

# **MARKSCHEME**

**November 2001**

**PSYCHOLOGY**

**Higher Level**

**Paper 2**

**SECTION A**

- 1. Explain why this research study is not an experiment. [2 marks]**

No manipulated independent variable. Give *[1 mark]* for ‘no controls’ or equivalent non-specific statement about variable control.

- 2. This study uses a cross-cultural method.**

- (a) State what is meant by a cross-cultural research method. [1 mark]**

A cross-cultural method studies a known effect in a new culture/compares effects across cultures/tests members of more than one culture or similar.

- (b) Describe *one* strength and *one* weakness of cross-cultural research methods. [4 marks]**

**Strengths** – provide data demonstrating whether cultures differ in psychological processes or characteristics/provide evidence to support universals in psychology (or “a more universal psychology”)/broaden previously narrow scope of psychological findings in terms of culture, and similar points.

**Weaknesses** – candidates could mention that it is hard to ensure group equivalence on variables other than cultural membership/mention of possible confounding variables *[1 mark]* with specific and accurate example given *[2 marks]*/mention of cultural biases of researcher, questions, methods for *[1 mark]*; *[2 marks]* for that plus a specific description or example.

Give a maximum of *[2 marks]* for a very good strength or weakness up to a maximum of four for the whole answer to question 2 (b).

3. (a) State *one* advantage of the interview method used in this study compared with the use of a structured questionnaire. *[1 mark]*

(b) Explain why you think this is an advantage. *[2 marks]*

**Advantages\*** : allows us to get at the real meanings intended by participants; doesn't restrict participants only to the items given; interviewer is able to clarify question items and perhaps put the participant at ease in terms of their behaviour being evaluated; interviewer may encounter ideas not predicted by questionnaire, ambiguities in questions can be explored; participants can explain that they do not understand a question and the interviewer can rephrase it.

(c) State *one* weakness of the interview method used in this study compared with the use of a structured questionnaire. *[1 mark]*

(d) Explain why you think this is a weakness. *[2 marks]*

**Disadvantages\*** : less precise measurement of variables; participants treated somewhat differently, hence their responses will also vary; researchers have the problem of assessing these data on a similar basis; assessments made may therefore be inconsistent and unreliable making comparisons difficult; structured questionnaires can help participants find answers; in an interview situation some may find it hard to think of anything appropriate to say; the influence of interpersonal variables can be strong, since the situation is face to face; individual interviews can take a lot more time to administer than do some forms of questionnaire or survey – but don't credit 'interviews are more expensive' as it is impossible to compare like with like here.

\*The statement of an advantage or weakness may run into the explanation. Where this occurs, try to distribute marks appropriately and fairly across (a) and (b) and/or (c) and (d).

Allow up to *[1 mark]* in total where some points are particularly well explained to compensate for marks lost on poorly explained or absent points.

**4. The participants were randomly selected.**

**(a) Explain what is meant by the term random selection.**

**[2 marks]**

A random sample is a design strategy intended to ensure that every person in the target population has an equal chance of being selected. Candidates **must** include reference to equal probability of selection in some form of words for **[2 marks]**. ‘Drawn by chance’, ‘An unbiased sample’ or similar, may obtain **[1 mark]** only, whereas ‘haphazard’, ‘opportunity’ or similar receive no marks.

**(b) Describe how you could select 20 participants at random from a population of 100.**

**[2 marks]**

The system described must work. Acceptable would be putting all 100 names ‘in a hat’ (or container), shuffling, and removing 20. For full marks, shuffling in some form should be included. Also acceptable are using a computer but only **[1 mark]** for this without elaboration (an example of adequate elaboration would be: ‘Entering a number for each member of the population, asking the computer to randomly order these, then selecting any 20’). Similarly ‘using table of random numbers’ may be offered and again only **[1 mark]** without elaboration (an example of adequate elaboration would be: ‘Move through the table giving a number to each person in the population, then select the first 20.’).

More subtle is ‘taking every 5th name on the list’. Give **[1 mark]** for this, though technically this is not random (or, more correctly, not ‘equal probability sampling’) unless the first number is chosen randomly. That is, one chooses a number between 1 and 5 at random ( $k$ ) then selects every  $k$ th person on the list. No candidate is likely to offer this, but give full marks if they do.

Give at least **[1 mark]** where ‘chance’ is employed in some appropriate way.

Give no mark for any method which simply draws a haphazard sample (e.g. going to the population and just picking people without bias or asking for volunteers).

5. (a) **What is meant by a representative sample?** **[1 mark]**

Any answer that explains that it should be possible to generalise from such a sample to the population it was drawn from. Accept answers such as: ‘It is similar to the underlying population’, ‘It represents the underlying population fairly accurately’, and so on.

- (b) **Using the information about the research project given above, explain why the samples used here might fail to be representative.** **[2 marks]**

The point being sought here is that international students may not be representative of their larger background culture. Give **[2 marks]** where this is explained **clearly, even if** the point is not made explicitly. An adequate example might be: ‘The participants were students at an international school and might differ in educational background,’ though of course it would be better if the ambiguity were cleared up by adding ‘from the rest of the population’. Candidates could conceivably write that the random sampling had not been entirely successful, in which case award **[1 mark]**. Do not award marks for inventions outside the given information (e.g. ‘The researchers might have forgotten to use random sampling’, or ‘Some of the culture A students might really come from Culture C’.)

6. (a) **What is a confounding variable?** **[2 marks]**

Any variable which systematically interferes with/obscures results/cause effect relationship/effect; candidates may not explicitly state that the interference should be systematic but award a mark wherever it is clear that the notion of unwanted/uncontrolled distortion of results is intended. **[2 marks]** for a clear answer, **[1 mark]** for either a less clear or an incomplete answer.

- (b) **The researchers assume that the differences between numbers of reasons given were the result of cultural differences. Give two other possible confounding variables which might have caused these differences. Explain your reasoning in each case.** **[4 marks]**

Award marks for any sensible and relevant variables, e.g. Differences in economic background, educational level (of the family), cultural attitude to interviews. Award only **[1 mark]** where a relevant phrase is simply given - e.g. ‘Sampling bias’.

Compensate by up to **[1 mark]** so that an extremely good answer for one of the variables can receive **[3 marks]** so long as marks for 6 (b) do not exceed 4 in total.

- 7. State the research hypothesis in this study. [2 marks]**

The research predictions are actually given in the text and could be used here. The hypothesis is more of the form: ‘Students from individualistic societies (or ‘Culture A’) give more independent reasons for going to university than do students from collectivist societies (or ‘Culture B’)’. Also acceptable would be answers of the form: ‘There is an association (or a relationship exists) between cultural membership and type of reason given for attending university.’ Students may write, *e.g.*, ‘there will be an association (a relationship) between cultural membership and type of reason given for attending university’. Though this is phrased as a prediction rather than a hypothesis, this type of answer may be accepted for the full **[2 marks]**.

Give **[1 mark]** for less clear statements with basically the same meaning, allow some verbal confusion, but no marks for general statements (*e.g.* ‘The results/differences will be significant’).

- 8. State the level of measurement which best describes the data shown in Table I. [1 mark]**

Accept any of: Nominal/Frequencies/Categorical data

- 9. State an appropriate test of significance for analysing the data shown in Table I. [1 mark]**

Chi-square

- 10. Give two reasons for your choice of test in Question 9. [2 marks]**

Any two of:

1. Nominal data/frequencies/categorical data
2. Testing differences (between distributions)/association
3. Unrelated design

**[1 mark]** for each clear reason.

11. Differences between group frequencies were significantly different with  $p < 0.01$  (Line 19) . Explain fully what is meant by this statement. [3 marks]

Many answers are possible.  $p$  is the probability of obtaining results this extreme or greater if the null hypothesis is true (*i.e.* the population is distributed in the same way as the expected frequencies - though don't expect candidates to provide this detail). Here  $p$  is less than 0.01 so the result is highly significant. Give full marks where these ideas are clear, no matter what else is said. If the explanation is less clear give fewer marks (*e.g.* [2 marks] for: 'The probability of getting the results by chance is very low'). 'The probability of a type 1 error is less than 0.01, if the null hypothesis is true' is also correct but highly unlikely. For the first part only of this statement, give [1 mark].

'The probability of the difference occurring by chance is less than 0.01' is incomplete and can receive [2 marks]. Similar likely [2 marks] answers will be:

'Such a difference would only occur 5% of the time or less by chance'  
'95% of the time, by chance, we would not get a result this extreme'.

Generally an answer using 'by chance' and mentioning 5% or 95% in the appropriate direction should receive [2 marks]. Credit 'we may reject the null hypothesis' with [1 mark] in addition to marks gained for the points above (but maximum remains [3 marks]).

12. (a) State two ethical principles that should be recognised by the researcher in conducting these interviews. [2 marks]

Front runners should be anonymity and confidentiality, though do not award marks where these terms are simply presented as single words - ethical 'principles' are asked for. Award full marks where any other principles are adapted realistically to the situation.

- (b) Explain why each of these ethical principles would be important in this study. [4 marks]

Here candidates should say why confidentiality, for instance, is important and relevant, *e.g.* 'The participant might worry that the data could be seen by important others (*e.g.* personal tutor, head of school) and this could conceivably affect progress at the school.'

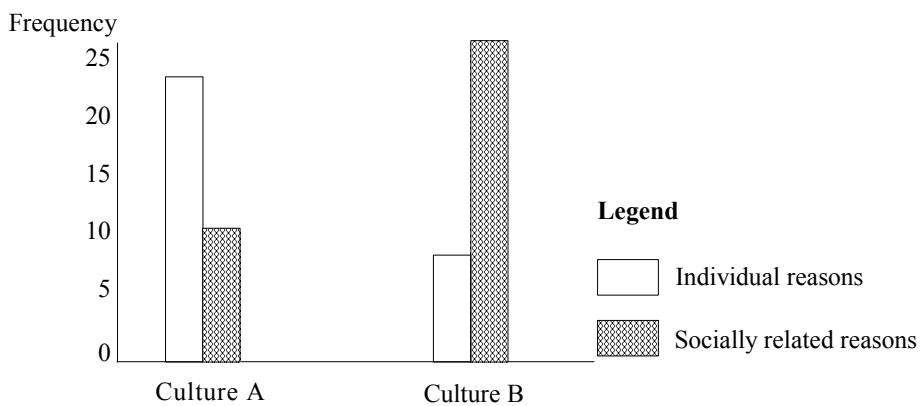
Any reasonable rationale will do with full marks for a clear answer, one for some relevance but poor wording *etc.*

Compensate by up to [1 mark] so that an extremely good answer for one of the principles can receive [3 marks] so long as marks for 12(b) do not exceed 4 in total.

13. Explain why you think the research assistants were kept unaware of the research hypothesis. [2 marks]

‘So that they could not bias the results in the direction the researcher expected’ would be adequate for full marks. Award [2 marks] where the theme of biased scoring, because of hypothesis knowledge, is quite clear and [1 mark] where the theme is central but not well explained.

14. Copy the incomplete bar chart shown below and complete it by adding appropriate bars for the data in Table I. [Graph paper is not required] [4 marks]



Give [1 mark] for each appropriately shaded bar reaching the appropriate height in the appropriate place. Do not penalise if the two bars for each culture are separated from each other (they should, strictly speaking, be combined) but deduct [1 mark] where there is no separation at all between the set of bars for Culture A and the set of bars for Culture B.

15. Describe one improvement you would make to this study if it were to be repeated and give a reason for your suggestion. [3 marks]

Difficult to predict answers here but only give [3 marks] for a full clear explanation and realistic, appropriate improvement. Likely themes are extending the culture base, asking different educational questions, using a questionnaire for greater objectivity and so on. Give only [1 mark] for points like ‘add another culture’, unless the addition is justified. Give none at all for ‘add more participants’ (since there is no need to here) unless a good reason is offered for this.



## SECTION B

### Biological bases of behaviour

**16. How effective is the endocrine system in influencing the behavioural functions in humans?**

*[25 marks]*

Candidates who present an essay that is solely a description of the endocrine system should receive a maximum of *[12 marks]*.

The question calls for more than description since the candidate is required to consider the effectiveness of the endocrine system on behaviour. It is reasonable for candidates to give examples of physical responses to endocrine activity provided that this is justified as behaviour, but examiners are reminded that they should not work on behalf of candidates who do not make this link explicitly. An example may be in the production of adrenalin in a fight or flight situation where the endocrine system is generally extremely effective. It may be claimed that it is less effective in the expression of grief or sadness where the immediacy of physical response is not always so apparent.

Candidates should be awarded credit if they are able to trace the effectiveness of the endocrine system in terms of its evolutionary development in humans. For example some psychologists suggest that bodily systems evolve in terms of costs and benefits. It is costly to evolve a system that enables immediate responses and these are developed mainly for responses that maintain life or that optimise reproductive opportunities. Emotions such as grief or fear or happiness are not usually life threatening and hence the endocrine system does not need to be so effective in promoting such processes. Although endocrine related reactions to stress may have been beneficial to primitive humans that is not always the case in modern life. Many executives, for example, suffer from stomach ulcers as a result of not being able to discharge aggression or take evasive action in a civilised society. “Stress is the price we pay for civilisation.” (Freud)

In order to sustain a discussion over effectiveness, candidates will need to draw on examples and these should demonstrate their knowledge of the endocrine system. This may also extend to steady state theory or the self regulation of the system. Credit should not be given to work which refers to non-human animals unless this is justified in terms of its contribution to human evolution.

Candidates who provide descriptions, with no indication of effectiveness, should receive a maximum of *[12 marks]*.

**17. Discuss evidence which suggests that physiological mechanisms and emotion are correlated.**

**[25 marks]**

The question requires that evidence be used to substantiate discussion in this essay; anecdotal material should not be awarded credit in this context. Much of the earlier literature on the subject matter of the title is concerned with the priority of emotion over physiology or physiology over emotion. Thus the James-Lange and the Cannon-Bard theories focus on this issue. What is important in the context of this essay is that the two are correlated as far as both of these studies are concerned.

It is when candidates consider Schachter and Singer's work that some recognition of the relative importance of the two main concepts should be questioned. One of the main points to emerge from this work is that while physiological arousal is necessary to experience emotion, it is not sufficient by itself. The social context in which emotions occur and the cognitive perception of such social conditions determine how an individual will label emotion associated with arousal. The well known study of Dutton and Aron, related to the emotions of males on high suspension bridges, and their misattribution of fear to sexual attraction, reinforces this point. Further evidence from Hohmann's studies of war veterans with spinal chord injuries, and more recent studies by Lazarus, who claims that cognitive processing can arouse both physiological and emotional feelings, could provide relevant material for debate.

Examiners should take care not to be unduly influenced by lengthy descriptions of studies, no matter how detailed and impressive. Essays that are confined to description should have a maximum of **[13 marks]**. Additional marks are gained by evaluation and critical analysis of the material presented.

**18. How has the study of people with specific brain deficits helped psychologists to understand the organisation of brain functions?**

*[25 marks]*

The term ‘specific deficits’ is taken from the syllabus and is used in relation to brain functions, including vision. The term should be interpreted fairly widely so that it may include genetic deficits or those that may be sustained during development or maturity. The question is focused not so much upon the deficit itself, but on how an understanding of the condition may have helped in the understanding of the organisation of brain functions. It follows that examiners should not award so much credit for descriptions, for example, of how Phineas Gage came to be injured in his railway construction work, but what was learned from the damage to his frontal lobe – the effect on his personality and his change to irritable and impulsive character. It was this type of deficit that led to subsequent operations on the frontal lobes of many patients who showed aggressive tendencies.

The brain injuries of First World War victims and their investigations in the field by military surgeons such as Penfield, added to our knowledge of the organisation of brain function, as have the trauma endured by patients subjected to viral attack or brain tumours. Candidates should be aware of the limitations of such studies, particularly in relation to the lack of controls and precision in these instances. Some subsequent work, for example Sperry’s studies on severing the corpus callosum of epileptic patients, or the prefrontal lobotomies conducted on some aggressive mental patients, have been deliberately conducted to investigate brain function, as have studies involving electrical stimulation and recording of brain activity.

## **Comparative psychology**

### **19. Discuss the differences between animal species in their ability to learn**

***[25 marks]***

Candidates should indicate that they know what is meant by learning - a more or less permanent change in the behaviour of the individual animal. While it is not essential to describe differences in types of learning such as classical, operant or cognitive, such material may be accepted as relevant, providing that it is explicitly directed to the question.

Ability in learning may be approached in several ways and could certainly include humans. Animals that are comparatively short lived, which happens with many insect species and some small aquatic creatures, have very little opportunity to learn, but experiment with fruit flies have shown that these have the ability to learn, as do the planaria species that have featured in memory experiments with T mazes. The learning experienced in both cases has involved classical conditioning. Animals that do not receive any parental care are usually those that can survive on behaviour that is primarily inherited. The longer that parental care is given, then usually the more learning has to be undertaken.

Such animals are also dependent upon a series of sensitive stages for successful development and learning. For example male song birds have an innate predisposition to learn their complex courtship song but if they are prevented from hearing the songs of mature male birds at a crucial stage of development they do not learn their courtship song. Candidates will be expected to do more than simply describe a number of examples of learning behaviour, and those that do so should be limited to a maximum of ***[13 marks]***.

The question requires a discussion on the differences between animal species in their ability to learn, so this should include reasons as to how and why this might occur. Discussion that involves laboratory based work that is made relevant to the question should receive credit.

**20. Some non-human animal species have been taught to use language to communicate with humans. Discuss the differences in teaching such language for**

**(a) non-human primates**  
*and*

**[12 marks]**

**(b) other non-human animal species**

**[13 marks]**

It is not necessary for the language in question to be human language, but only that the form of language used be understood by humans and the animal species concerned. The main form used with primates has often depended upon their manual dexterity in addition to their cognitive understanding of what is required. So for example some studies with primates have involved the use of plastic symbols in order to communicate, or pointing to objects and body parts, or in the case of Washoe, use of American Sign Language. Early attempts such as those employed by Hayes and Hayes with Vicky focused on teaching vocal language, and these failed because chimpanzees do not possess the necessary physiology for such vocalisation.

Alex, the African grey parrot, has been taught to produce English spoken language by Pepperberg and much of this has apparently occurred by Alex observing humans communicating in social settings. In addition Pepperberg uses extensive vocal praise as operant reinforcement to reinforce the learning. Although the teaching of language to dolphins by Herman *et al*, did not involve the production of language, it did mean that the dolphins, Akeakamai and Phoenix, were taught to comprehend human communication in a way that was different from that used with primates. In the case of the former dolphin the trainer used arm signals, in the latter the dolphin reacted to a series of computer generated whistles.

Candidates who only use one animal species in part (b) should be limited to a maximum of **[7 marks]** for this part.

**21. To what extent is the use of non-human animals justified in psychological research related to perception ?**

**[25 marks]**

The wording of the question seeks to encourage candidates to examine both the advantages and disadvantages of using animals for perceptual research. It also requires that candidates should make a judgement on the issue rather than merely produce a rationale for the use of animals in this way.

Candidates who do not focus their answers on perception should receive a maximum of **[10 marks]**.

Ethical issues may be a concern for candidates. Why should humans use animals for the selfish ends of their own species? Most counters to this criticism focus on the point that alternatives to animal research, *i.e.* the use of humans is even less ethical, and computer simulations or the use of simple organisms for research on perception is not always reliable.

Animals used in psychology have also made a most valuable contribution to our understanding of human perception. Examples could include the kittens used by Held and Hein in their work with the carousel and the vertical world environment, dogs used to test sensitivity to pain from heat, and cats used to investigate visual perception, or birds use to investigate the learning of courtship song when they have been deafened. It is also relevant that blind humans use dogs as guides, that police use dogs to help sniff out drugs, and the techniques for teaching such dogs have largely derived from psychology. Whatever examples are used the candidate should relate these to the question and eventually should come to present a judgement based on the evidence presented.

## Delinquency and crime

22. **“Biological and social processes both contribute to criminal behaviour.”** **Assess this claim, using psychological studies to support your argument.** **[25 marks]**

While the role played by biological processes in crime is likely to be relatively modest, there is sufficient evidence to suggest that biology cannot be ignored. For the influence of biological processes, candidates may present evidence from a variety of physiological studies *e.g.* excessive androgen increases the level of antisocial behaviour (Ellis); testosterone effects (Ehrenkrantz *et al*, Mattson *et al*); the relationship of androgens to female crime. Material from studies of twins and adoption studies is equivocal, but better candidates may offer a critical evaluation of these studies and explain how they offer support for both biological and social processes. For example, the impact of modelling of parents’ anti-social behaviour is noted in the Cambridge study (West). Child rearing practices, patterns of family interaction, and peer-group influences may be explored as evidence of the impact of social processes. Studies include those by West, Patterson, Bandura and Walters, McCord, Widom and Elliott *et al*. There are numerous studies on the impact of social processes.

If candidates present only descriptive work, a maximum of **[12 marks]** can be awarded. The term “assess” requires the candidate to weigh the available evidence and reach a conclusion in terms of the given quotation. Candidates should focus on whether these two processes, biological and social are equal and also present the reasoning for their conclusions.

23. **“An act is only criminal within its social context.”** **Evaluate this statement with reference to *two* cultures you have studied.** **[25 marks]**

Welford suggests that some acts, such as murder, are intrinsically criminal because they are universally condemned. However, Becker argues that acts are not intrinsically deviant; crime is a label that is attached to conduct for social reasons. Thus, behaviours such as homosexuality, adultery or recreational drugs, do not always constitute criminal behaviour.

The social context within which certain behaviours take place thus may define whether or not an act is criminal.

The question calls for candidates to explore the different ways in which criminal behaviour is defined by any two cultures. The cultures may be two separate cultures within the one country, or from different countries. If only one culture is presented then the maximum mark to be awarded is **[13 marks]**.

Do not award marks for common sense views or anecdotal material. The majority of the essay must be an evaluative account, with substantive analysis throughout the essay.

**24. Identify *two* social institutions and**

- (a) describe how attitudes towards appropriate and inappropriate behaviour may be influenced by each of them;**

**[10 marks]**

Examples of social institutions include schools, religious organisations, the family (as a social institution), prisons and universities.

Having identified the social institutions to be described and analysed, section (a) requires candidates to describe the ways in which each institution fosters the development of behavioural attitudes. The impact of schools on the attitude and behaviour development is well-documented, and relevant studies include those by Reynolds, Hargreaves, Farrington or Rutter *et al.* Patterson has contributed a number of studies on the importance of the family unit.

- (b) critically compare the role of the chosen social institutions in two different cultures.**

**[15 marks]**

This section requires candidates to use the same two examples of social institutions used in section (a). Well prepared candidates should have little difficulty in choosing appropriate examples. For example, the family as a social institution plays an important role in most collectivistic societies, but has less impact in individualistic societies. Similarly, the role of schools may vary widely between cultures.



**Dysfunctional behaviour**

25. (a) Describe *one* classificatory system used in the diagnosis of dysfunctional behaviours.

[12 marks]

A satisfactory answer to this question should offer both the purpose and the assessment techniques of the chosen classificatory system. Relevant material regarding the purpose of a classificatory system may include some or all of:

- Identification of patterns of symptoms forming a disorder
- Identification of sufferers
- Prognosis for a disorder
- Enables investigation of aetiologies
- Offers suitable treatment

Techniques of assessment to include some or all of:

- Observation
- Clinical interview
- Psychological tests
- Physiological tests

Candidates choosing DSM IV should describe its multi-axial diagnostic approach and criteria.

- (b) Discuss *ethical* issues arising from attempts to classify and diagnose dysfunctional behaviours.

[13 marks]

From the use of the term ‘diagnose’, component answers should identify the medical model basis for use of classificatory systems and consider ethical implications arising from the difficulties of classification, and also from the consequences of classification.

Ethical problems surrounding classification of dysfunctional behaviours have been well documented by *e.g.* Szasz and Rosenhan (although the latter’s criticisms should be related to earlier versions of DSM). However, a balanced answer should include the benefits of classification – *e.g.* identifying people requiring help, stimulus to provide effective interventions, *etc.*

Ethical implications arising from the consequences of classification may include, for example, the effects of labelling - loss of control and self-responsibility, the ‘self-fulfilling prophecy’ effect, negative self-image, *etc.* Mention may also be made of the problems associated with administering treatments for disorders for which the aetiology may be unknown. A balanced discussion will consider whether the benefits (care, treatment, safety, *etc.*) balance out the costs. Award a maximum of [8 marks] for responses offering only limitations **or** strengths.

**26. To what extent does biomedical research contribute to our understanding of the dysfunctional disorder schizophrenia?**

**[25 marks]**

This question requires a judgement as to the value of biomedical research into our understanding of schizophrenia. Beginning with a definition and description of the symptoms of schizophrenic disorders (as per *e.g.* DSM), responses should consider neurochemical, neuroanatomical and known organic disorders as potential explanations for its onset.

Whilst candidates are likely to be familiar with the ‘dopamine hypothesis’ and related research, in order to achieve marks in the higher bands, each of the additional explanations should be considered. Neuroanatomy and links to type II symptoms, citing post mortem examinations and PET and CAT scans may be discussed, in addition to the type I related neurochemical research findings. Although known organic disorders, *e.g.* brain tumours, have been implicated in psychotic states suggesting an organic basis for schizophrenic disorders, evaluation for all three types of suggested aetiology should include a consideration of the critical cause-effect relationship implications.

Better quality answers will probably also refer to the implications of each explanation for treatment and may well attempt the important evaluation by comparing the biomedical approach to the disorder with an alternative.

To substantiate assertions regarding the 3 areas implicated in biomedical aetiologies for the disorder, research findings and theory should be cited. Award a maximum of **[10 marks]** for pure description of the 3 types of explanation, with appropriately proportioned marks for answers offering only one or two. Give full credit for answers acknowledging the complexity of the disorder and resultant difficulties associated with a monocausal explanation for its onset.

**27. How effective is psychoanalysis in dealing with dysfunctional disorders?**

**[25 marks]**

A competent answer to this question will probably begin by briefly outlining the aims and techniques involved in psychoanalysis *i.e.* in the safety of the therapeutic alliance, identifying underlying unconscious causes of behaviours for the individual, using techniques which will bring them to conscious awareness so they may be dealt with and the ego thus strengthened. Techniques will include free association, dream analysis, *etc.* in catharsis and transference.

The therapy may be applied to a range of disorders, *e.g.* mood disorders (Anna O), anxiety disorders (Little Hans – phobia), obsessive-compulsive disorders (the Rat Man), eating disorders, schizophrenia, *etc.*

As the focus of the question is on the *effectiveness* of psychoanalysis, a definition of the term is required and empirical research offered to indicate success rates, *e.g.* Eysenck, 1952, Sloane *et al* (1975), Smith *et al* (1980), Shapiro & Shapiro, (1982). An awareness of the problems surrounding the concept of ‘effectiveness’ will distinguish better from weaker answers. Look for a focused essay, awarding a maximum of **[12 marks]** for responses simply describing the theory.

**The psychology of gender**

- 28. To what extent can psychological theory and research explain differences in educational achievement between females and males?** **[25 marks]**

The focus of the question is the extent to which psychological theory and research can account for gender differences in educational achievement. The question also calls for candidates to produce a judgement. Possible content could include reference to social learning and cognitive theories; the role of stereotypes; research into single sex classes and academic attainment; research that examines differential behaviour of teachers towards males and females; subject choices (*e.g.* Colley *et al.* 1994, March 1989. Lee & Bryk 1989, Australia and USA).

Responses omitting reference to both psychological theory and research should receive no marks, appropriate theory only, **[12 marks]**. A simple description of research and theory should receive a maximum of **[12 marks]**. For high marks candidates should present a well detailed description of theory and research incorporated into a reasoned argument that culminates in a logical conclusion.

- 29. (a) Outline the cognitive developmental explanation of the development of gender identity.** **[13 marks]**
- (b) Evaluate this explanation by reference to relevant research.** **[12 marks]**

For part (a) the focus will be on the knowledge and understanding of stages of developmental change in a child's understanding of gender identity. Contributions may be taken from Kolberg's theory and research. This should include three stages and a clear explanation that it is the child who is *actively* organising its own identity. For maximum marks the candidate should demonstrate a clear understanding of the active nature and developmental stages of cognitive change in the process of gender identity.

For part (b) the strengths and limitations of relevant research should be examined by the candidate. Material may be taken from Kohlberg's own research, Kuhn *et al.*'s research into toy preferences, Fagot's work *etc.* Candidates should make the point that this approach does not explain why children begin to display sex appropriate behaviours before they understand gender identity.

For description only there should be a maximum of **[6 marks]** awarded. If no empirical research is offered then the candidate should receive no marks. High marks should be reserved for those candidates who use research to evaluate the theoretical explanation they offer.

**30. Discuss the relative influence of environmental and genetic factors in gender development.**

**[25 marks]**

This question requires the expression of an informed opinion about the relative influences of two types of factor in gender development. The possible content may come from a range of material which could include biological influences such as: Money and Erhardt, Imperato-McGinley *etc*, in addition to animal studies where the biological determinants of gender have been manipulated to produce specific male or female characteristics.

Research looking at the effects of socialisation could include Rubin (parental sex typing, Sears (aggression), Lamb, (peer group influence), Johnson (PMS is found only in Western developed societies). Theoretical explanations could include the psychoanalytic, social learning and cognitive developmental. Theories which consider the interaction of the two approaches (*e.g.* cognitive) would also be appropriate.

For answers meriting marks at the higher ends of the mark range there should be a balanced argument referring to both genetic and social factors. If only one type of factor is addressed then the marks should be halved. Description of theories and research only should receive a maximum of half marks. Purely anecdotal responses should attract no marks.

**Intelligence and personality**

**31. Examine the controversies in defining personality.**

**[25 marks]**

There is a wide range of approaches to understanding personality but little agreement on what the term means. Weaker responses will probably simply describe one or several theories of personality and such an approach should earn a maximum of **[10 marks]**. On the other hand, stronger responses should underline the complexity of the effort to define personality. Has the theorist chosen an all encompassing approach to explain all aspects of the personality (most psychodynamic theories) or a narrow-band approach attempting to describe a few distinctive features of the personality? (*e.g.* Adorno's authoritarian personality construct). Consideration of other such dimensions (trait *versus* type; levels of reductionism; intrapsychic *versus* interpersonal; the study of mental processes *versus* the study of behaviour; the role of culture *versus* prescribed sequences; freedom *versus* determinism) would be valid in answering this question. References to specific theories within the framework of an argument would be expected.

A good answer may go in depth, in an integrated fashion into two or three of the above issues or may alternatively choose to survey more aspects of the controversy. Evaluative comments, required for higher marks, may refer to the limitations (methodological, ethical, cross-cultural) in the different theoretical attempts at defining personality.

32. (a) **Describe one cognitive theory of intelligence.** **[15 marks]**
- (b) **On what basis do these theories criticise intelligence testing?** **[10 marks]**

Cognitive theories define intelligence as consisting of a set of mental abilities. A well developed cognitive theory of intelligence such as Sternberg's, from Yale University, could be chosen. His triarchic theory of intelligence includes contextual, experiential and componential dimensions of intelligence. This theory is applicable cross culturally. Other theories (Thurstone/Guilford/Gardner and some aspects of Piaget's theories) could be described. Some cognitive theories of intelligence often fail to take into account cultural context and personal experiences (Sternberg's criticism).

Intelligence testing is seen as too narrow and lacking applicability to solving problems in the real world. Sternberg criticises IQ testing because it focuses on measurement of a construct rather than seeing how people operate in the world.

Candidates who merely describe Piaget's or any other theories without critically evaluating the theory should not obtain more than **[10 marks]**.

33. **Using appropriate examples, analyse the criteria involved in the production of either personality or intelligence tests.** **[25 marks]**

Either personality or intelligence should be chosen for in depth discussion. Psychometrists often disagree on the content validity of tests because they disagree on what the tests should be measuring. If intelligence testing is chosen, familiarity with the criteria employed in test construction could be shown using a historical approach (e.g. from Binet's approach to more contemporary psychometrists such as Weschler, Spearman, Guilford, Gardner). The difficulties involved in developing culture fair tests would meaningfully address the evaluative issue of cross culture validity. Newer approaches focus on people's ability to solve problems rather than "measuring IQ" (Sternberg) or the criteria to determine emotional intelligence. Reliability and validity are important issues.

If personality is chosen, the candidate should demonstrate familiarity with different dimensions such as projective as opposed to objective; person/situation interaction; Cattell's factor analysis, Eysenck's 3 dimensions. At least two of the above or similar issues related to personality test production should be discussed in order to obtain marks in higher bands.

Candidates who describe a theory of personality or intelligence without developing an argument about the criteria involved in the production of tests should get no marks. If only one example is offered a maximum of **[12 marks]** could be obtained.

**Life span psychology**

- 34. Discuss and evaluate the effect of the mother's physical and mental health on the unborn baby.**

**[25 marks]**

The focus is on the unborn baby. References to the later development of the child should be related to prenatal factors. Answers require evaluation rather than purely descriptive accounts. As such, the prenatal environment should be considered in relationship to life choices or conditions that may affect the unborn child. The use of drugs, alcohol, (Clarren and Smith), diet restrictions or nutritional factors related to poverty (Stechler and Halton) would be highly relevant. Sontag (1994) has carried out interesting research on the relationship of stress and hormones. Maternal illnesses as well as maternal age could be brought into the discussion. Methodological research issues (*e.g.* the distinctions between stress associated to another factor, such as poverty) may be brought into the discussion. Discussion of teratogens are clearly relevant but if the discussion is restricted to genetic factors, a limit of **[10 marks]** may be awarded. The question lends itself to ethical considerations but should not be restricted to diatribes against drugs and alcohol.

- 35. (a) Outline *two* theories defining adolescent identity.**

**[15 marks]**

- (b) To what extent could cultural factors influence the acquisition of identity?**

**[10 marks]**

A brief outline of *two* theories would be sufficient for the first part of the question.

Transitional changes are seen by the life span approach as related to both internal as well as external factors. As such, life experiences are at least as important as intrapsychic factors. Social class and cohorts, gender issues, ethnicity and other such factors contribute to an understanding of how the adolescent sees herself. Contemporary theories (Steinberg, 1996) describe identity as a psychosocial concern. Erikson's predetermined sequence may only partially account for the above factors and a simple description of his theories to answer this question would not be sufficient and would merit no more than **[5 marks]** for the second part of the question, unless specific references are made to sociocultural factors.

References to cross-cultural research, awareness of the role of the media as well as of the multiplicity of concerns that affect patterns of adolescent identity (Coleman, Kroger) would lead to the awarding of high marks.

- 36. What data collection methods could be appropriate alternatives to the experimental method in life span psychology? Refer to specific studies to illustrate your answer.**

*[25 marks]*

This essay will most likely be primarily descriptive in nature, appropriate choice of the studies selected marking the difference between a mediocre and a good essay. Better responses will include some evaluative comments regarding cross-cultural applicability of studies and approaches, ethical concerns, and insight about the difficulties involved in studying groups or individuals on a long term basis, as would be typical of life span studies. Another interesting consideration with the use of cross-sectional studies involves how individuals may not be truly comparable from one period to another. Self reports may lead to providing socially acceptable answers.

Case studies, cross-cultural studies, observational (ethological) research, surveys and self reports, quasi experimental and correlational studies are other alternatives to the experimental method.

Award higher marks to answers that include good examples of the method discussed as well as evaluative comments.

**The migrant, sojourner and tourist experience**

- 37. Which of the various theoretical interpretations of the migration experience do you find most appropriate in explaining this phenomenon? Support your selection through a comparison with other possible interpretations.**

**[25 marks]**

Candidates may address any number of theories which may include adjustment/adaptation theories, biomedical models, and social skills and cultural competence models, to name a few, as a way of introducing their selection. However at the beginning of the essay candidates should indicate which interpretations they feel are most appropriate and demonstrate that they can support their choice. Failure to do so will result in considerably fewer marks. Good discussions will explain theoretical interpretations with clarity and succinctly establish their differences. Award full marks to essays which discuss the advantages and disadvantages of the selected theoretical interpretations.

- 38. (a) How does the experience of immigrants differ psychologically from the experience of refugees?**

**[12 marks]**

- (b) What suggestions do psychologists offer to enhance immigrants' and refugees' success abroad?**

**[13 marks]**

What is needed in this essay is a comparative account of how two categories of migrants (immigrants and refugees) differ in their psychological reaction to new cultures. Allow for variety in candidates' essays. Some possible differences (part (a) **[12 marks]**) might include for *immigrants* the emphasis upon permanent relocation, adaptation of host society's norms and customs; while for *refugees* the experience of resettlement may share some of the above characteristics but within a society that is unfamiliar or unattractive to them. This is markedly different from the immigrant situation. Each category of migrant's psychological reaction to these conditions and expectations should be carefully explored for full marks.

In part (b) **[13 marks]** candidates are asked to provide suggestions from psychologists that might improve a migrant's foreign experience. Again, there is a broad spectrum of choices here from which to choose. Most suggestions are associated with pre-departure preparation and orientation, as well as the acquisition of certain social skills, *e.g.* decoding NVC. In addition, satisfactory career placement in the host culture alleviates much psychological stress. Award high marks if the included suggestions originate in psychological theory and research and are clearly expressed.



- 39. What are mental maps and what psychological effect do they have on a tourist's experience abroad?**

***[25 marks]***

Well-prepared candidates should be able to construct an essay which discusses cognitive maps, schema, *etc.* and how these may affect our experiences abroad. The concept of mental maps (cognitive maps) has received a fair amount of attention in various fields of psychology. The task for candidates is to offer a sound definition of mental maps and to apply this definition to the phenomenon of tourism. Research studies are required; anecdotal material should receive no marks. The causal relationship between attitudes and behaviour might also be explored if correctly linked to mental maps. Higher quality answers will offer a thorough balance between definitions of mental maps and their application to the tourist experience.

## Organisational psychology

40. **“Conflict will always feature in organisational life; it should be a task of management to acknowledge this fact, and seek to understand it further.”**

**In relation to the quotation above, analyse sources and tactics of conflict within organisations.**

**[25 marks]**

According to the IB Guide, use of the key injunction ‘analyse’ in this context requires the candidate to offer a closely argued and detailed examination of a development, and will indicate relevant inter-relationships between key variables, any relevant assumptions involved and will also include a critical view of the account as presented. Candidates should manifest some knowledge of this interpretation although not necessarily all.

Detailed examination of sources of conflict could include reference to differences in perception between individuals or groups, strict limits placed on resources, over-specialisation in departments, inequitable treatment and perceived violation of territory over matters such as access to information on a need to see basis. Many of these sources emanate from hierarchical organisations where certain variables tend to be used together. For example resources may be made deliberately inequitable but only specified individuals know how and why this inequity is maintained.

Answers which focus either solely on sources of conflict, or solely on tactics of conflict, should be limited to a maximum of **[13 marks]**.

Tactics of conflict may apply to at least two parties within the organisation – those who seek to maintain or heighten conflict for their own particular ends, and those who seek to reduce it within manageable levels. The former may include those who have personality characteristics that thrive in an atmosphere of conflict, and who wish to use their position of power to impose decisions on subordinates. The latter will take a more constructive approach to include approaches that clarify goals and objectives, distribute resources more equably or seek more participative styles of leadership and management.

**41. To what extent is job satisfaction within organisations dependent upon motivation?**

***[25 marks]***

Candidates should convey to the examiner that they can differentiate between motivation and job satisfaction. Job satisfaction is an integral part of Herzberg's two factor theory which proposes that job enrichment should provide individuals with an opportunity to use their talents and abilities, and to exercise an element of self control over their jobs. By using Herzberg's model Myers has identified two groups of employees – motivation seekers and maintenance seekers. His six year study of employees with Texas Instruments found that several factors lead to job satisfaction when motivation is encouraged. Such factors include access to information, involvement, goal setting, problem solving and training.

Candidates should make it clear that job satisfaction is a complex process which embraces individual, social, cultural and environmental factors. There is also a debate amongst organisational psychologists as to whether there is a single overall factor which accounts for job satisfaction or whether there are a number of separate dimensions in operation. The quality of working life may be a single general factor, or just one of a number of contributing factors which extend to work organisation and job design, the nature of technology employed by the organisation, or the meaning of work to the individual.

Whichever approach candidates take they are required to make a judgement in order to answer the question that has been set. If no judgement is made there should be a maximum of ***[13 marks]*** awarded.

**42. Discuss the main causes of stress within organisations and the consequent effects of stress upon individual employees.**

***[25 marks]***

There are a substantial number of factors that contribute towards stress and in responding to this question candidates should be able to categorise the causes of stress into a small number of factors, preferably by using empirical research. Among the most well known attempts is that of Karasek using both Swedish and American surveys, where it is suggested that stress is related to two main factors – workload and discretion on how to complete a task.

Role stress can also be used by candidates to illustrate causes of stress and an example may be found from Whyte's study of American restaurants where waitresses are under constant conflict in pressure from customers to have food served immediately and from chefs who were unable to produce food instantly. Candidates who focus exclusively on causes of stress or effects of stress upon individuals should have a maximum of ***[13 marks]*** awarded.

The effects of stress on individuals are also various and these are receiving attention as disgruntled employees who have developed stress as the result of working conditions are in a position to sue their employer. Individuals can suffer both mental and physical damage from stress, and in the latter case this is sometimes shown by the increase in stomach acid build-up and a distinct possibility of suffering from ulcers. Employees can and do suffer from mental illnesses particularly where this is manifested as schizophrenic behaviour which is claimed to have arisen from role conflict.

Candidates are expected to base their essays on empirical evidence and those employing anecdotal evidence should not receive credit for such work.

**Social psychology**

- 43. What is the psychological relationship between attribution and social cognition?**

**[25 marks]**

In this question examples are needed to illustrate the relationship between attribution theory and social cognition. Well-prepared candidates will show that attribution theory is only one aspect of the larger field of social cognition. The major point for candidates to emphasise is that social cognition involves some form of interpretation of our own behaviour as well as the behaviour of others. Attribution theory (or theories, to be more precise) provides us with an understanding of how people assign causality (often erroneously) to the behaviour they perform and observe. Candidates are likely to mention other forms of social cognition including schematic processing, stereotyping, *etc.* which are relevant to this question, but the emphasis should be on how understanding attribution theory helps us to understand the larger topic of social cognition. Candidates who write a descriptive essay on attribution and social cognition without explicitly relating one to the other should receive a maximum of **[13 marks]**.

- 44. (a) What accounts for the controversial nature of research on altruistic behaviour?**

**[15 marks]**

- (b) In what circumstances can altruism be considered a group process?**

**[10 marks]**

For part (a) candidates must first explain what is altruistic behaviour and then identify the controversies surrounding research on this subject (for **[15 marks]**). Appropriate ethological references should be given full credit as long as they are integrated into an essay on human behaviour and the candidate is aware of the specific use of the term in ethology as increasing the fitness of the recipient. Several examples of apparent altruistic behaviour should be identified and evaluated.

The second part (b) of the question **[10 marks]** requires careful consideration of the nature of altruism. For example, can altruism ever be considered apart from a group process? Replying to this question or related others involves some discussion of how we define our terms in psychology and the cognitive strategies we take to separate ourselves from the social environment. Examples of altruism as a group process may include mothers sacrificing themselves for their children, a nurse sacrificing for the patient, and an IB examiner sacrificing time and effort for the organisation. Therefore, this question requires the identification of controversies in defining and illustrating altruistic behaviour as well as its application to social processes. Candidates who approach this task with competence and precision should be given full marks.

45. Explain by using empirical studies the psychological distinction between conformity and obedience.

*[25 marks]*

This question is a simple one requiring a very clear distinction between conformity and obedience. Award marks only for essays which demonstrate that the candidate comprehends the distinction between these two terms. In order to gain full marks candidates must include several relevant empirical studies for conformity **and** obedience. Give fewer marks for essays in which there is an over emphasis on Asch's study or Milgram's research at the expense of other pertinent research. On the other hand, a perceptive candidate might find reason to argue against Asch and produce a closer examination of cross-cultural situations in which the Asch research is subject to different interpretations. Additional credit should be awarded for this type of commentary. Award a maximum of *[10 marks]* to essays which simply describe conformity and obedience.

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