Surname	StemUp Model Solution	Centre Number	Candidate Number
Other Names			2

GCE AS

B290U20-1

S19-B290U20-1

PSYCHOLOGY – AS component 2
Psychology: Investigating Behaviour

THURSDAY, 16 MAY 2019 – AFTERNOON

1 hour 45 minutes

For Examiner's use only		
Question	**Maximum Mark**	**Mark Awarded**
1.	**4**	
2.	**6**	
3.	**2**	
4.	**6**	
5.	**2**	
6.	**3**	
7.	**12**	
8.	**30**	
9.	**15**	
Total	**80**	

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01

ADDITIONAL MATERIALS

You may require a calculator and a ruler.

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen.

Answer **all** questions in **Sections A** and **B**.

Write your answers in the spaces provided in this booklet. If you need more space, use the continuation page at the back of the booklet, taking care to number the question(s) correctly.

INFORMATION FOR CANDIDATES

The number of marks is given in brackets at the end of each question or part-question.

You are reminded of the necessity for good English and orderly, clear presentation in your answers.

Assessment will take into account the quality of written communication used in your answers.

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Section A

Answer **all** *questions*

1. Describe the process of peer review. [4]

The researcher writes up their research and submits the article to a journal. The editor of the journal first assesses whether it is suitable. If accepted by the editor, it is sent to reviewers, who are experts in the same field, and they are normally kept anonymous from the author. The reviewers scrutinise the aims, methodology, analysis and conclusions and submit their comments to the editor. The editor may then reject the article, accept it, or return it to the author to make revisions. The revised article is re-submitted to the editor and may then be published.

2. Describe **two** ways in which psychologists manage the risk posed by ethical issues. [3+3]

1. Ethics committees: most institutions where research takes place have an ethics committee that must approve any research before it begins. The committee looks at all the possible ethical issues raised in the research proposal and how the researcher suggests they will be dealt with, weighing up the benefits of the research against the possible costs to participants. Members often include lay people as well as experts in the field.

2. Ethical guidelines: organisations such as the BPS publish a code of ethics that all members must follow or they can be removed from the BPS. For example, the guidelines state that a researcher should not deceive participants if it would lead to discomfort, anger or objections, and that participants must be debriefed and told of their right to withdraw at any time.

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3. Explain the difference between stratified sampling and quota sampling. [2]

Both first divide the target population into sub-groups (e.g. by sex) in proportion, but in stratified sampling participants are then selected randomly from each sub-group, whereas in quota sampling they are selected by opportunity, at the convenience of the researcher.

4. Explain when it would be appropriate to use the following inferential statistics:

(a) Sign test. [3]

A Sign test is appropriate when the researcher is looking for a difference between two conditions (a test of difference), when the data collected is at the nominal level of measurement (e.g. categories such as yes / no or + / -), and when the data is related, i.e. a repeated measures or matched pairs design has been used.

(b) Mann Whitney U test. [3]

A Mann Whitney U test is appropriate when the researcher is looking for a difference between two conditions (a test of difference), when the data is at least ordinal level (ordinal or above, e.g. ratings), and when the data is independent, i.e. an independent groups design has been used.

5. Describe what is meant by the term 'standard deviation'. [2]

Standard deviation is a measure of dispersion: a single value which shows how far, on average, the scores in a set of data are spread out (vary) around the mean. A large SD means the scores are widely spread from the mean.

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6. Explain why psychologists may prefer to collect quantitative data rather than qualitative data in psychological research. [3]

Quantitative (numerical) data is generally easier and quicker to analyse and display than qualitative data, e.g. using descriptive statistics, graphs and inferential tests. It can be collected more quickly from a large sample, so findings are more generalisable. It is also more objective and less susceptible to researcher bias during analysis, whereas qualitative data must be interpreted, which is more subjective.

7. 'The reason why Milgram's 1963 research is still taught today is because it tells us so much about what a psychologist should not do.'

Critically evaluate the ethical issues raised by Milgram's 1963 research '*Behavioral Study of Obedience*'. [12]

Milgram (1963) studied 40 male volunteers aged 20 to 50 from New Haven, who believed they were giving electric shocks of 15 to 450 volts to a 'learner'. All 40 went to at least 300 volts and 26 (65%) went to 450 volts. The study raises several serious ethical issues.

Deception: participants were told the study was about the effect of punishment on memory and learning, the learner (Mr Wallace) was a confederate, the draw for roles was rigged, no real shocks were given and the learner's protests were pre-recorded. This prevented fully informed consent. However, without deception the research would have been invalid, as participants would have shown socially desirable behaviour and demand characteristics, so obedience could not have been measured. Milgram also claimed participants thought the deception acceptable: in a follow-up questionnaire 84% said they were glad to have taken part and only about 1% were sorry.

Failure to protect from harm: participants showed signs of extreme tension; they were seen to 'sweat, tremble, stutter, bite their lips, groan, and dig their finger nails into their flesh', and three had full-blown uncontrollable seizures. Baumrind

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(1964) argued this distress was unjustifiable and may have damaged their self-image. On the other hand, Milgram could not have predicted it: before the study he expected only a small proportion (1 to 3%) to give the highest shock, and participants could have stopped at any time. Participants were also debriefed and had a friendly reconciliation with Mr Wallace, and a psychiatrist who interviewed participants a year later found no evidence of lasting harm.

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Section B

Answer **all** *questions*

8. An advertising company wanted to investigate what would make consumers use a new brand of toothpaste. They believed that consumers are more likely to try the new brand if the benefits of the new brand of toothpaste are explained by a dentist. To test this, they produced two adverts. In 'Advert One' an actor talked about the benefits of the new brand of toothpaste dressed as a dentist. In 'Advert Two', the same actor talked about the benefits of the new brand of toothpaste dressed in a suit. The advertising company conducted a small scale study and asked 20 shoppers who were in a local supermarket to watch 'Advert One' and then 'Advert Two'. The shoppers were then asked to state which advert would be more likely to make them buy the new brand of toothpaste.

The results were as follows:

	Advert One (Actor dressed as dentist)	Advert Two (Actor dressed in suit)
Number of shoppers who preferred the advert	15	5

(a) State an operationalised non-directional hypothesis for this research. [2]

There will be a difference in the number of shoppers who prefer Advert One (actor dressed as a dentist) and Advert Two (actor dressed in a suit) as the advert most likely to make them buy the new brand of toothpaste.

(b) (i) Identify the sampling technique used to select participants in this research. [1]

Opportunity sampling.

(ii) Explain **one** strength and **one** weakness of the sampling technique used to select participants in this research. [2+2]

Strength: it is quick and easy, as the company just asked 20 shoppers who were already in the local supermarket, so no sampling frame or time-consuming selection was needed for this small scale study.

Weakness: the sample may not be representative of all consumers, e.g. shoppers in one local supermarket at one time of day, and the researchers might be biased in choosing shoppers who look friendly or likely to prefer the dentist.

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(c) (i) Identify the experimental design used in this research. [1]

Repeated measures design.

(ii) Explain **one** strength and **one** weakness of the experimental design used in this research. [2+2]

Strength: any difference in preference between the two adverts should be due to the IV (dentist or suit) rather than individual differences between groups, as the same 20 shoppers watched both adverts. Fewer participants were also needed.

Weakness: order effects are likely, as every shopper watched Advert One first, so they may prefer it because they saw it first and became bored by Advert Two. Seeing both adverts may also reveal the aim, causing demand characteristics.

(iii) Identify and explain how **one** other experimental design could have been used in this research. [1+2]

Independent groups design. The company could randomly allocate 20 shoppers to watch only Advert One (dentist) and 20 different shoppers to watch only Advert Two (suit), then ask each 'Would this advert make you buy this brand of toothpaste? (Yes / No)' and compare the number saying 'Yes' in each condition.

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(d) (i) Identify **one** graphical representation that could be used to display the results from this research. [1]

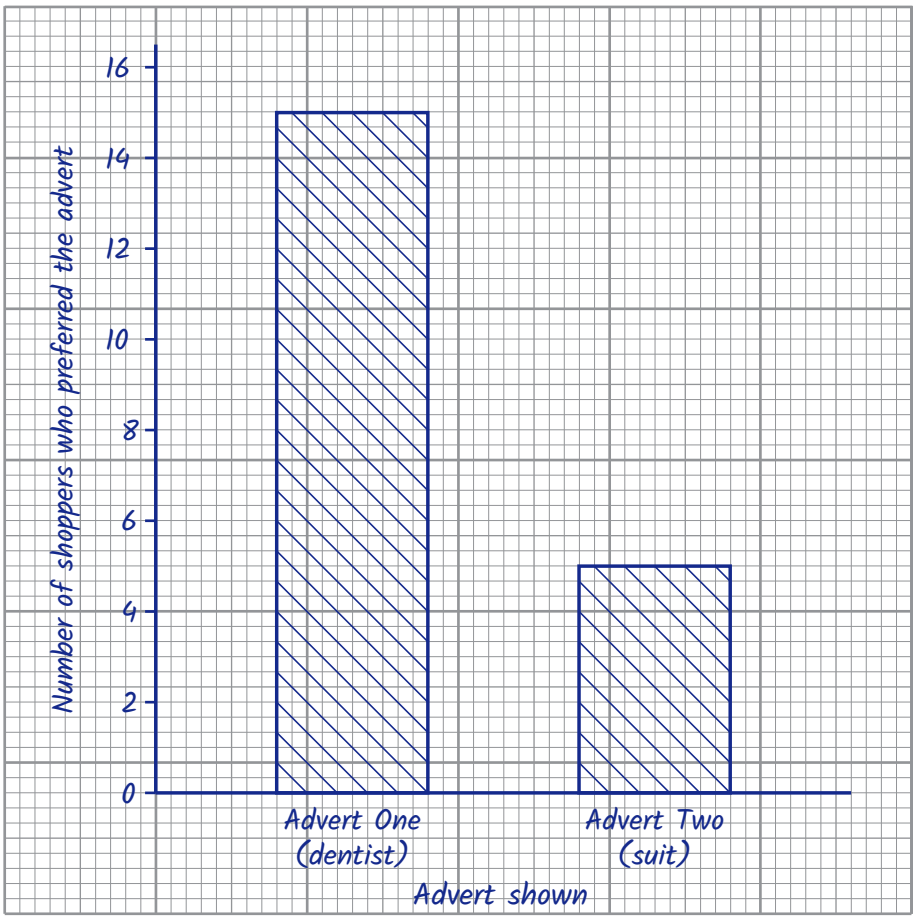
Bar chart.

(ii) Explain why the graphical representation you have chosen in *(d)*(i) would be an appropriate way to display the results from this research. [2]

A bar chart shows the frequency of category (nominal) data, in this case the number of shoppers whose preferred advert was Advert One (dentist) or Advert Two (suit), with separate bars because the categories are discrete.

(iii) Construct the graphical representation you have chosen in *(d)*(i) to display the results from this research. [4]

Bar chart to show the number of shoppers who preferred Advert One (dentist) and Advert Two (suit)



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(e) (i) Explain **one** issue of validity in this research. [2]

Order effects: all 20 shoppers watched Advert One first, so they may have preferred the dentist advert simply because they saw it first and got bored watching Advert Two, which was practically the same advert, rather than because of the dentist's clothes.

(ii) Explain how you would deal with the issue of validity you have chosen in *(e)*(i). [2]

Counterbalancing: show 10 shoppers Advert One followed by Advert Two, and the other 10 shoppers Advert Two followed by Advert One, so any order effects are balanced out across the two adverts.

A member of staff at the advertising company, who has studied AS Psychology, suggests that the company should conduct a semi-structured interview to investigate what would make consumers use a new brand of toothpaste.

(f) (i) Explain **one** strength of using a semi-structured interview in this research. [2]

The interviewer can ask follow-up questions they had not thought of, e.g. if a shopper says they trust the dentist, they can ask why, giving richer, more detailed data on what would make consumers use the new toothpaste.

(ii) Explain **one** weakness of using a semi-structured interview in this research. [2]

Developing questions on the spot needs well-trained, skilled interviewers, making it more expensive for the company than a questionnaire, and these questions may be less objective, so the interviewer could lead shoppers' answers.

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9. In 1999, a team of researchers wanted to investigate how often teenagers were behaving aggressively in T.V. dramas. They conducted a content analysis of T.V. dramas watched by teenagers. They wanted to investigate the amount of times there was a scene where a teenage character behaved aggressively. They analysed five episodes of the two most popular T.V. dramas: '*Head over heels'* and *'Rebellion'*.

	Episode 1	Episode 2	Episode 3	Episode 4	Episode 5	Mean
Head over heels	1	1	1	1	2	1.2
Rebellion	2	4	2	2	9	3.8

(a) Explain **one** reason why a content analysis is an appropriate method to use in this research. [2]

A content analysis is one of the few methods that can be used to study artefacts such as T.V. dramas. It also has high ecological validity, as the researchers analyse the actual dramas that teenagers watch.

(b) Give **one** conclusion that could be drawn from the mean scores. [2]

The mean number of aggressive scenes by teenage characters per episode was higher in 'Rebellion' (3.8) than in 'Head over heels' (1.2), so teenagers watching 'Rebellion' are exposed to more teenage aggression.

(c) Explain **one** strength of using the mean scores in this research. [2]

The mean uses every score from all five episodes of each drama, so it is the most sensitive measure of central tendency, and it is needed for further statistical analysis, such as calculating the standard deviation of aggressive scenes.

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(d) Explain why a median might be more appropriate in this research. [2]

The median is not affected by outlying (extreme) scores, unlike the mean. Episode 5 of 'Rebellion' had 9 aggressive scenes, which raises its mean to 3.8, whereas the median of 2 better represents a typical episode.

(e) A psychologist decided to replicate this research. Explain why she might have decided to use a directional hypothesis in her research. [2]

Directional hypotheses are used when previous research has been conducted. The 1999 findings, that 'Rebellion' showed more teenage aggression than 'Head over heels', could be used to predict the direction of her results.

(f) The psychologist is considering whether she should use the same procedures as the original research. Discuss **one** weakness of the original research and explain how this weakness could be improved. [5]

One weakness is that the research is now out of date and narrow: it only analysed T.V. dramas in 1999. Teenagers today may not watch T.V. dramas as much; they may watch different styles of programme, such as reality shows, and use streaming, YouTube and social media. The two most popular dramas from 1999 therefore may not represent the aggression teenagers are now exposed to, which lowers validity.

To improve this, she could survey teenagers to identify the top three programmes they watch today, irrespective of genre, and conduct a content analysis of those, and also analyse their most visited websites, social media and celebrity news sites for teenage role models behaving aggressively.

END OF PAPER

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7. (continued) Failure to allow participants to withdraw: when participants challenged the experimenter about the learner's welfare or wanted to stop, they were given standardised verbal prods such as 'Please continue' and 'It is absolutely essential that you continue', ending with 'You have no other choice, you must go on'. This put strong pressure on them to stay. However, without these prods, voiced in a 'firm, but not impolite manner', would Milgram really have been assessing obedience? The prods were the order from an authority figure that the study set out to measure. Participants were also told at the start that the $4.50 payment was theirs regardless, and 14 of the 40 (35%) did withdraw, which suggests the right to withdraw existed in practice.

In conclusion, the quotation is partly true: the deception, distress and pressure to continue are exactly the issues that led to stricter BPS ethical guidelines and ethics committees, so Milgram's study is now a key example of what a psychologist should not do. However, judged by the standards of 1963 and a cost-benefit analysis, the harm was unforeseen, it was dealt with by debriefing, and the study produced valuable knowledge about destructive obedience that could not have been gained without these methods. It is taught both as a warning and because its findings remain so important.

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