <sup>different</sup> participants, as

numerous types of people will be on the <sup>[15]</sup> plane,

from different economic and social backgrounds.



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

Some researchers may class 'bored and restless' behaviours differently to others (EG tapping one's foot - due to boredom or music?) Another thing that may influence the inter-rater reliability is if ~~some~~ some behaviours are over-~~exaggerated~~<sup>exaggerated</sup> and other behaviours are missed, ~~for example~~ which would skew the reliability, for example, if 'sitting' and not fidgeting is 'calm', whilst they overlook any limbs bouncing or moving constantly and vice versa. [6]

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

A naturalistic observation, when investigating behaviour during travel, has high ecological validity, as it is set in the natural environment, ensuring a level of realism and thus ~~an~~ applicability and generalisability. However, because it is in an uncontained environment, not only is it hard to replicate, but also difficult to eliminate or control extraneous variables, such as individual differences, ~~or~~ (like whether it is the rush hour or a family trip with small children, etc.) [6]



presumptuous consent - rather do a pilot study to assume that those in the study will have a similar reaction (and consent)

25 Describe two ways you would address the ethical consideration of responsibility in relation to this study.

Firstly, it would be the researchers responsibility to protect the privacy of each participant, as without consent or debriefing (they are being observed on public transport) it won't be easy to obtain either. Another way to address responsibility would be to consider whether it is socially sensitive; eg: would the results isolate those who tap their feet from boredom, portraying them in a negative light?

[6]



SECTION C: Data analysis and interpretation

Answer all the questions.

Love is in the (question) air. We can fall in to it and out of it, it can make us feel both happy and sad or even angry and mad, but what is love? Psychologists decided to investigate this further by using the self-report method in which they posted out a questionnaire to members of the public to complete. Some of the data from the first twenty males and first twenty females to respond are presented in the tables below.

**Table 1: Ratings of the importance of physical appearance for being in love given by male and female participants**  
(1= 'not very important' to 10 = 'extremely important')

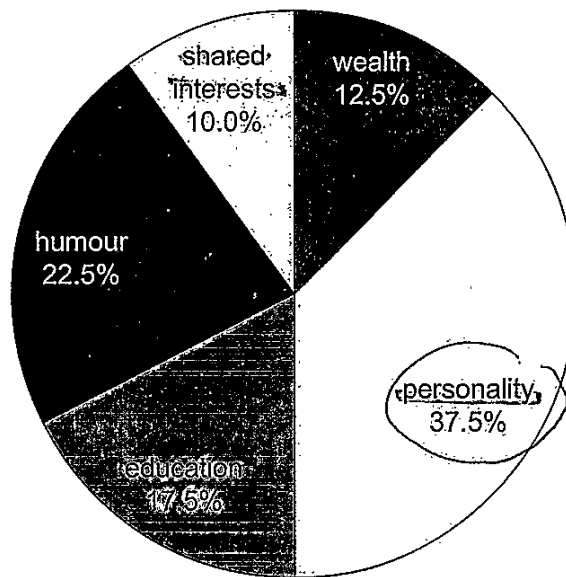
males	females
7	3
5	7
9	7
10	6
8	4
7	6
7	9
9	6
8	5
10	10
9	5
10	7
9	7
9	5
9	14
7	9
6	16
5	12
6	18
7	19
9	20

**Table 2: Responses to the question ... do you believe in love at first sight?**

	yes	no
males	5	15
females	12	8

**Figure 1**

Pie chart showing the percentage of people who thought which attributes were the most important for being in love with someone



- 26 A partly completed table of measures of central tendency for the data collected in Table 1 is presented below.

Measures of central tendency for the ratings of the importance of physical appearance for being in love given by male and female participants		
	males	females
mean	7.9	4.3
median	8.0	4.5
mode	9.0	3.

Answer the following questions so that the rest of the table can be completed. Show all your workings.

- (a) Calculate the mean rating of the importance of physical appearance for being in love given by males. Write your answer to two significant figures.

Table 1

$$7 + 5 + 9 + 10 + 8 + 7 + 7 + 9 + 8 + 10 + 9 + 10$$

$$+ 9 + 9 + 7 + 6 + 5 + 6 + 7 + 9 = 157$$

$$\frac{157}{20} = 7.85$$

$$\approx 7.9$$

[3]

- (b) Calculate the median rating of the importance of physical appearance for being in love given by females.

~~7, 2, 2~~

$$1, 1, 2, 3, 3, 3, 3, 3, 4, 5, 5, 5, 5, 5, 6, 6, 7, 7$$



$$\text{median} = 4.5$$

[2]

- (c) What is the mode for the importance of physical appearance for being in love given by females?

$$2 \times 1's, 1 \times 2, 6 \times 3's, 1 \times 4, 5 \times 5's, 2 \times 6's, 2 \times 7's$$

$$\text{mode} = 3.$$

[1]



- 27 (a) What is the range for the rating of the importance of physical appearance for being in love given by males and females? Show your workings.

$$\begin{array}{l} \text{male highest} = 10 \\ \text{female highest} = 7 \\ \approx 17 \\ 10 - 1 = 9 \\ \text{range} = 9 \end{array} \quad \begin{array}{l} \text{male lowest} = 5 \\ \text{female lowest} = 1 \\ \approx 6 \\ \boxed{17 - 6} \\ = 11 \\ \text{male range} = 5 \\ \text{female range} = 6 \end{array}$$

[4]

- (b) Outline one conclusion from the calculation of the range for the rating of the importance of physical appearance for being in love given by males and females.

Males have a lower range than females, suggesting that they value physical appearance less than females. However, the overall range is 9, suggesting that physical appearance for being in love is extremely important for both females and males. [3]



- 28 (a) Using the formula provided calculate the value of Chi-square for the data in the table below. The  $E$  values (expected frequencies) have already been provided (in the table in italics). Show your workings.

$$\chi^2 = \sum \frac{(O-E)^2}{E}$$

Responses to the question ... 'do you believe in love at first sight?'			
	yes	no	$\Sigma$
males	5 <i>(8.50)</i>	15 <i>(11.50)</i>	20
females	12 <i>(8.50)</i>	8 <i>(11.50)</i>	20

$$\chi^2 = \sum \frac{(O-E)^2}{E}$$

$$\boxed{m/y} \quad \frac{(5-8.50)^2}{8.50} = 1.441$$

$$\frac{(15-11.50)^2}{11.50} = 1.0652$$

$$\frac{1.44 + 1.06}{2} = 1.25 \quad 1.25^2 = 1.5625$$

$$\chi = 40 \quad ? \quad [5]$$



(b) Using the extract of the tables of critical values for the Chi-square test presented below, what is the critical value at the 5% probability level for data collected in this study?

Degrees of freedom (df)	Probability level		
	0.5	0.05	0.01
1	0.455	3.841	6.635
2	1.386	5.991	9.210
3	2.366	7.815	11.345
4	3.357	9.488	13.277
5	4.351	11.070	15.086

.....  
.....  
.....  
..... [2]

(c) Write the significance statement for the analysis performed on this data using the Chi-square test.

.....  
.....  
.....  
..... [2]





- 29 Using the data presented in the pie chart in Figure 1 on page 12, calculate the ratio of how many people said that personality was the most important thing for love compared to those that said wealth was. Show your workings.

$$\text{Personality} = 37.5\%$$

$$\begin{array}{r} 37.5 \\ 12.5 \\ \hline 10.0 \end{array}$$

$$22.5$$

$$\begin{array}{r} + 17.5 \\ \hline = 100 \end{array}$$

$$100 - 37.5 = 62.5$$

$$62.5 : 37.5 \quad \times 2$$

$$= \frac{125}{75} = \frac{25}{15} = \frac{5}{3} \quad \text{5:3}$$

~~ans = 5:3~~

~~wealth = 12.5~~

[4]

★ Please see extra paper  
It's the paper at the back - sorry!

- 30 Evaluate the population validity of the data collected in this study.

Firstly, the sample only consists of ~~20~~ 40 people. Though it isn't androcentric, considering the ease of collecting data, it is relatively small, and so lacks generalisability. Furthermore, there is only quantitative data, so we are unable to find out ~~whether~~ the thoughts of the participants, or ~~or~~ their social/cultural background (they may be straight, white, and ~~low~~ <sup>and have affluent views on</sup> working class<sup>1</sup>), which puts the applicability of the sample in question, as we are unsure if the sample is truly valid or not. Another point is that the researchers only specify 5 attributes for love in figure 1, and <sup>doesn't</sup> allow for any other possible attributes, <sup>at least</sup> assuming their attributes are all there is. This reduces the population validity, as it boxes answers in; the answers may be misleading (eg the ~~most~~ actual most important attribute may be spirituality, or height.)



- 31 The discussion section of the write-up of a practical report includes a conclusion made from the analysis of the data collected. Outline one conclusion from the discussion section of any of your own practical activities.

My practical activity was on whether mobile phones are used to escape uncomfortable situations. We concluded that mobiles are used ~~in~~ <sup>uncomfortable</sup> 13/20 ~~uncomf~~ times to escape an situation (6.5% of the time). This shows that mobiles act as a 'safety blanket' to induce [3] comfort and escape discomfort.

END OF QUESTION PAPER

An uncomfortable situation would be characterized by accusational topics ('did you steal...') or ones where ~~an~~ uncomfortable images/subjects chosen, e.g. ~~the spider~~ - fear of holes, ~~talking about~~ fear of spiders, hoarders houses, etc.



## ADDITIONAL ANSWER SPACE

If additional space is required, you should use the following lined page(s). The question number(s) must be clearly shown in the margin(s).

22 This reduces ethnocentrism, as in my study, the sample was predominantly white, female teenagers from a school in Hertfordshire (middle class), which is both androcentric, and ethnocentric.

In terms of how the data would be recorded, I would make use of the camera's on the plane, as constantly looking around from a seat would both raise suspicion and offer a limited view of the participants. This will ensure a more holistic view of the sample, and when recording them, it would mean the observation can be replicated and ~~re~~ re-tested, unlike my study, where the participants were constantly blocking my view and ~~at~~ any mistakes in recording their behaviour were never noted.

(page 9, at the bottom.)

★ This will be ensured, as 'first', 'business' and 'normal' flying classes will be observed and recorded.



$$29 (37.5 : 12.5) \times 2 = \underline{75 : 25}$$

$$\frac{75 : 25}{5} = \underline{15 : 5}$$

$$\frac{15 : 5}{5} = \underline{3 : 1}$$

$$\text{ans} = 3 : 1$$

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