

**MARK SCHEME for the May/June 2012 question paper  
for the guidance of teachers**

**9773 PSYCHOLOGY**

**9773/02**

Paper 2 (Methods, Issues and Applications), maximum raw mark 60

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes must be read in conjunction with the question papers and the report on the examination.

- Cambridge will not enter into discussions or correspondence in connection with these mark schemes.

Cambridge is publishing the mark schemes for the May/June 2012 question papers for most IGCSE, Pre-U, GCE Advanced Level and Advanced Subsidiary Level syllabuses and some Ordinary Level syllabuses.

Page 2	Mark Scheme: Teachers' version	Syllabus	Paper
	Pre-U – May/June 2012	9773	02

## 1 Methodology

(a) Outline two findings that can be drawn from the table above. [4]

Possible findings include:

- Male subjects exhibited more physical imitative aggression, following exposure to the aggressive male model than female subjects. The mean score of verbal imitative aggression for males was 12.7 whereas the mean score for females was 2.0.
- Male subjects exhibited more verbal imitative aggression, following exposure to the aggressive male model than female subjects. The mean score of physical imitative aggression for males was 25.8 whereas the mean score for females was 7.2.
- Girls exposed to the female model performed considerably more imitative verbal aggression than the boys with a mean score of 13.7 and 4.3 respectively.
- Girls exposed to the female model performed significantly more non-imitative aggression than the boys. This can be seen from the mean scores of 21.3 and 16.2 respectively.
- Subjects in the aggression condition reproduced a good deal of physical and verbal aggression resembling that of the models and their mean scores differed markedly from those of subjects in the non-aggressive and control groups who exhibited virtually non-imitative aggression.

NOTE: any appropriate answer can receive credit; the hints are for guidance only.

1 mark for basic outline of the results e.g. 'girls who observed non aggressive models performed less mallet aggression responses than girls in the aggressive group' and 1 further mark for elaboration such as reference to data e.g. 'girls who observed non-aggressive models had a mean mallet aggression score of 0.5 as compared to a mean score of 18.0 in the aggressive groups'. Twice.

(b) Identify two ways in which this study lacked ecological validity and explain how the ecological validity of this study could have been improved. [8]

Possible ways that the study lacked ecological validity include:

- The experimenters conducted the study in a lab environment. Very rarely will an adult demonstrate how to attack a toy and then allow the child to imitate this behaviour. As Kevin Durkin (1995) pointed out: *"Where else in life does a 5-year-old find a powerful adult actually showing you how to knock hell out of a dummy and then giving you the opportunity to try it out yourself?"*
- Children hit a Bobo doll and not a real person and therefore we cannot assume that the aggressive behaviour displayed would be replicated towards another human. Bandura might have failed to distinguish between play fighting and real violence.
- The model and the child were strangers. This is not like everyday life situations where children imitate role models within their family.
- Bobo dolls are specifically designed to be hit and bounce back when knocked over. This might have encouraged children to be aggressive towards the Bobo dolls.

<b>Page 3</b>	<b>Mark Scheme: Teachers' version</b>	<b>Syllabus</b>	<b>Paper</b>
	<b>Pre-U – May/June 2012</b>	<b>9773</b>	<b>02</b>

NOTE: any appropriate answer can receive credit; the hints are for guidance only.

1 mark for identification of how the study lacked ecological validity e.g. 'children hit a Bobo doll and not a real person' and a further mark for elaboration e.g. 'this means that Bandura might have failed to distinguish between play fighting and real violence'. Twice.

Possible ways that the ecological validity of the study could have been strengthened include:

- Replicate the experiment in a natural setting, e.g. children's home or school.
- Use real people instead of a Bobo doll although this would be unethical to conduct in real life.
- Ask the parents of the children to act as models instead of strangers.

NOTE: any appropriate answer can receive credit; the hints are for guidance only.

2 marks for a suggestion of how the ecological validity could have been improved e.g. 'the experiment could be replicated by asking the parents of the children to act as models instead of strangers' and 2 further marks for an explanation e.g. 'this would have provided further evidence that children imitate behaviours observed within the family setting and that parents act as role models'.

**(c) Using examples from research, debate the use of the observational method when investigating learned behaviour. [8]**

Strengths and weaknesses need to be closely related to learned behaviour.  
Strengths and weaknesses need to be fully explained and not merely identified.  
Strengths and weaknesses can be taken from any key studies, from further research, from the 'explore more' section or from a Paper 3 option. The choice of examples will reflect the synoptic nature of the whole 2-year course.

Strengths and weaknesses can be related to any type of observational method, including controlled, natural, participant and non-participant observations as long as the examples come from relevant studies where the suggested method was used.

One strength and one weakness is sufficient to establish a debate as long as these are fully explained and supported by apposite examples in relation to the observation of learned behaviour.

NOTE: any appropriate answer can receive credit; the hints are for guidance only.

Strengths of controlled observations include:

- Usually carried out in a lab environment and thus allow high control of variables.
- Relatively easy to replicate because of the use of standardised procedures and this improves reliability.
- Allows the use of complex equipment and thus the collection of objective data.

Weaknesses of controlled observations include:

- Low in ecological validity as they are not conducted in a natural environment.
- Demand characteristics might be an issue with controlled observations.
- Participants are aware that they are taking part in psychological research and might change their behaviour to how they think they are expected to behave.

<b>Page 4</b>	<b>Mark Scheme: Teachers' version</b>	<b>Syllabus</b>	<b>Paper</b>
	<b>Pre-U – May/June 2012</b>	<b>9773</b>	<b>02</b>

Strengths of naturalistic observations include:

- High ecological validity as they are conducted in natural environments.
- Fewer demand characteristics as participants are unaware that they are being observed.
- Allow us to study situations that cannot be artificially set up.

Weaknesses of naturalistic observations include:

- Low control of extraneous variables, do not allow us to draw conclusions about the causes of behaviour.
- Low reliability due to lack of standardised procedures and control of variables.
- Experimenter subjectivity might distort data.

Strengths of participant observations include:

- Allow us to study situations that otherwise would have been difficult to investigate.
- Allow researchers to uncover factors that were unknown when the study was designed.
- Allows for more natural behaviour if researchers successfully conceal their identity.

Weaknesses of participant observations include:

- If participants know that they are being studied they might alter their behaviour to how they think they are expected to behave.
- The experimenter might consciously or unconsciously affect group dynamics just by being a group member.
- The researcher might develop bias towards the group and interpret their behaviour according to his expectations.
- Difficulty in documenting data while you are part of a group.

	<b>marks</b>
Debate is comprehensive. Quality and depth of argument (or comment) is impressive. Selection and range of arguments is balanced and competently organised into issues/debates, methods or approaches. Effective use of appropriate supporting examples which are explicitly related to the question. Analysis (valid conclusions that effectively summarise issues and arguments) is evident throughout. Evaluation is detailed and quality of written communication is very good. Understanding and usage of psychological concepts, issues and approaches is extensive.	<b>7–8</b>
Debate is very good. Quality and depth of argument (or comment) is clear and well developed. Selection and range of arguments is balanced and logically organised into issues/debates, methods or approaches. Good use of appropriate supporting examples which are related to the question. Analysis (key points and valid generalisations) is often evident. Evaluation is quite detailed and quality of written communication is very good. Understanding and usage of psychological concepts, issues and approaches is competent.	<b>5–6</b>

<b>Page 5</b>	<b>Mark Scheme: Teachers' version</b>	<b>Syllabus</b>	<b>Paper</b>
	<b>Pre-U – May/June 2012</b>	<b>9773</b>	<b>02</b>

<p>Debate is good.  Quality and depth of argument (or comment) is reasonable.  Selection and range of arguments may be imbalanced with some organisation into issues/debates, methods or approaches evident.  Reasonable use of appropriate supporting examples which are related to the question.  Analysis (key points and valid generalisations) is sometimes evident.  Evaluation has some detail and quality of written communication is good.  Understanding and usage of psychological concepts, issues and approaches is good.</p>	<b>3–4</b>
<p>Debate is reasonable.  Quality and depth of argument (or comment) is adequate.  Selection and range of arguments is often imbalanced with attempted organisation into issues/debates, methods or approaches evident.  Some use of appropriate supporting examples which are often peripherally related to the question.  Analysis (key points and valid generalisations) is discernible.  Evaluation has little detail and quality of written communication is adequate.  Understanding and usage of psychological concepts, issues and approaches is sufficient.</p>	<b>1–2</b>
<p>No or irrelevant answer.</p>	<b>0</b>

<b>Page 6</b>	<b>Mark Scheme: Teachers' version</b>	<b>Syllabus</b>	<b>Paper</b>
	<b>Pre-U – May/June 2012</b>	<b>9773</b>	<b>02</b>

## 2 Issues, Approaches and Perspectives

- (a) Outline the reductionism and holism debate in psychology using examples from any research. [6]

Reductionism refers to the belief that all complex phenomena can be explained by reducing them down to their simple components. On the other hand holism takes the view that the 'whole is more than the sum of its parts'. Holism refers to the idea that complex phenomena cannot be understood simply by looking at their components and that every phenomenon has its own properties and the system as a whole determines how the parts behave.

NOTE: any appropriate answer can receive credit; the hints are for guidance only.

Research examples can be taken from key studies, from further research or from the 'explore more'. Research can be taken from a Paper 3 option. The choice of research will reflect the synoptic nature of the whole 2-year course.

Maximum of 3 marks if candidates have not outlined both sides of the debate.

	<b>marks</b>
Description of the two approaches is accurate, includes most aspects and has elaboration. The candidate clearly understands what they have written. Effective use of appropriate supporting examples which are explicitly related to learned behaviour.	<b>5–6</b>
Description of the two approaches is accurate, has some elaboration, and some understanding. Good use of appropriate supporting examples which are related to learned behaviour.	<b>3–4</b>
Description of the two approaches is basic with little or no elaboration, with little understanding. Reasonable use of appropriate supporting examples which are related to the question.	<b>1–2</b>
No or irrelevant answer.	<b>0</b>

<b>Page 7</b>	<b>Mark Scheme: Teachers' version</b>	<b>Syllabus</b>	<b>Paper</b>
	<b>Pre-U – May/June 2012</b>	<b>9773</b>	<b>02</b>

**(b) Contrast the reductionist and holistic approaches when explaining emotion. [6]**

The question requires not only knowledge of the reductionism and holism debate but also the ability to contrast. Further than this, it requires candidates to apply their knowledge of this debate to explain emotion.

The reductionist approach can explain emotion as a consequence of the release of certain hormones such as adrenaline and endorphins.

The holistic approach can explain emotion through examining the interaction of the parts that form the whole. For example, the interaction of physical, biological, chemical, social, economic and mental factors amongst others will need to be considered when explaining emotion.

NOTE: any appropriate answer can receive credit; the hints are for guidance only.

	<b>marks</b>
Contrasts are appropriate. Description of contrasts is accurate and detailed. Relationship of emotion to the comparisons is explicit. Understanding is full.	<b>5–6</b>
Contrasts are attempted. Description of contrasts is generally accurate with good detail. Relationship of emotion to the comparisons is evident. Understanding is good.	<b>3–4</b>
Contrasts are attempted. Description of contrasts is evident with some detail. Relationship of emotion to contrasts is evident in parts. Some understanding is evident.	<b>1–2</b>
No or irrelevant answer.	<b>0</b>

**(c) Using examples from research, outline the problems that psychologists face when they investigate behaviour using a reductionist approach. [8]**

Any relevant research will be credited. Research can be taken from key studies, from further research or from 'explore more'. Research can be taken from a Paper 3 option. The choice of research will reflect the synoptic nature of the whole 2-year course.

Problems that psychologists face when they investigate behaviour using a reductionist approach include:

- Complex systems may not behave predictably and reductionism arguments tend to be too simplistic as they ignore the complexities of behaviour and experience.
- Behaviour has a number of different causes, reducing it down to one explanation offers a limited understanding of human behaviour.
- Methodological reductionism aims to make the study of behaviour more accessible by reducing the variables. The findings of such experimental research may not apply to other settings because key variables have been altered by being simplified.
- Behavioural components might be difficult to isolate and investigate.
- According to Bell (2000) trying to reduce the mind to something merely physical is to make a basic error. We observe that only certain physical events are associated with mental events: certain electrical activity in the brain (during REM sleep) is associated with subjective reports of dreaming. Psychologists then make the error that one causes the other.

<b>Page 8</b>	<b>Mark Scheme: Teachers' version</b>	<b>Syllabus</b>	<b>Paper</b>
	<b>Pre-U – May/June 2012</b>	<b>9773</b>	<b>02</b>

NOTE: any appropriate answer can receive credit; the hints are for guidance only.

	<b>marks</b>
<p>Problems are accurate and use of psychological terminology is comprehensive.            Description of knowledge (theories/studies) is accurate, coherent and detailed.            Understanding (such as elaboration, use of example, quality of description) is very good.            Apposite examples are used throughout.            The answer is competently structured and organised (global structure introduced at start and followed throughout). Quality of written communication is very good.</p>	<b>7–8</b>
<p>Problems are mainly accurate and use of psychological terminology is competent.            Description of knowledge (theories/studies) is mainly accurate, coherent and reasonably detailed.            Understanding (such as elaboration, use of example, quality of description) is good.            Appropriate examples are used throughout.            The answer has structure and organisation.            Quality of written communication is good.</p>	<b>5–6</b>
<p>Problems are basic and use of psychological terminology is adequate.            Description of knowledge (theories/studies) is often accurate, generally coherent but lacks detail.            Understanding (such as elaboration, use of example, quality of description) is reasonable.            Peripherally relevant examples are used throughout.            The answer has some structure or organisation.            Quality of written communication is good.</p>	<b>3–4</b>
<p>Problems and use of psychological terminology is evident.            Description of knowledge (theories/studies) is sometimes accurate, has coherence and is brief.            Understanding (such as elaboration, use of example, quality of description) is discernible.            Examples are used occasionally.            The answer has discernible structure or organisation.            Quality of written communication is adequate.</p>	<b>1–2</b>
No or irrelevant answer.	<b>0</b>



<b>Page 9</b>	<b>Mark Scheme: Teachers' version</b>	<b>Syllabus</b>	<b>Paper</b>
	<b>Pre-U – May/June 2012</b>	<b>9773</b>	<b>02</b>

### 3 Applications

- (a) Describe psychological evidence and/or theories that could be relevant to the issues raised in the source. [10]

Candidates are required to identify and describe in detail relevant evidence and/or theories to the issues raised in the source. Bowlby's theory of maternal deprivation, Ainsworth's theory of attachment styles, Hazan and Shaver's study on romantic love, Freud's theory of the Oedipus complex, Bandura's social learning theory and research on the effects of video games but also Baron-Cohen's research on autism are obvious examples, but any relevant research will be credited. Candidates can use any appropriate evidence from any other key theory and study or from any key application and 'the explore more' section.

	marks
<p>Description of knowledge (theories/studies) is accurate, coherent and detailed.            Use of terms is accurate and use of psychological terminology is comprehensive.            The theories/studies described are wide-ranging.            Understanding (such as elaboration, use of example, quality of description) is very good.            The answer is competently structured and organised (global structure introduced at start and followed throughout).            Quality of written communication is very good.</p>	8–10
<p>Description of knowledge (theories/studies) is mainly accurate, coherent and reasonably detailed.            Use of terms is mainly accurate and use of psychological terminology is competent.            The theories/studies described cover a reasonable range.            Understanding (such as elaboration, use of example, quality of description) is good.            The answer has some structure and organisation.            Quality of written communication is good.</p>	5–7
<p>Description of knowledge (theories/studies) is often accurate, generally coherent but lacks detail.            Use of terms is basic and use of psychological terminology is adequate.            The theories/studies described cover a range.            Understanding (such as elaboration, use of example, quality of description) is reasonable.            The answer has some structure and organisation.            Quality of written communication is good.</p>	4–3
<p>Description of knowledge (theories/studies) is sometimes accurate, has some coherence but is brief.            Use of terms and use of psychological terminology is discernible.            The theories/studies described cover a narrow range.            Understanding (such as elaboration, use of example, quality of description) is sufficient.            The answer has a little structure and/or organisation.            Quality of written communication is adequate.</p>	1–2
No or irrelevant answer.	0

<b>Page 10</b>	<b>Mark Scheme: Teachers' version</b>	<b>Syllabus</b>	<b>Paper</b>
	<b>Pre-U – May/June 2012</b>	<b>9773</b>	<b>02</b>

**(b) Explain the issues raised in the source using the evidence and/or theories you described in part (a). [10]**

Candidates are required to apply their knowledge of the studies and/or theories described in part (a) to explain the events raised in the source. At least two events need to be explained with the evidence explicitly applied to the source.

	<b>marks</b>
<p>Quality of explanation and depth of argument is impressive.            Application of knowledge (theories/studies) described in part a) is accurate, coherent and detailed.            Use of terms is accurate and use of psychological terminology is comprehensive.            Understanding (such as elaboration, use of example, quality of description) is very good.            The answer is competently structured and organised (global structure introduced at start and followed throughout).            Quality of written communication is very good.            Relationship to the events raised in the source is explicit.</p>	<b>8–10</b>
<p>Quality of explanation and depth of argument is very good.            Application of knowledge (theories/studies) is mainly accurate, coherent and reasonably detailed.            Use of terms is mainly accurate and use of psychological terminology is competent.            Understanding (such as elaboration, use of example, quality of description) is good.            The answer has some structure and organisation.            Quality of written communication is good.            Relationship to the events raised in the source is evident.</p>	<b>5–7</b>
<p>Quality of explanation and depth of argument is competent.            Application of knowledge (theories/studies) is often accurate, generally coherent but lacks detail.            Use of terms is basic and use of psychological terminology is adequate.            Understanding (such as elaboration, use of example, quality of description) is reasonable.            The answer has some structure and organisation.            Quality of written communication is good.            Relationship to the events raised in the source is evident in parts.</p>	<b>4–3</b>
<p>Quality of explanation and depth of argument is basic.            Application of knowledge (theories/studies) is sometimes accurate, has some coherence but is brief.            Use of terms and use of psychological terminology is discernible.            Understanding (such as elaboration, use of example, quality of description) is sufficient.            The answer has a little structure and/or organisation.            Quality of written communication is adequate.            Relationship to the events raised in the source is implicit.</p>	<b>1–2</b>
No or irrelevant answer.	<b>0</b>