A-level
PSYCHOLOGY
(7182/2)
Paper 2 Psychology in Context

2017
Morning
Time allowed: 2 hours

Materials
For this paper you may have:
• a calculator.

Instructions
• Use black ink or black ball-point pen.
• Fill in the boxes at the bottom of this page.
• Answer all questions. You must answer the questions in the spaces provided. Do not write outside the box around each page or on blank pages.
• Do all rough work in this book. Cross through any work you do not want to be marked.

Information
• The marks for questions are shown in brackets.
• The maximum mark for this paper is 96.
• You will be assessed on your ability to:
  - use good English
  - organise information clearly
  - use specialist vocabulary where appropriate.
Section A
Approaches in Psychology

Answer all questions in this section

Only one answer per question is allowed.
For each answer completely fill in the circle alongside the appropriate answer.

CORRECT METHOD [ ] WRONG METHODS [ ] [ ] [ ]

If you want to change your answer you must cross out your original answer as shown. 

If you wish to return to an answer previously crossed out, ring the answer you now wish to select as shown.

Which one of the columns in Figure 1, A, B, C or D shows the correct arrangement of levels in Maslow’s hierarchy of needs? Shade one box only.

Figure 1

<table>
<thead>
<tr>
<th>Top of hierarchy</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-actualisation</td>
<td>Self-actualisation</td>
<td>Love/belongingness</td>
<td>Love/belongingness</td>
<td></td>
</tr>
<tr>
<td>Love/belongingness</td>
<td>Esteem</td>
<td>Esteem</td>
<td>Self-actualisation</td>
<td></td>
</tr>
<tr>
<td>Esteem</td>
<td>Love/belongingness</td>
<td>Self-actualisation</td>
<td>Safety</td>
<td></td>
</tr>
<tr>
<td>Safety</td>
<td>Safety</td>
<td>Physiological</td>
<td>Esteem</td>
<td></td>
</tr>
<tr>
<td>Physiological</td>
<td>Physiological</td>
<td>Safety</td>
<td>Physiological</td>
<td></td>
</tr>
</tbody>
</table>

Bottom of hierarchy

Column A [ ]
Column B [ ]
Column C [ ]
Column D [ ]

[1 mark]
Which of the following sentences best describes Wundt’s method of introspection? Shade one box only.

Introspection involves …

A  performing mental calculations.
B  reporting present experience.
C  describing events from the past.
D  outlining hopes for the future.

[1 mark]

Tim used to run a family business. About two years ago, the business got into financial difficulties. Tim’s bank demanded repayment of a loan. Tim lost the business and is very angry.

Two defence mechanisms are denial and displacement.

Outline what is meant by denial and displacement and suggest how each could be involved in Tim coping with his situation.

[4 marks]
Briefly evaluate defence mechanisms as a way of explaining human behaviour and experience. [4 marks]

Outline what is meant by cognitive neuroscience and describe one practical application of cognitive neuroscience. [6 marks]

Extra space
Outline Pavlov’s research into classical conditioning and describe how classical conditioning might explain a child’s fear of school.

[8 marks]
Section B

Biopsychology

Answer all questions in this section

Identify the two components of the peripheral nervous system, and explain two differences in their organisation and/or functions.

[4 marks]

Josie is twelve. Last year she was involved in a serious road accident and suffered head injuries that caused problems with speech and understanding language. Now, a year later, Josie has recovered most of her language abilities.

Using your knowledge of plasticity and functional recovery of the brain after trauma, explain Josie’s recovery.

[4 marks]
Which of the following, A, B, C, or D, is a feature of functional magnetic resonance imaging? Shade one box only.

A  Directly measuring the electrical activity of neurons using electrodes implanted in the brain.

B  Directly measuring the electrical activity of neurons using electrodes on the scalp.

C  Indirectly measuring the electrical activity of neurons by recording changes in brain blood flow.

D  Indirectly measuring the electrical activity of neurons by recording changes in neurotransmitter release.

[1 mark]

Identify two glands that form part of the endocrinal system and outline their functions.

[4 marks]
Discuss what research has shown about localisation of function in the brain.

[8 marks]
Raoul has recently been prescribed a drug for a mental illness. He looks on the internet to find out more about the drug but he does not understand the phrase ‘synaptic transmission’.

Write a brief explanation of synaptic transmission in the brain to help Raoul understand how his drug might work.

[3 marks]
Section C
Research methods

Answer all questions in this section

Read the item and then answer the questions that follow.

Following previous research indicating the social benefits of green space in urban areas, two psychology students decided to observe social behaviour in public spaces. They focused on two neighbouring towns, Greensville where most public spaces were planted with flowers and vegetables, and Brownton where most public spaces were paved with concrete.

The students compared the instances of considerate behaviours in the two towns. Considerate behaviour categories included putting litter in the bin, having a dog on a lead and riding a bike with care.

The observations were carried out in four different areas of a similar size in each town on weekdays between the hours of 4.30pm and 6.00pm. The students worked together to ensure inter-observer reliability, recording each target behaviour whenever it occurred.

13 Should the hypothesis for this research be directional or non-directional? Explain your answer.

[2 marks]

14 Before the observation could begin, the students needed to operationalise the behaviour category ‘riding a bike with care’.

Explain what is meant by operationalisation and suggest two ways in which ‘riding a bike with care’ could have been operationalised.

[4 marks]
The students thought that having a dog on a lead was a useful measure of considerate behaviour because it had face validity. Explain what is meant by face validity in this context.

[3 marks]

Identify and briefly outline two other types of validity in psychological research.

[4 marks]
Identify the behaviour sampling method used by the students. Shade one box only.

A  Time sampling  
B  Pair sampling  
C  Event sampling  
D  Target sampling

[1 mark]

Explain how inter-observer reliability could be ensured by working as a pair.

[3 marks]

The data for considerate behaviours is shown in Table 1.

Table 1

<table>
<thead>
<tr>
<th>Considerate behaviours</th>
<th>Litter in bin</th>
<th>Dog on lead</th>
<th>Riding bike with care</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greensville</td>
<td>23</td>
<td>12</td>
<td>19</td>
</tr>
<tr>
<td>Browntonn</td>
<td>10</td>
<td>17</td>
<td>9</td>
</tr>
</tbody>
</table>

The students noted that overall more considerate behaviours occurred in Greensville than in Browntonn.

Calculate the ratio of considerate behaviours observed in Greensville to considerate behaviours observed in Browntonn. Show your workings and present your answer in the simplest form.

[3 marks]
The students carried out a Chi-square test on their data.

Explain why the Chi-square test was an appropriate test to use in this case.  

[3 marks]

In order to interpret the results of the Chi-square test the students first needed to work out the degrees of freedom. They used the following formula.

Degrees of freedom (df) = (r–1) x (c–1)  

r = number of rows and c = number of columns

Calculate the degrees of freedom for the data in Table 1. Show your workings.  

[2 marks]
The calculated value of Chi-square was 6.20. Referring to Table 2 below, state whether or not the result of the Chi-square test is significant at the 0.05 level of significance. Justify your answer.

Table 2

<table>
<thead>
<tr>
<th>df</th>
<th>0.10</th>
<th>0.05</th>
<th>0.025</th>
<th>0.01</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1.64</td>
<td>2.71</td>
<td>3.84</td>
<td>5.41</td>
</tr>
<tr>
<td>2</td>
<td>3.22</td>
<td>4.60</td>
<td>5.99</td>
<td>7.82</td>
</tr>
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<td>4.64</td>
<td>6.25</td>
<td>7.82</td>
<td>9.84</td>
</tr>
<tr>
<td>4</td>
<td>5.99</td>
<td>7.78</td>
<td>9.49</td>
<td>11.67</td>
</tr>
</tbody>
</table>

To be significant at the level shown the calculated value of Chi Square must be equal to or greater than the critical/table value.

In the discussion section of their report of the investigation the students wanted to further discuss their results in relation to levels of significance.

Write a short paragraph the students could use to do this.

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**Table 2**

<table>
<thead>
<tr>
<th>df</th>
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</table>
As a follow-up to their observation the students decided to interview some of their peers about inconsiderate behaviours in their 6th Form Centre. The interviews were recorded. Explain how the students could develop their interview findings by carrying out a content analysis and why content analysis would be appropriate in this case. [3 marks]

Suggest one inconsiderate behaviour that the students might focus on in their content analysis. [1 mark]
Design an experiment to investigate the effect of indoor plants on mood in office workers. For your measure of mood you should devise a measure that would give data suitable for testing at the ordinal level of measurement.

In your answer you should provide details of:

- Design – include reference to the experimental design, variables and controls
- Materials/Apparatus – describe any special materials required
- Data analysis that could be used – include reference to descriptive and inferential analysis.

Justify your choices.

[12 marks]
There are no questions printed on this page