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Introduction

These exemplar answers have been chosen from the summer 2018 examination series.

OCR is open to a wide variety of approaches and all answers are considered on their merits. These exemplars, therefore, should not be seen as the only way to answer questions but do illustrate how the mark scheme has been applied.

Please always refer to the specification http://www.ocr.org.uk/Images/171732-specification-accredited-a-level-gce-psychology-h567.pdf for full details of the assessment for this qualification. These exemplar answers should also be read in conjunction with the sample assessment materials and the June 2018 Examiners’ report or Report to Centres available from Interchange https://interchange.ocr.org.uk/Home.mvc/Index

The question paper, mark scheme and any resource booklet(s) will be available on the OCR website from summer 2019. Until then, they are available on OCR Interchange (school exams officers will have a login for this and are able to set up teachers with specific logins – see the following link for further information http://www.ocr.org.uk/administration/support-and-tools/interchange/managing-user-accounts/).

It is important to note that approaches to question setting and marking will remain consistent. At the same time OCR reviews all its qualifications annually and may make small adjustments to improve the performance of its assessments. We will let you know of any substantive changes.
Question 22

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]

Exemplar 1

14 marks

[Handwritten text with some legibility issues, discussing participant observation in a real-life situation, observation categories, and data recording methods.]
Talking into 'TV' Catering Romance

Having pre-determined categories is a big advantage because less time is spent on identifying the different behavior types in the brain. Thus, leaving more time to record the data and reducing the likelihood of missing behavioral types on the long journey. In my observations, I used pre-determined categories such as throwing a fit or the tough. This allowed me to make recording the observational much easier, but some behaviors were not on my list, reducing the necessity of my findings. (Book page) [15]

22) I would use time sampling by recording for 10 seconds every 30 seconds. I would look up from my sudden puzzle and mentally the behaviors I saw for the 10 seconds, whilst testing my head each minute. Time sampling is good in use because not only does it give you a clue on the most frequent behavior, but also the long-term effects. Each behavior is displayed for, for example, a person may find themselves resti or do many activities during the long journey whilst others stick to only one activity. In my observation so disposal of litter, I found about a dozen back of the sampling listed key events may be missed, such as...
Examiner commentary

This is a top band response receiving 14 marks as all four RFs (Required Features) are addressed in context and justified (some of which is in context), with explicit links to the candidate's own practical activities for 3 out of the 4 RFs (for RF 2 there is only an implicit link as the theme of the study is not outlined. This means 14, rather than 15 marks credited).

RF 1 is addressed in context (participant observation stated, completing a puzzle in a newspaper on the train as a passenger) and is justified (reduces awareness of being observed) with an explicit link to the use of non-participant observation in the candidates own study of litter disposal.

RF2 is addressed in context, appropriate behavioural categories identified (e.g. reading and talking) and is justified in context (e.g. states the use of behavioural categories will save time recording behaviour on the train), but there is only an implicit link to their own practical work.

RF3 is addressed in context (states that time sampling recording behaviour every 30 seconds for 10 seconds will be used) and is justified in context (provides information about frequency of behaviours on the train) and there is an explicit link to one of their own practical activities investigating little disposal.
RF4 is addressed in context (suggested use of a tally system to record the behavioural categories identified) and is justified in context (can see which behaviours on the train are the most frequent easily) with an explicit link to one of the candidates own practical activities where they used a similar tally system investigating gender differences in colour preferences (although this could have been a little clearer).

**Exemplar 2**

8 marks

To observe peoples behaviour during travel, I would conduct a non-participant observation plan on the 26th August to the 27th August. Observers/researcher would conduct the observation covertly. This is to ensure ecological validity and reduce any suspicion the participants have in my study on the effect of technology on behaviour. I found that there was a higher risk of social desirability as my participants wanted to appear more better portrayed 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.

<table>
<thead>
<tr>
<th>Behaviour</th>
<th>No. Times Displayed</th>
<th>(Tally)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biting nails</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humming</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Talking to someone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moving leg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reading</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sleeping</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

This method will make sure that the study can be replicated. Furthermore, with multiple researchers observing, it will allow peer-reviews, increasing inter-rater reliability. In my study on mobile phones, I didn't compare my observations to anyone else suggesting that I am prone to researcher bias, reducing my validity and

would make use of time something
sampling, recording the 2 hour behaviours every 30 minutes on the 12 hour trip from London Airport to South Africa, Johannesburg. This will mean that a range of behaviours can be recorded, as well as a variety of participants, as numerous types of people will be on the plane, from different economic and social backgrounds.

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 ethnocentric 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 the 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-tested, unlike my study, where the participants were constantly blocking my view and any mistakes in recording their behaviour were never noted.

This will be ensured, as ‘first’, ‘business’ and ‘normal’ flying classes will be observed and recorded.
Examiner commentary

Overall, this response was credited 8 marks.

RF1 addressed in context (suggesting use of non-participant observation with the use of cameras to record behaviours during the travel), but could have been more detailed. It is justified, but not in context (just mentions would reduce participants suspicion), with an explicit link to the candidates own practical work investigating use of technology.

RF2 addressed in context (with appropriate behavioural categories – e.g. reading and sleeping), it is justified but not in context (general reference to increasing replicability), with an explicit link to the candidates own use of behavioural categories in a study of mobile phone usage.

RF3 has not really been ‘properly’ / fully addressed, as for time sampling it does not state for how long every 30 seconds observations would be made for (limited response).

RF4 addressed in context (reference to use of cameras on the plane to record / document behaviour) and justified in context (stating reduces participants awareness of being observed on the plane), but there is only an implicit link to how behaviour was recorded in one of the candidates own practical activities.
Question 23

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

Exemplar 1 6 marks

Examiner commentary

Two good, appropriate points here, both in context (although the second point could have been a bit clearer). The first point refers to the effect of clear pre-determined behavioural categories, the second point talks about the possible influence of observer fatigue due to the type of behavioural sampling technique used.

Exemplar 2 2 marks

The training of the observers may influence inter-rater reliability of this study, as soon observer may record different types of behaviour that may not be listed beforehand. Also, if the researchers agreement point is not 0.8, this could hinder the results of the observation on the behaviours of individuals on long journeys.
Examiner commentary

Here the candidate has provided two brief comments, neither of which are in context and both of which lack clarity. This response could have been improved by elaborating on how / why the recording of different behaviours (not previously listed) would have affected the inter-rater reliability.
Question 24

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

Exemplar 1

6 marks

One strength of this method is that it reduces demand characteristics because participants are in their own environment. They are used to being in such a controlled or manipulated environment. Therefore, they are more likely to show genuine behavior as they are not aware that they are being observed. However, one weakness is that it is difficult to control extraneous variables and give every participant the same experience. For example, if a participant fell asleep in the car, it might be because it was too hot in the car, and they slept for the whole journey, which reduces validity of the research. Less data could be collected. However, they might fall asleep normally but due to the extraneous variables, this could...

Examiner commentary

Two good, appropriate points, with use of supporting examples, in context, to provide elaboration and add the necessary detail for top band.

Exemplar 2

4 marks

One strength of the naturalistic observation method for this study is that participants can not apply demand characteristics as they are in their own environment and know they’re not being observed which can increase ecological validity of the study. However, one weakness of this study is that the researcher may have no control over extraneous variables which could...
Examiner commentary

The first point lacks clarity (it is not made clear how / why participants would not know they were being observed), and the response is not in context. The second point about lack of control is sufficiently detailed with a supporting example in context.
Exampler 1
4 marks

Examiner commentary
The first point about debriefing is appropriate and detailed and provides elaboration with use of good specific examples contextualised to the research presented. The second point about confidentiality ('protection') is creditworthy, but not very clear (so a weak attempt in context) as it is not clear how not using the participants names (after the study) would protect them during the study.

Exemplar 2
1 mark
Examiner commentary

One mark here for reference to ‘protection’ of the privacy of the participants, but the response is not detailed. It should have been made clear how the debrief would / could have done this (lacks elaboration). The second point about ‘social sensitivity’ is not appropriate to the question rubric.
Questions 26(a), (b) and (c)

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                           | 4.3             |
| median                         | 8.0             |
| mode                           | 9.0             |

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.  

\[
\text{mean}_{\text{male}} = \frac{7 + 5 + 9 + 10 + 8 + 7 + 7 + 9 + 8 + 10 + 9 + 10 + 9 + 9 + 3}{15} = \frac{157}{15} = 10.46666667 \\
\approx 10.5 \text{ (to 2 s.f.)}
\]

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

\[
\begin{align*}
\text{median} & = \text{middle value} \\
& = 8
\end{align*}
\]

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

\[
\text{mode} = 9
\]

Exemplar 1  

(a) 3 marks, (b) 2 marks, (c) 1 mark
Examiner commentary

Q26(a) – correct answer showing calculations required presented to two significant figures (3 marks).
Q26(b) – Correct answer for median with ‘calculations’ shown (2 marks).
Q26(c) – Correct identification of the mode (1 mark).

Exemplar 2

(a) 2 marks, (b) 0 marks, (c) 1 mark

Examiner commentary

Q26(a) – correct answer showing calculations required but not presented to two significant figures (2 marks).
Q26(b) – Median incorrectly identified (0 marks).
Q26(c) – Correct identification of the mode (1 mark).
Questions 27(a) and (b)

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.

(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.

Exemplar 1

Examiner commentary

Q27 (a) Correct identification with appropriate calculations of the range for both the males and the females (4 marks).

Q27 (b) Appropriate conclusion in context (males rated importance of physical appearance more consistently than females - enough for 3 marks).
Exemplar Candidate Work

Exemplar 2

(a) 2 marks, (b) 0 marks

\[\text{Males} = 80 - 75 = 5\]

\[\text{Male \ Range} = 5\]

\[\text{Female} = 80 - 74 = 6\]

\[\text{Range} = 6\]

The average for the rating of the importance of physical appearance is much higher for men.

[4 marks]

Examiner commentary

Q27(a) Correct identification of the range for the males with calculations, but incorrect for females (2 marks).

Q27(b) Nothing creditworthy here as the candidate refers to differences based on calculations of the measures of central tendency (average) rather than the range as the question asks for (0 marks).
Questions 28(a), (b) and (c)

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.

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

<table>
<thead>
<tr>
<th>Responses to the question ( 'do you believe in love at first sight?' )</th>
<th>yes</th>
<th>no</th>
</tr>
</thead>
<tbody>
<tr>
<td>males</td>
<td>5 (8.50)</td>
<td>15 (11.50)</td>
</tr>
<tr>
<td>females</td>
<td>12 (8.50)</td>
<td>8 (11.50)</td>
</tr>
</tbody>
</table>

(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 |

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

Exemplar 1

(a) 5 marks, (b) 2 marks, (c) 2 marks
Examiner commentary

Q28(a) Correct calculation of Chi Square with all steps of appropriate calculations shown using appropriate rounding of decimal places at various stages (5 marks).

Q28 (b) Critical value correctly identified (2 marks).

Q28(c) Correct acknowledgement that the results are statistically significant with appropriate discussion providing the rationale for the conclusion (i.e. calculated / observed value greater than table critical value) (2 marks).

Exemplar 2

(a) 2 marks

Examiner commentary

Correct calculation of two cells with calculations shown (2 marks).
Examiner commentary

Q28 (b) The candidate has used the incorrect number of degrees of freedom (4) leading to looking up and citing the incorrect critical value (0 marks).

Q28(c) Incorrect reference to ‘correlation’ here (0 marks).

Exemplar 3

(b) 0 marks, (c) 0 marks

\[ 10 - 9.488 = 0.512 \]
\[ 11.070 - 10 = 1.07 \]

My value is closest to 9.488.
\[ df = 4 \]

There is a statistical significant correlation between love at first sight in males and females.

Exemplar 4

(a) 0 marks, (b) 0 marks, (c) 0 marks

\[ 15 - 5 = 10 \]
\[ 8 - 12 = -4 \]

\[ 5 + 15 + 10 = 30 \]
\[ 8 + 12 + -4 = 16 \]

\[ Females = \frac{16 \times (4 - 2.60) \times (16 - 2.60)}{11.50} = 29.6 \]
\[ Males = \frac{30 \times (16 - 2.60)}{11.50} = 30.2 \]

\[ 0.455 + 1.386 + 2.366 + 3.357 + 4.351 = 11.915 \]
Examiner commentary

Q28 (a) Nothing creditworthy (0 marks).
Q28 (b) Nothing creditworthy (0 marks).
Q28 (c) Nothing creditworthy (0 marks).
Question 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. [4]

Exemplar 1 4 marks

\[ \frac{100 \text{ ppt}}{4.0 \times 100} = 0.4 = \frac{1}{2} \]
\[ 0.4 \times 37.5 = 15 \text{ ppt} \]
\[ 0.4 \times 125 = 5 \text{ ppt} \]
\[ \frac{15.5}{5} = 3.1 \]

Examiner commentary

This response achieves full marks as it shows clear steps in the calculation of the working out of the ratio, and presents the final answer in its most simplified form.

Exemplar 2 0 marks

\[ 37.5 \text{ of } 100 \text{ ppt} \]
\[ 37.5 \div 100 = 0.375 \]

Examiner commentary

This response provides the incorrect ratio (1:8) and does not even have any appropriate workings showing how the figures quoted in the incorrect ratio presented have been derived. The candidate starts by trying to work out what number (for use in the ratio) is represented by 37.5% of 100 (the proportion who regarded personality as most important), but does not multiply the resulting figure by 40 (the total number of participants).
Question 30

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

Exemplar 1

5 marks

This response has two points. The first (generalisation) is made really well and is in context. The second point (sample size / nationality) is briefer (but still clear), but is not in context. If the second point (like the first) was in context this would have achieved the maximum 6 marks.

Exemplar 2

2 marks
Examiner commentary

This response is regarded as an 'attempt in context'. Credit is given for an attempt in the first part of the answer with reference to how using members of the general public would be good. However, the point is not made very clearly. The answer could have been improved by elaborating on the fact that members of the public would include a diverse range of people, across different ages and socio-economic backgrounds etc. which would have enabled the researchers to gather opinions about love from a greater variety of people and increase the representativeness and generalisability of the findings about what people think about love.
Question 31

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.

Exemplar 1

[...There was a significant increase in happiness levels shown through changes on the semantic differential scale. How happy do you feel? Very unhappy 1, 2, 3, 4, 5, 6 Very happy. Between the answers on the scale, those who had eaten a chocolate bar showed a positive change. Then, ate a 50 gram bar of chocolate and then answered it 30 minutes later and those who didn't ate the same but did not receive any chocolate in between the questions. This shows that chocolate has a positive effect on mood....]

Examiner commentary

Here the candidate does not simply state a finding from one of their own practical activities (as a lot of other candidates did), they provide (in the last sentence) some interpretation of what the finding suggests / informs us (that ‘eating chocolate has a positive effect on mood’).

Exemplar 2

I completed a small scale experiment on other students in sixth form. I wanted to identify if the time spent revising affected final grades. I asked the students how many hours they spent revising for a science mock exam and what grade they achieved. From this study, I concluded that the more time spent revising, the better grade an individual would get. For example, an individual revised for 10 hours and got an A, compared to someone who revised for
Examiner commentary

This response just provides details of a finding from one of the candidate's practical activities (albeit clear and detailed), that ... ‘the more time spent revising the better the grade an individual would get’. This response could have been improved if there was some discussion of *why* this might be (ie. some *interpretation* of the finding). For example, more time spent revising means less time doing other things that could be distracting and allow the candidate to focus more clearly on remembering details for the exam etc.).

Exemplar 3

0 marks

Examiner commentary

This candidate has made a comment related to the data collected in the research presented on the question paper (about opinions about love), and not about one of their own practical activities as the question asks for. This highlights the importance of the need for candidates to plan and conduct their own practical work and keep a portfolio of what they did and found so they can revise this for the examination.
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