

## PSYCHOLOGY

### Overall grade boundaries

#### Higher level

<b>Grade:</b>	1	2	3	4	5	6	7
<b>Mark range:</b>	0-8	9-19	20-27	28-40	41-54	55-67	68-100

#### Standard level

<b>Grade:</b>	1	2	3	4	5	6	7
<b>Mark range:</b>	0-10	11-20	21-29	30-43	44-55	56-68	69-100

### Higher level internal assessment

#### Component grade boundaries

<b>Grade:</b>	1	2	3	4	5	6	7
<b>Mark range:</b>	0-2	3-5	6-8	9-11	12-15	16-18	19-25

#### The range and suitability of the work submitted

There was a wide and varied range of topics that were investigated in this year's HL internal assessments. It was noted that the most successful experimental studies came from the field of cognitive psychology, while some others from areas such as social psychology were also done very well.

Unfortunately, there were still far too many candidates who had not conducted experimental studies. Instead, their studies were either quasi-experimental or correlational in nature. Once again teachers are reminded that candidates *must* manipulate *one* independent variable and measure *one* dependent variable. A pre-existing difference between groups is *not* a suitable independent variable. Therefore gender, culture, handedness, age, race, school grade, IQ, *etc.*, are *not appropriate* for the IB psychology higher level internal assessment. If an independent variable is *not* manipulated by the candidate, then a mark of zero (0) is awarded for the entire report as it does not meet the most basic requirement of the psychology internal assessment.

While some candidates attempted to address more than one independent or dependent variable, this was usually at the detriment of depth of analysis in the introduction, results and discussion sections due to the strict word limit for the report. Although multi-faceted studies may be very interesting to candidates, they do not always lend themselves well to the internal assessment task.

Additionally, there were still a number of candidates that conducted studies that breached ethical guidelines set out by the IBO. It is the responsibility of *both* the teacher and the student to ensure that the studies to be carried out meet IB ethical guidelines. Everyone should be reminded that internal assessments that do not adhere to ethical guidelines may receive no credit for this component. If there are any questions on ethics, please make use of the Online Curriculum Centre (OCC) to get feedback

from other experienced teachers. A general rule of thumb that may be useful when considering whether or not to approve a topic of investigation is “doubt means don’t”.

Most candidates handled the procedural aspects of their studies rather well. Problems arose, however, with the analysis, explanation and justification required in the introduction and discussion sections.

## **Candidate performance against each criterion**

### **Criterion A: Introduction**

The main purpose of this section is for the candidate to introduce and analyse studies that are relevant to the hypothesis that they are proposing. The assessment criterion requires candidates to provide relevant studies/theories and to analyse them in depth. This analysis was most successful where candidates provided discussion of the importance of each study, how it related to their own hypothesis, and its findings. Far too many candidates described the studies rather than analysing them. The research hypothesis must be operationalized (*i.e.*, the levels of the independent variable and how the dependent variable is to be measured must be clearly identified).

Justification of the hypothesis was problematic. A hypothesis is justified when the prediction it is making is supported by some sort of background research, theory or study. For example, if candidates predict that group A will score higher than group B, and the background research provided has suggested that group B will perform better than group A, then their hypothesis is not justified. Candidates should have some sort of justification for the prediction they make in the hypothesis.

### **Criterion B: Methods: Design**

Many candidates were able to justify appropriately the design of their experiment. Some candidates, however, understood this requirement to be justification for use of the experimental research method rather than the design of their experiment. Justification of the design could be based on relative strengths and limitations (*e.g.*, repeated measures designs lessen the impact of participant variables, however counterbalancing may need to be considered).

Most candidates were able to identify appropriately their independent and dependent variables. There was a lack of precision at times, however. For example, in the classic Stroop effect studies the independent variable is the concept of interference, operationalized, for example, as the print colour of the words presented to participants, and the dependent variable is time to complete the task. Some candidates stated that the IV was the actual lists of congruently coloured or incongruently coloured words. These lists are not the independent variable, *per se*, but rather how the different conditions of the independent variable were operationalized. In one list there was interference, in the other list there was no interference. Many candidates stated how the IV was operationalized, but failed to identify what the independent variable actually was.

More candidates did a good job of following ethical guidelines than in previous sessions, but there are still some who did not. Additionally, candidates need guidance from the teacher on proper informed consent statements. There is a difference between “consent” and “informed consent”. While most candidates got the consent of their participants, not all were *informed* of relevant details of the study that can be shared and yet not affect participant performance. Additionally, the need for parental informed consent needs to be reiterated where appropriate.

### **Criterion C: Methods: Participants**

The assessment criterion requires that candidates identify some characteristics of the target population. Many candidates are not doing this adequately. Instead, they give characteristics of the sample and make no reference to the broader population from which the sample was taken. There was also imprecise use of the word “random” with many selection procedures not being random, although the claim was made that they were. Opportunity/convenience samples and volunteers are not random

and claims should not be made that they are. Additionally, few candidates adequately addressed how participants were allocated to the conditions.

Extremely large sample sizes are unnecessary for the IB psychology internal assessment requirements, a sample of 15-20 participants is sufficient.

#### **Criterion D: Methods: Procedure**

This section was rather well done. Some candidates over-simplified this section to a skeletal list of steps that were rather cryptic.

#### **Criterion E: Results**

This section was problematic for many candidates. While the calculations of descriptive and inferential statistics were rather well done, the actual understanding demonstrated in their analysis was weak. All raw data tables must go in the appendices. Only summary data tables, graphs and results of statistical analysis need to be in this section of the paper. There was a problem in labelling of graphs and charts as well as selection of the most appropriate visual representation of the results. In most cases, a simple two-bar graph is the most appropriate. Complex bar charts, pie graphs, box and whisker plots, *etc.*, may not be the most appropriate to the hypothesis. Additionally, no extraneous results need to be analysed. For example, many candidates reported gender differences even though their hypotheses did not mention gender as a variable (which is inappropriate for this experimental study anyway). Measures of central tendency tended to be better handled than measures of dispersion. Additionally, few candidates analysed the descriptive statistics, in this section or in the discussion section (*e.g.*, explaining *why* there may be differences in measures of dispersion between the two conditions). This type of analysis was seen in rare cases and generally tended to score quite well as the candidates demonstrated more complete understanding of results analysis.

#### **Criterion F: Discussion**

The discussion of the results in this section was usually rather limited. As mentioned above, most candidates provided no discussion of results other than differences in the means. Measures of dispersion were rarely discussed. Many candidates were able to relate back to the introduction section, although this was rather simplistic at times. Weaknesses were discussed more than were strengths. Much of the discussion of improvements was rather superficial (*e.g.*, need bigger sample size). Few candidates discussed their own procedural aspects that might have introduced confounding variables. Some candidates did not include a conclusion in their discussion.

#### **Criterion G: Presentation**

Presentation of references from internet sources was problematic for many candidates. Candidates should be given direct instruction in how to properly cite references throughout the paper and in the references section. It is advised to bring your librarian or information literacy specialist in to help candidates with this. It is recommended that candidates include the word count on their title page.

### **Recommendations for the guidance and teaching of future candidates**

- The psychology internal assessment is a very difficult challenge for most students as it is probably the first time they have encountered such a task. There is a need for teachers to be well versed with experimental research methods and statistical analysis appropriate to psychology. When assessing their own students' work, teachers must carefully adhere to the assessment criteria. When awarding marks there must be written evidence that justifies the mark awarded. Teacher comments are helpful in understanding how marks were awarded. It is perfectly acceptable to submit an IA for moderation with the teacher's marks and comments on it.

- Teachers must ensure that all work submitted by candidates follows ethical guidelines set out by the IBO. This scrutiny should come very early in the process. Teachers must also resist students' desire to carry out "interesting" yet unethical studies. The IA is not like the Extended Essay in that teachers are required to give support to their students throughout the task; it is not intended to be a piece of independent research.
- Candidates must also be carefully instructed in the precise use of psychological terminology. Terms such as "random", "experiment", and "informed consent" have very particular meanings in psychology that differ slightly from their use in everyday language. Misusing these, or other terms, does not demonstrate a high level of understanding of psychological research methods.
- As this task is part of the IB psychology course, it is a learning experience for candidates. Teachers should take the time and opportunity to support their candidates throughout the process. This should include dedicated class time to activities that help develop the skills that are to be assessed in the final report. These activities could include practicing hypothesis construction, collaborative writing of a sample introduction section not to be used in their IA, discussion of results and findings of published studies, peer editing and peer reviews. The skills required must be taught and not left for the final submission of the IA.

## Standard level internal assessment

### Component grade boundaries

<b>Grade:</b>	1	2	3	4	5	6	7
<b>Mark range:</b>	0-2	3-5	6-8	9-10	11-12	13-14	15-20

### Range and suitability of the work submitted

Some excellent reports of candidate experimental studies were submitted for this examination session. These reports reflected understanding of experimental design, appropriate data collection procedures accompanied by analysis, and included details of the procedure conducted (including sampling methods) with all relevant materials needed for replication. Discussions were well balanced and provided an appropriate conclusion and offered modifications and improvements for further research. However, many candidates submitted work that gave the impression of having been produced in a hurry or which suggested a weak understanding of psychological research methodology.

Some candidates still failed to adhere to the requirements of the experimental study particularly in relation to the use of quasi-independent variables and survey research. Such examples included the use of gender, age, handedness and ethnicity that did not allow for manipulation of the IV by the candidate. To meet the requirements, candidates must manipulate the independent variable and examine its effect on the dependent variable.

#### Criterion A: Introduction

Introductions had clear aims and relevant research at the top of the range. However, too often relevant information was presented in a routine-like manner with an over-emphasis on procedural characteristics of the original study and lacking focus on design or the theoretical relevance of findings. In other cases introductions were astonishingly short.

Furthermore, candidates sometimes introduced modifications of original studies. These suggested modifications of studies were often not justified and led to unnecessarily complex designs. Quite often the authorship of research mentioned in the introduction was not properly referenced, particularly if the research was taken from secondary sources.

Candidates are reminded to link the original research study in the introduction with relevant commentaries in the discussion.

### **Criterion B: Method: Design**

The method section continues to improve and was completed in the required manner by most candidates although there are still some candidates who do not state the rationale for selecting a particular research design.

Identification of the independent variable (IV) and dependent variable (DV) was frequently correct; however the operationalization of these two variables was not always clear.

Most candidates seem well aware of ethical issues and in the majority of cases a copy of an informed consent form was presented in the appendices. However, some candidates are still unaware that parental consent is also needed where participants are under 16 years of age.

Informed consent needs to be written carefully and with thought so that all relevant aspects of the study that might affect the willingness of the participants to participate in the study are clearly outlined (*e.g.*, possible effects on participants such as embarrassment, stress, discomfort)

### **Criterion C: Method: Participants**

Most candidates chose students from their psychology classes as a sample. Most identified the sampling technique but often failed to identify how the sample was allocated to groups and only rarely justified the chosen method of sampling. The term “random” is still not understood by many candidates, leading to confusing accounts of participant selection and allocation to conditions.

### **Criterion D: Method: Procedure**

This criterion produced the least difficulty for candidates. The majority of candidates produced clear, itemized and easily followed procedures.

Candidates should be encouraged to include reference to timing and location as well as the major steps taken in the procedure.

### **Criterion E: Results**

Rather frequently examiners commented that candidates present and discuss outcomes that were not part of the original hypothesis. Descriptive statistics in these cases did not match the choice of the IV and DV defined in the design section.

Usually the descriptive statistics chosen were mean, median, mode and range. It is highly recommended for candidates to choose only one measure of central tendency (the one which is appropriate for the scale of measurement used when obtaining the results). In addition, an appropriate measure of dispersion should be included. Also, candidates should be encouraged to label their tables and graphs more clearly and accurately; *e.g.*, not just stating “score obtained” or “conditions A and B”, *etc.*, but actually giving a full, informative label that tells the reader exactly what the data presented are referring to.

In many reports, candidates failed to elaborate on the data. Candidates should be encouraged to provide a short but relevant discussion interpreting the data – for example discussing possible differences between the measures of central tendency or trying to explain the dispersion of data.

### **Criterion F: Discussion**

Discussion ranged from superficially written with limited evaluation of strengths and limitations to well balanced with an appropriate conclusion and offering modifications and improvements for further research. Most candidates had difficulty relating their findings back to the original work and

the theoretical background stated in the introduction, and were seldom perceptive in criticising their own research. Furthermore, related ideas for future research were often undeveloped.

In general, most examiners noticed that candidates had problems with presenting a relevant conclusion. Although there were concluding remarks embedded within the report a final concluding statement was rarely seen.

### **Criterion G: Presentation**

Presentation of many reports is in accordance with the guidelines prescribed – many centres demonstrated work that was impressively presented and scored full marks for this criterion. Unfortunately, there are still reports in which the maximum number of words permitted is exceeded or in which no reference section is provided.

## **Recommendations for the guidance and teaching of future candidates**

Teachers might consider using stages of development where specified parts of the IA task need to be completed by the candidate by a certain deadline:

### Stage 1:

- Consideration of ethical guidelines
- Topic identification,
- Research question,
- Identification and operationalization of variables,

### Stage 2

- Research of literature
- Review of theoretical background and previous research

### Stage 3

- Methodology
- Identification of design and justification,
- Characteristics of target population, sampling method
- Ethical guidelines
- Outline of procedure

### Stage 4

- Conducting the study
- Compile and analyze results,
- Compare results to data obtained in previous investigations
- Analyze strengths and limitations of current study
- Suggest modifications
- Provide conclusion
- Compile, label and organize materials for Appendix

This method or a similar one will allow:

- Candidates to move through the component process in a more organized manner.
- Teachers to monitor the progress and guarantee that the work conducted is original.
- After candidates have completed all steps the teacher can check and comment on the first draft for each candidate separately. A specific tick list could be used by both candidates and teachers to check off relevant parts of the report as they go along. This list would help ensure more complete coverage of elements included for each criterion. It would also help the teacher to apply the assessment criteria more rigorously (especially for criteria B, C, E & F), rather than letting serious problems go through.

Generally, teachers should emphasize clearly the following recommendations to future candidates:

- It is strongly advised that variables of race, gender, handedness and age are not used for study. If these variables are used as an IV a zero is awarded for the report since it is not considered a true experiment, as defined in the *psychology guide* on page 57.
- Also, teachers should strongly recommend SL candidates to keep their experiment within focused and manageable limits. SL candidates are also reminded to avoid using inferential statistics. Descriptive statistics should be used instead.
- More attention should be given to drawing graphs as well as writing accompanying commentary to indicate that candidates have understood their own graphical constructions.

## Higher and standard level paper one

### Component grade boundaries

#### Higher level

<b>Grade:</b>	1	2	3	4	5	6	7
<b>Mark range:</b>	0-4	5-9	10-11	12-17	18-24	25-30	31-52

#### Standard level

<b>Grade:</b>	1	2	3	4	5	6	7
<b>Mark range:</b>	0-4	5-8	9-11	12-17	18-22	23-28	29-44

### The areas of the programme and examination that appeared difficult for the candidates

The consistent focus required to answer certain questions seemed to elude certain candidates. Frequently such candidates responded to a question that was not set or a question they had predicted, and they were determined to answer by using their memorized material.

Many candidates seemed to have insufficient understanding of basic terminology from the *psychology guide*, and this left them apparently unable to understand the precise requirements of questions. For example, in question 1, far too many responses omitted applications of theory or research findings, instead simply describing research or assumptions from the perspective. In question 2 the key term “research method” was overlooked by many, and the focus of their response centred instead on an evaluation of the selected study.

Once again, the cognitive perspective appeared to present problems and candidates struggled to offer an appropriate study from the perspective, attempting, for example, to use Kohler’s insight learning study and the work of Bandura in question 2. In addition, understanding of methodology was limited, as in claiming Loftus & Palmer used verbal protocols or observation as their research methodology when investigating eyewitness testimony.

Although a compulsory part of the syllabus, many candidates struggled to identify and explain a study in which biological factors *extended* behaviourist explanations.

There was a lack of empirical research, and also of reference to ethical, gender, methodological and cultural factors in many responses to section B questions.

## **The areas of the programme and examination in which candidates appeared well prepared**

In comparison with previous years, candidates seemed to have an improved understanding of the humanistic perspective, although most tended to have an over-simplistic view of the assumptions of free-will and determinism in this perspective. Although candidates struggled with question 3, their use of learning theories in other questions showed a sound understanding of classical and operant conditioning, and of Social Learning theory. Levels of knowledge were generally satisfactory but candidates were often unable to adapt their knowledge to the specific requirements of the question as set. Many candidates found it difficult to focus on the psychological aspects of material under discussion in biological perspective questions, appearing to confuse biology and psychology in producing answers that were essentially pure biology.

Frequently candidates were able to offer fair descriptions of research and theory. Less frequently but in some cases quite impressively, they were able to write cogently on assumptions, methods, evaluation and cultural differences in the manner of interpretation of psychological material. However, examiners gained the distinct impression that this knowledge was often rote learned and, once faced with a relatively novel application problem, candidates seemed unable to produce potential responses that were within their intellectual grasp. This could be the result of insufficient time being available to discuss such problems in class.

Scripts awarded marks in the lowest bands were generally characterized by a lack of empirical research and theory, instead offering merely anecdotal responses to questions.

## **The strengths and weaknesses of the candidates in the treatment of individual questions**

### **Section A**

**Question 1:** *Assess **one** application of theories or findings of empirical studies from the biological perspective. (8 marks)*

Many candidates were able to describe current biological knowledge of the function of the brain and nervous system yet failed to make the connection with psychology. Appropriate applications could have been drawn from areas such as work (shift patterns, stress) or treatment (drug interventions for dysfunctional behaviours). Roger Sperry was regularly accused of unethically severing the corpus callosum in epileptic patients, whilst even weaker responses reeled off the history of Phineas Gage yet were totally unable to explain how this could be considered to be an application of findings or theory.

**Question 2:** *Identify **one** study from the cognitive perspective, and explain **one** strength and **one** limitation of the research method used in the study. (8 marks)*

A small proportion of candidates failed to identify an appropriate study from the cognitive perspective. Many spent a great deal of time discussing aspects of the study that were not relevant to the question, *e.g.* considering the results at length and how these fitted with the cognitive perspective. Most candidates did not make clear which method was used in the selected study – frequently including the name of the method almost by accident in the latter part of their response. As in previous sessions, some candidates incorrectly referred to “the experiment” in discussing non-experimental research. Instead of offering a strength and a limitation of the methodology, too many candidates offered evaluation of the research procedure or findings. Clearly, not reading the question in detail affected the ability of many candidates to achieve marks for their response.



**Question 3:** *“The influence of biological factors has extended traditional behaviourist explanations of behaviour within the learning perspective”.*

*Explain this statement making reference to **one** relevant study from the learning perspective. (8 marks)*

Poorly attempted by very many candidates, this was another example of lack of thorough reading of the question. Candidates often ignored the “biological factors” and simply described studies offering cognitive factors as additional elements extending traditional behaviourist explanations of learning. Others confused biological responses, such as salivation, with the influence of biological factors and some answers attempted to consider what the biological perspective could contribute to the learning perspective.

**Question 4 (HL only):**

*(a) Describe **one** key concept used in humanistic explanations of behaviour. (4 marks)*

*(b) Explain the assumption on which the concept chosen in part (a) is based. (4 marks)*

Candidates in some centres produced responses demonstrating sound knowledge and understanding of the question and the perspective. In fact, many candidates offered far more information than was required for full marks in a section A question. However, a sizeable minority appeared not to understand the difference between an assumption and a concept, thus failing to attract marks. Whilst candidates were able to describe an appropriate concept in part (a) and an assumption in (b), many were unable to clearly link the two.

## Section B

**Question 5:** *Discuss **two** theoretical explanations of behaviour, **one** from the biological perspective and **one** from another perspective that you have studied for this paper. (20 marks)*

This was a very popular choice of question but one that often produced weak responses. Too many candidates described two studies from different perspectives rather than addressing the requirement to *discuss* two *theories* of behaviour. Others ignored the requirement to discuss two explanations of behaviour, instead offering a very general evaluation of each perspective’s approach to explaining behaviour. Such responses tended to lack detailed theory or research. Generally, there was little analysis/evaluation and where it was present it was limited, weak and/or inappropriate. Distinctions between candidates’ scores tended to rest on evidence of their ability to discuss rather than to simply offer two sequential accounts.

**Question 6:** *Evaluate the contribution of the cognitive perspective to the scientific study of behaviour. (20 marks)*

This question was rarely selected by candidates, and again tended to produce weak responses. Candidates failed to address the “scientific study” aspect of the question, and offered minimal evaluation of the perspective’s contributions in this area. Appropriate content could have included innovative methods for investigating the “black box” of the mind - focusing on inference and testable research methods such as clinical interviews and verbal protocols in addition to the experiment. Examiners also accepted responses focusing on studies rather than research methods, where the candidate was able to make the case for these offering a contribution to the scientific study of behaviour.

**Question 7:** *Assess the effectiveness of learning perspective explanations for either **one** psychological or **one** social question. (20 marks)*

Candidates attempting this question often complicated a straightforward task by failing to identify a social or psychological question. Relevant choices could have included, for example, a dysfunctional behaviour such as phobias, the acquisition of gender roles, urban violence, *etc.* Explanations were often well developed but assessment of their effectiveness defeated many candidates. Assessment of effectiveness could have been addressed, for example, by considering ways in which cultural, ethical, methodological or gender considerations might have an impact on the explanations, or by comparing the explanations with those from another perspective.

**Question 8 (HL only):**

*Compare the humanistic and cognitive perspectives in terms of determinism and free will. (20 marks)*

Responses to this question tended to be either excellent, demonstrating a sound understanding of the assumptions and the two perspectives, or very weak, offering over-simplistic and unsubstantiated assertions about each perspective. Too many candidates appeared to have no understanding of the ‘soft’ determinism of the cognitive perspective, referring to it as being totally deterministic. Only the best responses mentioned the deterministic elements of the humanistic perspective, most incorrectly assuming behaviour is governed entirely by free will. There was a tendency to omit research evidence in answers to this question, and the comparison injunction often took the form of two sequential accounts instead of the more explicitly comparative approach adopted in the most successful responses.

## Recommendations and guidance for the teaching of future candidates

- More advice could be provided for students in how to ‘unpack’ and then answer questions as it seems they are often let down by their inability to respond appropriately to question requirements rather than by their lack of psychological knowledge. Regular practice throughout the course using previous examination questions and mark schemes should be incorporated into course delivery from the start. Candidates need to be familiar with all the command terms used in question setting. Many seemed to have a clearer understanding of ‘evaluate’ and ‘compare’ than of ‘discuss’, ‘assess’, and ‘explain’.
- The biological factors that extend traditional learning perspective theories could be covered in more depth, as could the ability to identify and link key assumptions and concepts for each perspective.
- Students could be advised to write an introductory sentence that identifies the strategy being used to answer the question. Many candidates waste time writing at length about ‘background information’ (not required and thus not attracting marks) before actually starting to respond to the question.

## Higher and standard level paper two

### Component grade boundaries

#### Higher level

<b>Grade:</b>	1	2	3	4	5	6	7
<b>Mark range:</b>	0-4	5-9	10-12	13-18	19-24	25-30	31-40

### Standard level

<b>Grade:</b>	1	2	3	4	5	6	7
<b>Mark range:</b>	0-2	3-4	5-6	7-9	10-12	13-15	16-20

### General comments

Paper 2 for this examination session did not seem to pose any significant problems, as the full range of marks was earned across most questions. Once again, the most popular options were the psychology of dysfunctional behaviour, social psychology and psychodynamic psychology. A moderate number of candidates responded to questions from the health psychology and lifespan psychology options while very few answered comparative psychology or cultural psychology questions.

Most candidates appeared to be familiar with or to have read the instructions on the requirements of the paper. However, there were still some candidates who answered more than the required number of questions. In such cases, the mark of the best essay is recorded, however these marks tend to be much lower than those candidates who answered only the required number of questions as they had less time to develop their responses.

### The areas of the programme and examination that appeared difficult for the candidates

While it is commendable that more candidates were citing psychological studies in their responses, it was too commonly seen that a great number of candidates do not know how to *use* these studies. The vast majority of responses citing psychological research tended to be very highly descriptive, *i.e.*, they went into great detail describing the procedure and general aspects of the studies. There were relatively few responses in which candidates explicitly discussed how the studies cited helped them to respond to the question. It is very encouraging that more psychological evidence is being used, but there is still some effort that needs to be put into teaching students *why* these studies are important. That is, candidates should demonstrate better understanding of the aims and results of the studies, the findings, and the implications or application of the findings. Extremely detailed knowledge of the procedural aspects of a study are usually not required in responding to an IB psychology examination question. Additionally, relatively few candidates demonstrated an understanding of the relationship between studies and the broader theories that they are investigating or helping to formulate. This relationship is key to developing a real understanding of psychology.

It was common for candidates not to address the question correctly or to address only part of what the question required. For example, some questions asked for description and evaluation and many candidates failed to provide appropriate, relevant evaluative commentary in their responses. It was common for much of the evaluation that was provided to be general in nature and not necessarily correspond or link back to the question that was asked. For example, candidates may cite methodological considerations that might have affected a particular study, however they did not generally discuss why these methodological issues should have been addressed differently in the study. General or prepared evaluative commentary usually did little to help the responses, as it was not necessarily made relevant to the question.

The quality of responses varied from articulate analytical essays showing excellent understanding to those demonstrating very little psychological knowledge. The terms “cultural dimensions”, “methodological considerations” and even in some cases “model” or “theory” were often misunderstood. Terms used in setting questions come directly from the IB *psychology guide* and therefore it is important for candidates to be familiar with the terms and how they are used within the

IB *psychology guide*. Some candidates assumed some terms to have a colloquial or linguistic definition rather than a psychological one.

## **The areas of the programme and examination in which candidates appeared well prepared**

Many candidates had very detailed knowledge of psychological studies within the option(s) they had studied. Responses to both social psychology and the psychology of dysfunctional behaviour options tended to be rather strong. Candidates were not well prepared to answer questions in cultural or comparative psychology, although this did not appear to deter some from trying – usually with little success.

## **The strengths and weaknesses of the candidates in the treatment of individual questions**

**Question 1:** *Compare parenting behaviour in humans and non-human animals. (20 marks)*

Commonsense answers were usually provided in response to this question. The vast majority of essays were descriptive and anecdotal making little reference to relevant research. At times when it was apparent the candidate had prepared for this option, the essays were excellent although the comparison between human and non-human animals was not always explicit.

**Question 2:** *Describe and evaluate two evolutionary explanations of behaviour related to comparative psychology. (20 marks)*

Usually Darwinian theory and the selfish gene theory were briefly outlined. Very limited evaluation was included and oversimplifications were prevalent. Many responses also inaccurately credited Darwin with the development of genetic theory.

**Question 3:** *(a) Distinguish between inter-species and intra-species communication using examples from non-human animals. (10 marks)*

*(b) Identify and evaluate one study of communication in non-human animals. (10 marks)*

This question was rarely attempted and, when it was, very limited understanding of communication was demonstrated. A very small number of candidates responded to this question with some excellent responses, including discussion of communication of a variety of animals, such as birds, cats and fish.

**Question 4:** *Assess how differences in cultural dimensions have an impact on human behaviour. (20 marks)*

This question was usually poorly answered with candidates not understanding the difference between cultural dimensions and culture. The term “dimensions” was also misinterpreted to mean “differences” which led to extremely simplistic, stereotypical and anecdotal responses that attracted very few, if any, marks.

**Question 5:** *Examine ways in which the concept of self varies across cultures. (20 marks)*

Very limited understanding of this question and different theories and conceptualisations of self, such as independent and inter-dependent self were demonstrated. Some candidates in Spanish interpreted the word “yo” to imply Freud's concept of ego as he viewed the structure of the mind rather than self.

**Question 6:** (a) *Describe two problems in cross-cultural research. (8 marks)*

(b) *Consider how each of these two problems might be managed when conducting cross-cultural research. (12 marks)*

Usually less prepared candidates tended to choose this question – with a very vague understanding of what the term “problem” means. In some cases gender differences or culture-bound syndromes were identified as “problems” with little mention of why these topics would be problems in cross-cultural research. There were a lot of over-simplifications and stereotypical responses that demonstrated very limited understanding about research methodology in a cross-cultural setting.

**Question 7:** (a) *Describe one empirical study related to dysfunctional behaviour. (8 marks)*

Sometimes very limited knowledge of studies was demonstrated. Sometimes the focus was only on the procedure (e.g., how Rosenhan conducted his most famous study) or only on findings (e.g., of a study of reliability of classification systems – textbooks do not offer a detailed description of this correlational research, they only discuss the findings and this is what the candidates offered).

(b) *Discuss methodological considerations that may affect the interpretation of findings from the empirical study described in part (a). (12 marks)*

Often, possible general methodological problems (sample bias, reactivity) and ethical problems were discussed. Most candidates did not *discuss* methodological considerations; instead they only described them. When discussing methodological considerations, candidates should give more than a basic recounting of general methodology and elaborate on why or how these considerations may be important or could have affected the study. Some candidates demonstrated limited understanding of methodological considerations, instead offering evaluation in terms of ethics, for example. A few essays were well balanced in their discussion providing both strengths and weaknesses in relation to methodological considerations.

**Question 8:** *Examine ways in which one model or theory of dysfunctional behaviour contributes to an understanding of dysfunctional behaviour. (20 marks)*

This was the most popular question on the entire examination paper. Unfortunately, however, usually limited descriptive knowledge was provided. The contribution of the model was often left vaguely stated or implicit. Many candidates described more than one model/theory and did not make it clear which model/theory was the intended focus of the response.

Candidates who understood what one model or theory of dysfunction was, generally chose the biological model for schizophrenia or the behavioural model for phobias and provided reasonable responses. However, there were many candidates who gave a dysfunctional behaviour as their example rather than a model or theory. In these cases candidates focused on the dysfunctional behaviour itself, and its treatment, rather than on the model/theory. Better scripts offered a very detailed description of a model but, when examining the contribution of the model/theory, presented only one side of the argument.

**Question 9:** (a) *Identify and outline one classification system of dysfunctional behaviour. (6 marks)*

The DSM IV classification system was usually identified and outlined.

There were a lot of incorrect responses. Sometimes the debate over the concepts of normality and abnormality was described, or one disorder was described in detail, including all its symptoms.

(b) *Discuss strengths and limitations of one classification system. (14 marks)*

Many responses were rather vague in their discussion. Once again, candidates tended to describe rather than discuss. They tended to state *what* some strengths and/or limitations were but did not discuss *why* or *how* these were strengths or limitations. Many essays made evaluative comments by citing studies of Rosenhan to address the issue of diagnosis in general and neglected to relate such

evidence back to the question. While the issues of diagnosis and labelling may be made relevant in response to this question, most responses treated these at a very superficial level.

**Question 10:** *Examine ways in which disordered patterns of eating may arise. (20 marks)*

Answers from some centres tended to be better than in previous years. In these cases descriptive knowledge was presented of biological, learning, cognitive theory accompanied with some empirical evidence. Usually biological factors influencing the occurrence of disordered patterns of eating tended to be explained in much more detail than cognitive and other psychological factors. This question did tend to draw many candidates who did not seem to have been prepared for the health psychology option. Responses were very anecdotal and little psychological evidence or argument was provided.

**Question 11:** *To what extent is the use of placebos justified? (20 marks)*

Responses to this question showed a very limited understanding of the possible uses for placebos in psychology. Most assumed placebos to be used only for treatment of disorders rather than being used for research purposes in psychopharmacology. Additionally, most candidates assumed that the placebo effect itself was the main aim of most studies using placebos rather than the effect or effectiveness of the active drug being the focus of the investigations.

**Question 12:** *(a) Describe two studies that have investigated psychological aspects of stress. (10 marks)*

More often than not, the first study was well described while the second study was only vaguely described. Some candidates did not provide studies investigating psychological aspects of stress but described studies on physiological aspects of stress.

*(b) Evaluate one means of coping with stress related to psychological aspects. (10 marks)*

The second part of the question was usually less effectively addressed. Some candidates did not read this question carefully and evaluated one of the studies described in part (a) rather than evaluating one means of coping with stress.

**Question 13:** *“Social development continues throughout the lifespan”. Use empirical studies to discuss this statement. (20 marks)*

This question was attempted by a small number of candidates. The support provided tended to be theoretical in nature, rather than empirical as the question required. Erikson’s theory provided the main support for many essays while few relevant examples of studies investigating social development were provided. Many did include cross-cultural studies in their discussion.

**Question 14:** *Discuss the importance of early attachment in human infants for later social and emotional development. (20 marks)*

This question proved problematic for many candidates, as they did not always address the aspects required by the question. The most notable error came from candidates discussing attachment in non-human animals without making reference to human behaviour as the question asked. Some responses only discussed infant attachment without reference to later development. There was very limited cultural discussion.

**Question 15:** *Describe and evaluate two theories of the development of gender identity. (20 marks)*

Candidates tended to do rather well on this question. Most provided appropriate theories of gender identity although the evaluation was not always balanced between the two theories nor between strengths and weaknesses.

**Question 16:** *Discuss how gender considerations may affect the interpretation of behaviour in Freudian psychoanalytic theory. (20 marks)*

This was the least popular question from this option. Limited descriptive knowledge was usually provided, with a very basic presentation of the Oedipus complex and the Electra complex.

**Question 17:** *To what extent have historical and cultural conditions affected the development of psychodynamic psychology? (20 marks)*

Usually rather long, detailed answers were offered related to the Zeitgeist, the influence of World War I and Darwin's theory. Links were seldom established between the conditions and the development of psychodynamic psychology. Many candidates also oversimplified the initial development of psychoanalytic theory in Vienna and its societal influences in the late 1800s/early 1900s and stated that it developed during the height of the Victorian Era in the UK. Relatively few candidates addressed the issue of the extent of relevant historical or cultural influences and most did not discuss any psychodynamic theorist beyond Freud.

**Question 18:** *Describe and evaluate one neo-Freudian theory. (20 marks)*

This was the most popular question within the option with most essays providing very detailed descriptive knowledge but very general evaluation. Some evaluation came in the form of relative comparison to Freudian theory and reference to cultural or methodological considerations. Responses generally focused on a description of the work of Horney, Adler, Jung or Erikson; however, a number had difficulty restricting themselves to one theory or were unable to go beyond description into evaluation.

**Question 19:** *To what extent do research findings about conformity allow predictions to be made about individual behaviour? (20 marks)*

This question proved to be the most popular from within this option with Asch's conformity studies being the most popularly cited. Some candidates were able to clearly argue and discuss studies of conformity to social roles (such as Zimbardo *et al.*), however many included studies of obedience (e.g., Milgram), which were not appropriate to the question. The command "to what extent" was not well addressed as most candidates went into detailed description and evaluation of conformity studies rather than focusing on factors that could influence individual conforming behaviour (e.g., group size, presence of a dissenter, gender or cultural issues).

**Question 20:** *Describe and evaluate two research methodologies (e.g. experiments, observation, interviews) used in social psychological studies. (20 marks)*

While this question was not as popular as some others, it tended to elicit some excellent responses. Unfortunately, many candidates confused the term "research methodology" with "empirical study". Instead of focusing on research methodologies many candidates described a study or two in detail and attempted to evaluate the studies rather than the research methodologies used. In this question, the studies should have been cited as *examples* of particular research methods being used rather than being fully described on their own.

**Question 21:** *(a) Describe one theory related to discrimination. (8 marks)*

*(b) Evaluate one theory related to discrimination making reference to empirical research findings. This theory could be the one described in part (a) or a different theory. (12 marks)*

Some candidates had difficulty in distinguishing between prejudice and discrimination. Many candidates did not focus on the behaviour that is discrimination. There were some excellent responses with great theoretical and empirical support. Very few candidates provided a well-balanced evaluation of a theory of discrimination. Occasionally candidates described and evaluated a particular study rather than a theory as required by the question.

## Recommendations and guidance for the teaching of future candidates

- Although time is always a limitation, some lesson time on examination technique would help all candidates. In particular, practice on what would be the best question to choose would help to improve performance and reduce examination anxiety. The majority of the lowest scoring essays may have shown detailed, descriptive knowledge about psychology, but they did not address the demands of the question as set.
- Some practice in interpreting questions could help. A possible exercise could be to have students look at five different questions concerning the option they are studying and work out how the questions differ from each other and what should go into each response. This would help them to learn to fit their response to the question being asked.
- Students should also be trained to develop an argument and to use psychological studies and theories in their responses. Far too many candidates still provide overly descriptive accounts of procedural aspects of the studies or every detail of theoretical explanations of behaviour. Rather than providing too much detail on the studies and theories candidates must be guided in how to *use* these as part of their argument. They need to be able to extract the relevant aspects of the study or theory, to discuss the aim, findings and implications of the studies, and to be able to explain and discuss rather than just describe. Evaluative commentary also needs to be made relevant to the question rather than simply be learned and recited out of context.

## Higher level paper three

### Component grade boundaries

<b>Grade:</b>	1	2	3	4	5	6	7
<b>Mark range:</b>	0-2	3-5	6-8	9-12	13-15	16-19	20-30

### Areas of the programme and examination that appeared difficult for the candidates

The quality of responses varied between schools indicating that some candidates had thoroughly prepared for the examinations while others had not. Most candidates performed well on parts of question 1 although a substantial proportion showed little knowledge of the way they could analyse a transcript of a verbal report.

Several candidates showed little understanding of the processes involved in conducting a small scale survey or a case study: the level of knowledge tended to be superficial and explanations were often vague or brief.

Some candidates appeared not to know the differences between verbal protocols and free association. There was also a lack of understanding about sampling techniques relevant to qualitative research. Many candidates assumed that random sampling is ideal for every piece of research conducted in psychology. In many cases random sampling is neither feasible nor desirable; other sampling techniques are to be preferred.

### The areas of the programme and examination in which candidates appeared well prepared

There was a general feeling, expressed by experienced examiners, that responses to paper 3 questions this year tended to show an improvement on previous years. For the first time there appeared to be no



remarks from candidates complaining that topics had not been covered in class. The trend towards improvement in understanding topics for paper 3 could not disguise the fact that a number of candidates produced very disappointing responses. Some candidates showed a good knowledge of concepts such as verbal protocols, sampling techniques, Likert scales or triangulation, but they had difficulty in providing informed discussion of the processes involved in qualitative research. This disparity suggests that where candidates fail to be provided with practical experience of, for example, interviewing, sampling techniques or content analysis, their understanding of processes is weak.

### **The strengths and weaknesses of the candidates in the treatment of individual questions**

**Question 1:**     *“Verbal protocols are a record of what people say when they are asked to think aloud as they perform a task.”*

*(a) Explain why a verbal protocol is used. (2 marks)*

*(b) Identify an example of a task for which a verbal protocol would be appropriate.*

*(1 mark)*

*(c) Discuss how the transcript of a verbal protocol could be analysed. (7 marks)*

Answers to question 1 tended to gain the highest marks. Usually appropriate examples were presented and apposite reasons provided for the use of verbal protocols. It seems that some candidates mistakenly took the term “analyse” to mean “psychoanalyse”. However free association as used in the medical profession is not an example of a verbal protocol, nor are mundane tasks like toasting bread or peeling a potato usually regarded as examples suitable for verbal protocols and subsequent analysis. Part (c) required a relevant discussion of how a transcript from a verbal protocol could be analysed and this did present problems. Although many candidates correctly suggested the use of content analysis they were unable to explain how they should proceed or justify why they should use it. They did not show awareness of the importance of focussing on statements crucial to the actions taken and they rarely linked this analysis to any examples. There was too much focus solely on methods of transcription, such as traditional versus post-modern, and they did not make this relevant to analysis of the transcript.

**Question 2:**     *Explain the processes involved in a small scale survey that could be used to investigate a psychological question. (10 marks)*

Responses to question 2 rarely identified a question to investigate. As a consequence, candidates often wrote down everything that they knew that could be related to survey research. Many produced a “strengths and weaknesses” essay rather than explaining the whole process involved in survey research. For example they compared small and large-scale surveys although this comparison was not required. Some answers considered points such as sampling techniques, the target population, or types of questions, but these were mainly descriptive and offered little in the way of explanation of their application. The means of gathering data and its subsequent analysis were only vaguely addressed and very often omitted.

**Question 3:**     *Discuss how you would conduct a case study of a small group of people who are to work together as a team over a period of a few weeks. (10 marks)*

It was encouraging that candidates did realise that case studies could involve several people as participants. Previously many psychology students had firmly identified the case study method with just one individual participant. In response to this question many candidates presented an appropriate combination of research methods using techniques such as interviewing, observation, self-report, questionnaires and diaries. They explained why these methods should be used, evaluated them and used triangulation to answer this question effectively. They commented that triangulation usually improved both the validity of qualitative research and the trustworthiness of its findings. Regrettably

some candidates insisted on interpreting the question as an invitation to consider strengths and weaknesses of different methods. Others presented a brief description of one or two methods such as observation or interviews, but failed to discuss their applications.

### **Recommendations and guidance for the teaching of future candidates**

- The most important action that teachers could take to improve the performance of their future candidates is to give them practical experience in the processes involved in qualitative research. This need not be extremely time consuming but it will repay the effort involved many times in terms of the candidate's understanding. Examples are to have students conduct a short interview, using an audio tape recorder. A transcript should be produced which is then subjected to content analysis using themes that emerge from the transcript. A written commentary should then be made about the themes in which the researcher shows some insight of the thought processes that have emerged. This is just one example of what is meant by practical work. Other examples could include practicals on sampling methods from a parent population, relevant verbal protocols, interviewing techniques, case studies, small questionnaires or surveys.
- Teachers should also ensure that candidates are involved in more than descriptions of research methods. These methods need to be discussed in depth where their relative advantages and disadvantages can be explored as part of the learning process. It is evident that some teachers are succeeding in these tasks but even more needs to be done.