

MARKSCHEME

May 2002

PSYCHOLOGY

Higher Level

Paper 2

SECTION A

- 1. Explain why this research design is not a true experiment. [2 marks]**

Award **[2 marks]** for accurate identification and explanation of one of the following: lack of manipulation of the independent variable, lack of truly random selection, or lack of truly random allocation. Award **[1 mark]** for simple identification of any of the factors above. No marks should be awarded for irrelevant points, such as “it does not test a hypothesis” or ambiguous points such as “it is not controlled”.

- 2. State the independent variable and give a reason for your answer. [2 marks]**

Taxi-driver or control or similar wording (*e.g.* experience of driving a taxi). Allow the second mark for explaining that this is the variable on which the two groups differ, even though it has not been manipulated.

Do not award the second mark if the candidate states that this variable was manipulated as it was a naturally occurring difference (hence a quasi-experiment).

- 3. State the dependent variable and give a reason for your answer. [2 marks]**

The (spatial reasoning test) scores, since this is the variable expected to vary as a result of taxi-driver experience, spatial memory use *etc.* No mark for “it depends on the independent variable” unless this is explained.

- 4. Explain why the selection method used for both samples of participants might produce bias. [2 marks]**

Both groups are volunteers and these are not representative of all people. Candidates could also say that volunteers are known to differ from average on certain characteristics or they can simply say that volunteers might differ. Candidates might concentrate on the given features of the control group (university staff/students, non-drivers) which should be awarded **[1 mark]**. For full marks candidates should concentrate on the method used for selection.

5. The test of spatial reasoning used in this research should be:

- (a) reliable
and
- (b) valid.

Explain what is meant by *each* of these terms with reference to the tests.

[4 marks]

For reliability the first mark may be given for something like “concerns whether a scale produces consistent results”. The second mark should be given for a fuller description, or a description of internal and/or external reliability.

For validity, digressions on internal and external validity of experiments will probably not be adequate for more than [1 mark], since the question is specifically about tests. Answers such as “validity concerns whether a test measures what it is intended to measure” can obtain [1 mark], whereas an example of attempted validation or a further elaboration showing how a scale might not be valid can earn the second mark.

6. Psychological tests need to be standardised before they are used as measures in research. Explain what is meant by the term *standardised test*.

[2 marks]

Award [2 marks] for a full, clear statement such as that a standardised scale will have been piloted on a large sample to obtain scoring norms for the population. Statements like “scores are related to the population” or “scores can be compared” would gain [1 mark] and if two such different points are presented, then [2 marks] can be awarded. Candidates might also talk about adjusting the scale based on feedback from piloting in which case award [1 mark]. Candidates must focus on standardised tests, not standardised procedures. Do not award credit for discussion of standardised procedures.

7. Explain the difference between the mean and the median as measures of central tendency.

[2 marks]

One accurate statement about **each** measure which clearly distinguishes them, is adequate. For instance, “the mean is the average value whereas the median is the central value”, or “the median is appropriate for ranked data whereas the mean is appropriate for interval level data”, or similar. Give [1 mark] for any accurate point made about one of the measures even where a statement about the other measure is incorrect.

8. **Table I shows the stem and leaf chart for the taxi drivers’ and control group’s scores on spatial reasoning.**

State which group’s scores would be described as particularly “skewed”, give a reason for this answer, and indicate the direction of the skew.

[4 marks]

The taxi drivers’ scores for **[1 mark]**. **[1 mark]** is obtained for clearly describing the features that show skew – one tail is “longer” than the other, an outlier at one end/tail, more scores at one tail of the distribution than at the other, or one extreme score skews the mean in a negative direction. **[2 marks]** for correctly identifying that the taxi driver scores are *negatively* skewed.

9. **Table II gives values for the standard deviation in each group.**

(a) **Explain what is meant by the term *standard deviation*.**

[2 marks]

Give **[1 mark]** for the description of standard deviation as a measure of dispersion; acceptable alternative terms, used correctly, would be: spread, breadth, distribution, variation around mean/centre, *etc.* “Range” is problematic since it is another technical measure of dispersion which candidates ought to be able to distinguish from the standard deviation, so no mark unless the context is satisfactorily clear. (For example, “range of scores around centre”.) Give an additional mark for a fuller description/explanation, *e.g.* in terms of the average of deviations, an exact formula or accurate description in verbal terms (square root of average of squared deviations). Alternatively give a second mark where candidates mention the role of standard deviation in making population estimates or similar.

(b) **Explain what is meant by saying that a participant in a study has a standard score (z score) of 1.5.**

[2 marks]

“The participant’s score is 1.5 standard deviations from the mean” is adequate for **[2 marks]**. “There are 1.5 standard deviations from the mean” is acceptable for **[1 mark]**.

10. (a) **Select a statistical test which could be used to test the significance of the difference between the two sets of spatial reasoning scores produced by the taxi drivers and the control group.** [1 mark]

Related t test or Wilcoxon (signed ranks). Though not on the syllabus, a one-way (related) ANOVA would be acceptable (“one-way” must be stated however).

- (b) **Give two reasons why you selected the test you chose in part (a).** [2 marks]

- Testing differences
- Ordinal (if Wilcoxon chosen)/interval data (if t test chosen) – need not be justified but must be appropriate to the test chosen
- Matched pairs – related design/within groups design

Award [2 marks] for any two of the above clearly identified. Award [1 mark] if only one is clearly identified.

11. **Explain what is meant by describing the difference as significant with “ $p < 0.01$ ” (line 16).** [3 marks]

Many answers are possible. p is the probability of obtaining the difference if the null hypothesis were true. Here p is less than 0.01 (or 1%) so the results are highly significant. Give full marks where comments are clear, no matter what else is said. If the explanation is less clear, e.g. “the probability of getting the results by chance is less than 1%” award [2 marks]. Award [1 mark] for simplistic statements such as, “we may reject the null hypothesis”, or “this would happen only 1 time in 100.”

12. **The correlation of 0.78 between time spent driving and spatial reasoning score is described as “moderately strong” (line 16). Explain what is meant by this description.** [2 marks]

Candidates need to relate the value of 0.78 to the full scale of correlations (up to +1). Any reference to significance of the correlation is irrelevant. Give [1 mark] for vague or general statements like “0.78 is a high value” or “driving predicts spatial reasoning”. Give [2 marks] where meaning is specific, e.g., “(positive) correlations are measured in strength up to +1 from zero and so this is fairly close to the top”. Give [0 marks] for, e.g., “there is a moderately strong relationship between time spent driving and spatial reasoning”, as this simply repeats the question.

13. The researchers claim that the difference between the spatial reasoning scores of the taxi drivers and the control group is likely to be caused by the taxi drivers' experience in using their spatial memory in their job every day.

Describe *two* confounding variables which might account for the difference found. Give a reason for *each* answer and base your answer only on the information provided within the research description given above.

[6 marks]

Possible answers from the text of the research scenario are the fact that the control group participants all came from the university and that some were inexperienced drivers. In each case a clear justification should be made for selecting the confounding variable. For instance, "some of the control group were inexperienced drivers and it might be something to do with driving skills, not using spatial memory, that makes the taxi-drivers better at spatial reasoning tasks".

For each of the two possible confounding variables: Award *[1 mark]* for identifying each potential confounding variable. A second mark for providing an appropriate reason, and the third mark for explicitly basing the answer on the information produced within the research description.

Candidates should not be awarded marks for making unsupported assumptions about what might have intervened.

14. The research described here was not a true experiment. Describe a true experiment which could be carried out in order to test the hypothesis that daily intensive use of spatial memory will lead to an increase in spatial abilities in humans.

(a) clear outline of the experimental design

[2 marks]

Do not award any mark here where the design described is not a true experiment. A comparison of any two groups of people with greater and lesser experience in using spatial memory (e.g., “architects and non-architects”) is not a true experiment. Typically, the experimenter should apply one treatment to one group (e.g., “prolonged practice with jigsaws”) and not to the other. Award [2 marks] where the design is correctly named and where groups and/or conditions are clearly identified. [2 marks] may also be awarded where a name is not provided but where the design type is obvious from a very clear description of group/conditions and the relationship between these and participants. (Maximum of [2 marks] possible.)

It is acceptable for candidates to describe an experiment using driving as the IV so long as there is clear manipulation of an IV and random allocation to groups. (Maximum of [2 marks] possible)

(b) explicit identification of IV and DV

[2 marks]

Award only [1 mark] for each clear identification (i.e. do not compensate). The dependent variable must be stated in operational terms. Do not award any mark for the dependent variable where a vague description is given (e.g., “the experimenter would then measure their spatial ability, ability to do spatial puzzles” etc.). (Maximum of [2 marks] possible.)

(c) sample selection

[2 marks]

Do not award a mark for a technical term (e.g., “random”) unless the selection method described clearly matches the term (e.g., “all students would be given a number and then 20 would be selected using a random number generator”). Award [1 mark] where the type of participant chosen is clearly made relevant to the design and [1 mark] for any further appropriate detail. Award [0 marks] for the simple provision of a technical sampling term (e.g. “a random sample would be selected” but [1 mark] where it is applied to a population (e.g. “a random sample would be selected from among the whole college student population”). Again, a further mark would be obtained for further relevant detail. (Maximum of [2 marks] possible)

(d) precise research procedure

[2 marks]

Give credit for the fact that this is only [2 marks] in a four part answer so do not expect the kind of detail required in a full practical report. Do not give credit here for the description of ethical considerations (see Question 15).

(Maximum of [2 marks] possible)

- 15. In the experimental design which you have just described in question 14, state *two* ethical issues which the researcher should identify and explain *each* of these.**

[4 marks]

Almost any of the ethical principles on page 34 of the Psychology Guide (apart from animal research) can be stated but the reason given must make the principle relevant to the research described in question 14. Give ***[1 mark]*** for each principle stated and ***[1 mark]*** for each fair reason. Do not award a mark where a principle is in such bland terms that it is vague or ambiguous, *e.g.*, “the researcher must be nice/must not upset the participants”.

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SECTION B

Biological bases of behaviour

16. (a) Describe effects of drugs on the nervous system.

[13 marks]

Candidates may select from any type of drug, including recreational drugs. In this section of the question they are required to focus on the effect of drugs on the nervous system. Candidates may also include work on non-human animals.

Drugs are either agonists or antagonists and their action on the synaptic transmission tends to mimic the action of natural neuro-transmitters that are present in the body. Agonists such as heroin or ecstasy or caffeine tend to excite the neuro-transmitter, while antagonists such as chlorpromazine, are inhibitory in effect. In reality drugs are far more complex in their actions and some candidates may know of Pinel's (1997) work in which he claims seven distinct processes for drug action that include the function of vesicles and action potentials and enzyme degradation. Candidates may offer other drugs than those mentioned above, and providing these are made relevant they should be awarded credit.

(b) Consider how these drugs may affect behaviour in humans.

[12 marks]

This section also may have many different responses, but they should all focus exclusively on behaviour. In general the drugs are one of depressants, stimulants or hallucinogens, and subsequent behaviour will reflect the category of drug used. Concepts such as drug addiction, effects on behaviour while in charge of machinery, or the effects on behaviour of drugs used in medicine may also attract credit. Drugs may, of course, have either positive or negative effects. Candidates are usually very well informed on these aspects of drug use.

17. Describe how the brain is affected by *one* degenerative disease and discuss how this disease alters the behaviour of its human sufferers.

[25 marks]

The word degenerative in this context means a usually irreversible deterioration of specific cells or organs of the brain, with a corresponding loss of function over a period of time. Candidates should make some reference to this aspect of the disease that they select. The function cannot be recovered by a change of the person's habits in exercise or food intake, for example, and in the vast majority of cases it cannot yet be cured by medical means. Degenerative diseases include Alzheimer's disease, multi-infarct disease caused by a series of small strokes, Huntington's chorea and motor neurone disease. Although these are frequently associated with people in old age, in some cases they start with people in their thirties; in the case of Huntington's chorea the disease is genetically transmitted but its effects are not normally apparent until the sufferer is into middle age.

Most candidates are likely to focus on Alzheimer's disease. Coyle *et al* found that most damage caused by the disease occurred in the hippocampus and neo-cortex, particularly in the frontal and temporal regions. Candidates should identify these areas of damage. The damage results from the failure of the brain to manufacture sufficient choline acetyltransferase, the enzyme that combines with choline to synthesise acetyl-choline. Without this essential chemical the cells that use it tend to degenerate and eventually to atrophy. Hence the cells required to form new long term memories no longer work although the older memories remain relatively intact. The behaviours of sufferers are a reflection of this loss of long term memory.

Candidates should show awareness that these diseases can happen at a relatively young age. In sufferers of Down's syndrome this same degenerative process begins at age 35–40 years. A maximum of [12 marks] should be awarded for the description and [13 marks] for discussion of the subsequent alteration of behaviour.

18. Describe and evaluate *two* studies of bodily rhythms.

[25 marks]

There are about 100 different bodily rhythms but generally these can be categorised under the headings of circadian – on a daily basis, infradian – cycles that last more than a day, and ultradian – those cycles that last less than a day. Most candidates will choose the first of these by using the sleep-waking cycle, or temperature. Infradian rhythms are likely to be illustrated by reference to the menstrual cycle or seasonal affective disorders, and ultradian by reference to the normal 90 minute sleep cycle. Examiners should be careful to avoid awarding marks for descriptions or theories of dreams unless these are made explicit as rhythms.

The question also calls for reference to studies rather than a general essay on bodily rhythms. This means that either theories or research studies should be the focus of this essay. For example, work on sleep by Aserinsky and Kleitman, or Horne's study of Randy Gardner could be included. Similarly Schochat's 1997 study of the effect of melatonin on the sleep-waking cycle could be relevant, as could Hendricks *et al*'s research into the differences between African and western women in relation to comparative sexual activity at the time of ovulation.

Two studies are required; if only one is offered then a maximum of ***[13 marks]*** should be awarded.

Comparative psychology

19. (a) Consider courtship behaviour in birds prior to mating.

[13 marks]

Pre-mating behaviour in birds is usually initiated by males who arrive at the nesting site first and then defend this territory against rival males. The way this defence is conducted is perceived and assessed by potential mates, as is the courtship song emitted by male song birds. As far as females birds are concerned courtship is the time when the female needs to assess her future mate's potential in terms of fitness so that defence strategies, nest-building abilities, food provision and genetic endowment are considered (Krebs and Davies). A major function of pre-mating or courtship has to do with the notion that the most successful way for most birds to raise their young is to do so with two parents sharing the task (Lack). Examiners should award credit for essays that attempt to address these or similar salient points related to pre-mating behaviour.

(b) Discuss the extent to which such behaviour differs from pre-mating behaviour in other species.

[12 marks]

In mammals, with the exception of humans, pre-mating behaviour can rarely be designated as courtship. Rather it tends to consist of polygyny or seasonal monogamy, and sometimes involves violent behaviour. For example, Hrdy has studied behaviour of Hanuman langur monkeys in which infanticide occurs when the old alpha male is replaced by a newcomer male. However in some mammals, such as foxes, there is a seasonal monogamous relationship. Examiners should award marks where candidates use the concepts of monogamy, polygyny or polyandry in a relevant manner.

20. Discuss explanations of visual communication between animals.

[25 marks]

Candidates may choose their examples from communication within the same species or between species, or a combination of the two. The aim of communication is for the message to alter the behaviour of the receiver. Grier and Burk suggest four major functions for communication – survival, reproduction, establishing territory boundaries and food. These same authors also claim that the advantages of visual signals are that they are able to be transmitted immediately, they carry substantial information, they are highly directional and some examples of visual signals, such as body colouring, are permanent and need be produced only once to have their effect.

Candidates should include disadvantages of visual signals in their discussion, for example the fact that they are only effective in good light, and they are not efficient over very long distances. Zahavi suggests that visual signals evolve in a manner that is honest or they would lose their function as a means of communication. For example, Thompson gazelle tend to exhibit high and frequent stotting behaviour in order to demonstrate to predators that they are the most agile of the herd and not worth the effort of pursuit. Astute candidates should be able to counter this claim by citing ethological recording of visual signals that shows deceit is practised by some species. Some moths and butterflies which are not poisonous themselves, mimic the colouration of poisonous species in order to avoid predation. Fireflies mimic the mating signals of rival species and then eat the unsuspecting males that respond, cuckoos lay coloured and patterned eggs identical to their hosts in order to deceive the host species into incubating the false egg and raising the most demanding of offspring.

Examiners should be careful to ensure that credit is given only for signals that are **visually** mediated.

Candidates who merely describe aspects of visual communication should receive a maximum of **[12 marks]**.

For full marks candidates are required to evaluate the visual communication that is used.

21. Describe and evaluate *two* theories that attempt to account for the evolution of behaviour in non-human animals.

[25 marks]

The proportion of marks awarded should be a maximum of ***[13 marks]*** for description and ***[12 marks]*** for evaluation.

Several theories are available from the literature including those of Darwin, Lamarck and Dawkins. The concept of evolutionary theory should be interpreted fairly generously here, so that if a candidate, for example, was to include reference to a theory by Krebs and Davies, or the evolution of homing behaviour in pigeons (Walcott and Green), these should receive credit. Candidates should make their theories relate explicitly to evolution and behaviour. Writing that focuses on physical aspects of evolution should not receive credit unless such development is expressly linked to the evolution of behaviour.

The evaluation of earlier theories mentioned above could include reference to their difficulty in explaining altruistic behaviour between animals, or, since these classic evolutionists lacked information on genetics, an explanation of how such behaviour came to be selected. Although more recent evolutionary theorists make out a reasonable case for kin selection and genetic closeness as an explanation for altruistic behaviour, this fails to explain such behaviour between non-related animals of the same species, or between animals of different species. Candidates may also challenge the explanation for behaviour that relies on physical evidence from remnants of bone structures and food remains to explain behaviour.

Delinquency and crime

22. (a) **With reference to empirical studies, describe *two* major family factors that contribute to the development of delinquent and criminal behaviour.**

[13 marks]

Research consistently finds several factors in terms of family functioning that characterise the families of delinquents. These factors include child-rearing practices, parental disharmony, family size, parental deviation and style of parenting, *e.g.* harsh, lax or erratic disciplinary practices are associated with families of delinquent children (Glueck & Glueck; West; Synder and Patterson); larger family size is an established correlate of delinquency (Fischer; West; Hirschi); criminals are more likely than non-criminals to have criminal parents (Glueck & Glueck; West; Robins et al).

There are a large number of empirical studies that could be used to explore the influence of family relationships. Look for a clear description of various aspects of each major factor chosen. If only one factor influencing the development of delinquent and criminal behaviour is described then a maximum of **[8 marks]** may be awarded.

- (b) **Evaluate the importance of family factors as an influence on the development of delinquent and criminal behaviour.**

[12 marks]

Candidates should evaluate the importance of family factors in relation to the empirical evidence. They may include reference to additional family factors in part (b) that have not been fully described in part (a). Candidates may discuss the relative impact and incidence of particular family factors. Reference may also be made to other social, economic or biological factors which are thought to have an influence on the development of delinquent and criminal behaviour. If mentioned, these must be related to their importance relative to family factors. Answers which do not contain evaluative comment should receive no more than **[5 marks]** for part (b).

23. **“Delinquent and criminal behaviour may be learned, but it is also a rational choice.” Evaluate this claim using the social learning and cognitive approaches.**

[25 marks]

The ideas and concepts of social learning theory have been applied to the learning of criminal behaviour, where the processes of reinforcement, modelling and imitation have all been suggested as being involved in the development of delinquent and criminal behaviour. Bandura, Mischel & Mischel and Nietzel are among those who have applied Social Learning concepts to the study of criminal behaviour. Braukman *et al* have also looked at the importance of peer group modelling. More recent research following an SLT approach has focused on social cognition and social skills *e.g.* Hollin, Ross & Fabiano.

A newer approach in the cognitive area suggests that not only is there a complex interaction of factors but that our actions are motivated by self-interest, and criminals weigh up the potential rewards and punishments, *i.e.* a rational choice is being made. Studies include those by Felson, Clarke, and Hough *et al*.

Candidates must address the quotation and offer a reasoned argument, using both theoretical approaches. If only one approach is addressed, a maximum of **[13 marks]** may be awarded.

A maximum of **[10 marks]** may be awarded for answers lacking explicit evaluation.

24. **Consider how theories of identity development and stigmatisation help to explain the social construction of the criminal identity.**

[25 marks]

Theories of the development of the criminal identity take many forms: the deterministic views of Freud; the biological view of Eysenck’s theory of criminality; the social constructionist theories that are more prevalent today. Social constructionist theories explore the ways in which individuals both make and are made by the social institutions that surround them.

Candidates must discuss at least two theories of identity development in relation to criminal behaviour as well as the impact of stigmatisation on the construction of the criminal identity. Theories may include, for example, those of Cohen on adolescent status problems, Hargreaves on strain theories, and Gold on self-presentation theories. Social labelling theories will help to explain stigmatisation.

The question is asking for the candidate’s opinions, which should be presented clearly, and supported with as much evidence and sound argument as possible. Candidates may take a broad approach or a more in-depth approach, but whatever approach is taken the opinions expressed must be well-justified and clearly presented. Candidates who simply describe theories of identity development should receive up to **[5 marks]**. Candidates must examine and give an opinion on two or more theories of identity development and stigmatisation. Candidates who examine only one theory should receive a maximum of **[13 marks]**.

Dysfunctional behaviour

- 25. Critically consider behavioural explanations of dysfunctional behaviour, and the resultant therapies.**

[25 marks]

In this question, candidates are being asked to make an appraisal of both the behavioural approach to dysfunctional behaviours and its therapeutic interventions. Answers should reflect an understanding of the behavioural notion of abnormality – learned maladaptive responses to stimuli. Observable behaviours only need to be considered as no underlying causation is considered. Therapies described should be clearly related to either C.C. or O.C. principles, or, in the case of modelling, to Social Learning Theory.

Evaluation of both approaches, *e.g.* the possibility of symptom substitution, directive therapy, high success rates *etc.* **and** therapeutic technique is required in an answer meriting high marks.

Award up to **[10 marks]** for the behavioural theory explanation and up to **[15 marks]** for related therapies. Behavioural theory must be addressed as it relates to dysfunctional behaviour, rather than a general treatment of the theory.

- 26. Describe and assess theory and research into the origins of schizophrenia.**

[25 marks]

An organised, detailed response to this question will probably begin by describing schizophrenia and introducing the relevant DSM IV diagnostic criteria including symptoms (emotional, behavioural, perceptual and cognitive), and the five sub-categories. Aetiologies may be subdivided into biological/genetic theories and/or evidence, psychological (environmental), and/or diathesis-stress model.

Candidates offering lists of potential aetiologies without evaluation should be awarded a maximum of **[12 marks]**. Essays awarded marks in the higher bands will probably be those describing and evaluating a range of explanations, including interactive approaches, with consequent trade-off in terms of depth or breadth.

27. (a) **Outline assumptions made about the origins of dysfunctional behaviour from the biomedical perspective.**

[10 marks]

To achieve maximum marks in this section, candidates should clearly explain the assumed relationship between behaviour and the “healthy” or “unhealthy” functioning of physiology and the nervous system. The role of genetic predisposition should also be described. Underlying causes of behaviour will include: genetic, organic or chemical.

- (b) **Discuss ethical and practical implications arising from the use of this approach.**

[15 marks]

Possible content may be divided into ethical and practical implications, although more astute candidates may well argue that the two occur together.

Ethical examples could include, for example, lack of responsibility for situation, therefore need for care and treatment; assumption that the individual is not responsible for their actions, *etc.*; labelling and prejudice; possibility of wrong diagnosis and/or treatment.

Practical examples could include sectioning (relates also to ethical social power issues); biological treatments with side effects, *etc.*

Award a maximum of **[7 marks]** for answers which discuss only ethical or practical implications but not both.

The psychology of gender

- 28. There are more illiterate women than men in all parts of the world. Examine the possible reasons for this gender difference by referring to theories and/or research, studied within this option.**

[25 marks]

A variety of answers is possible here. By examining the reasons for high illiteracy among women in comparison to men (the ratio is about 2:1), the candidates are invited to take a critical look at this phenomenon and present their own analysis of this particular issue. Candidates are likely to refer to women's lower status and power, and differences in various societies. Research on gender role stereotypes may also be included, *e.g.* Williams and Best. Cognitive, social learning and other theories may also be referred to. Research providing possible explanations for women's illiteracy is numerous.

This question might appear easy to candidates who have only superficial knowledge of the option. Without reference to theories and research the answer should not be awarded more than *[5 marks]*. Answers that are clear about the reasons for this gender difference and support their arguments with research and/or theories should gain marks in the higher bands.

- 29. (a) Choose one of the cognitive theories of acquisition of gender identity and compare and contrast it to the Social Learning theory explanation.**

[15 marks]

The question invites candidates to find similarities and differences between two different theories (cognitive and social learning theories) of acquisition of gender identity. They can select any cognitive theories, such as Kohlberg's cognitive developmental theory or Bem's gender schema theory. Differences are quite easy to find, but good answers may also focus on similarities. High marks should be awarded to those candidates that also refer to the presence of environmental and cognitive factors (as similarities) within both theories.

- (b) How can these two theories explain cultural and cross-cultural differences in gender roles?**

[10 marks]

Part (b) of the question requires an account of cultural and cross-cultural differences in gender roles. Good answers will probably be based on the relationship between gender stereotypes and social learning theory (the role of reinforcement and imitation), but other possibilities, such as the role of cognitive and biological factors must also be considered, to a certain extent. Candidates can refer to gender roles in general or choose one specific area of gender behaviour that varies cross-culturally. The highest marks should be awarded to candidates who evaluate the two theories they present.

- 30. To what extent can gender differences in mental health be explained by biological factors? Support your answer by considering other possible explanations. [25 marks]**

This question invites candidates to make a judgment about the strength of opposing views, *i.e.* providing a biological explanation of gender difference in mental health, supporting it with relevant evidence, while also considering other possibilities. It is expected that candidates will describe some of the differences, such as greater difficulties in boys than in girls during childhood and school age, whereas in adolescence and adulthood larger number of women present with problems, such as eating disorders or depression. Within biological factors, candidates may refer to chromosomal and hormonal differences relate to postpartum “blues”, depression, premenstrual syndrome, changes in menopause, *etc.*

Alternative explanations should be weighed against the biological explanation. Social learning theory with gender role stereotypes, including gender bias, in evaluating mental disorders, and general differences in responding to stress and distress as a part of gender roles may also be considered. Candidates should provide a conclusion to the question “to what extent”, which cannot be reached without taking into account other possible explanations besides the biological one. Descriptive answers should receive not more than **[5 marks]**. If differences are explained only by biological factors, candidates should not be awarded more than **[15 marks]**. For highest marks, at least one other possible explanation should be discussed.

Intelligence and personality

- 31. “Human behaviour is primarily influenced by genetic factors.” Discuss this statement by referring to specific research in the field of personality. [25 marks]**

To evaluate the validity of the above statement successfully, candidates must demonstrate an awareness of the range of behaviours that show traces of biological influence. In recent years, biologists claim to have identified specific genes responsible for a number of behaviours such as criminality or homosexuality. Longitudinal work by J Kagan points at the biological basis for shyness. Sociability early in life (Goldsmith and Gottesman) and temperamental differences in the context of the family (Scarr) are some of the issues that may be explored. Eysenck’s research on dimensions of personality is clearly relevant. Buss and Plomin have also conducted research on the genetic components of temperamental dispositions such as emotionality, activity level and sociability. Such traits or others explored through twin and adoption studies may become the basis for an argument exploring the influence of genetic factors.

Since this question calls for a discussion of the statement, those who offer description only should be awarded a maximum of **[10 marks]**.

Candidates may support the claim or challenge it. In fact, better prepared candidates, aware of the complexities involved, are more likely to offer an evaluative discussion of both genetic and environmental factors. Depth could be achieved through exploration of the social, political and ethical implications of research into the genetic basis of behaviour.

32. (a) Describe the differences between nomothetic and idiographic theories of personality.

[15 marks]

Candidates may describe each type of theory, using examples, and should refer to such differences as:

- uniqueness versus universal principles or common traits
- focus on the individual versus focus on groups
- holistic versus analytical approach
- differences in methodology (case study; use of biographical data versus experimental approach).

(b) Examine the strengths and weaknesses of each type of theory.

[10 marks]

Candidates should refer to specific theories to discuss the strengths and weaknesses of each to the study of personality. Among the strengths of the idiographic-type theory candidates may mention the depth of understanding allowed by the idiographic approach. The idiographic approach may be seen as vague and inferential in its attempts at generalising from individual studies. The nomothetic approach is seen as more scientific, allowing for control, prediction and detecting consistencies among individuals. Examples of specific theories can be used to highlight these general concepts.

Candidates may show their own preference towards either approach. Although the question asks for differences, some candidates may show a recognition that the study of individuals may be inseparable from the comparison between individuals.

33. Examine controversies in the production and use of intelligence tests. [25 marks]

Intelligence tests have long been associated with education and the armed services. Hospitals and mental health settings also use them as part of treatment plans, and for vocational rehabilitation purposes.

Some of the controversies surrounding their use include reductionism, since a single test may not provide a full picture of the individual tested; cultural bias (test takers do not always belong to the group where the test was originally standardised); and temporary factors which may affect performance in tests.

There is no general agreement about the nature of intelligence and therefore any tests that are constructed do not cover all the variables claimed for intelligence. Gould (1981) and Scarr (1989), among others, have analysed the biases in the development of IQ tests.

Better quality answers may provide specific examples of intelligence tests and may also acknowledge difficulties associated with culture and ethics.

Lifespan psychology

- 34. Examine methodological and ethical considerations associated with the study of the individual across the lifespan.**

[25 marks]

This is a question requiring the candidate to analyse and comment upon the specific issues arising from research into psychology across the lifespan. Answers should therefore reflect the particular difficulties to be overcome in this area of study and should include appropriate examples, as well as an evaluation of psychological research in general.

Relevant content could include some or all of the following: methodological considerations associated with longitudinal and cross-sectional research *e.g.* comparability, cohort effects, cross-generational problems, historical testing impact; ethical considerations *e.g.* ethnocentrism, confidentiality and privacy, the right to non participation, *etc.*

Award a maximum of **[12 marks]** for answers providing discussion of **either** methodological **or** of ethical considerations but not both.

- 35. (a) Outline *one* theory of adulthood.**

[12 marks]

Part (a) of this question requires a brief summary of the major aspects of one explanatory theory. Although many candidates will offer, for example, theories of personality development such as those of Levinson and Gould, Erikson's later stages could be made appropriate if written about in sufficient detail. Personality theories may be appropriate if made relevant to adulthood. Personality theories that are not made relevant in this way should receive no marks. Responses offering theories of adaptation, *e.g.* Cummings and Henry's disengagement theory, or an examination of the impact of life events (Holmes and Rahe) on adulthood experience, may also be made acceptable as examples of approaches focusing on the individual, in contrast to the more nomothetic stage theories.

- (b) Use examples of cultural variation in evaluating the chosen theory.**

[13 marks]

Part (b) asks candidates to make an appraisal of the selected theory in relation to cultural variation in the experience of adulthood. Evaluation may be made through an examination of the strengths and limitations of the theory, and of its implications, but must be focused on cultural variation (or lack of) to merit the awarding of marks in the higher bands. Answers lacking examples of cultural variation should be credited with very modest marks.

36. Consider how the concepts of childhood attachment and separation relate to behaviour in adulthood.

[25 marks]

Candidates are invited to present a consideration of the variety of patterns of attachment and separation in childhood. Many candidates will be familiar with the research of Ainsworth on childhood attachment, and of Bowlby on the effects of separation. However, as the question asks about adult behaviours, discussion of relevant material should be balanced. The following material may be made relevant: Ainsworth on adult relationships; Weiss on adult relationships; Hazan and Shaver relating childhood to adult attachment styles; Bartholomew, Putter, *etc.*

Award marks in the lower bands for simple description of relevant research/theory. Answers clearly demonstrating awareness of the relationship between childhood and adulthood attachment and separation behaviours with an explicit evaluation of explanations/research, should attract marks in the higher bands.

The migrant, sojourner and tourist experience

- 37. Using psychological theory and/or research, consider why the development and maintenance of the migrant's and sojourner's personal identity is especially difficult in foreign environments.**

[25 marks]

The question is looking for an account of how various categories of migrants differ in their psychological development of identity in foreign environments and why such development-maintenance is problematic. Answers might include a discussion of the distinction between migrants who stay for a long duration compared to those of a shorter duration (sojourners). Hence, for *immigrants* and *refugees* the notion of permanent relocation, which necessitates the adoption of the host society's norms and customs, is qualitatively different from a sojourner's experience. Therefore, personal identity development and maintenance might be affected in differing ways. Sojourners usually embrace a new culture with enthusiasm knowing that their stay is relatively limited. Identity issues are perhaps less pronounced for sojourners in comparison to other migrants. Factors such as unstable referents, social isolation, values conflicts, and role confusion can be integrated into a well-written response to this question. The migrant's *psychological* reaction to some of these factors (as well as others) should be carefully explored for higher marks, as long as they relate to *identity development*.

- 38. (a) Cultural values are maintained by more traditional societies. Comment on the relationship between international mass media and the cultural values of such societies, using relevant psychological theory/research in your answer.**

[15 marks]

Candidates should describe some of the issues surrounding the mass media and cultural values, particularly the values of non-Western cultures. Since youth throughout the world tend to be the greatest consumers of mass-media related knowledge and values, they are the ones who have the greatest potential for challenging existing societies. It is commonly believed that the international mass media (which is largely Western in content) are suffused with values alien and often threatening to more traditional societies. There is much in psychological literature to support this contention, as well as some research which indicates that cultures often rediscover their positive attributes as a result of confrontation with Western media. A good answer will focus on examples of this phenomenon while connecting them to actual psychological research.

- (b) Explain the possible psychological consequences of this relationship.**

[10 marks]

Psychological effects may include possible disruption of daily life patterns; increased threats to traditional values and mores; value conflicts; increased marginalisations as members of the host culture view themselves as distinctly different from members of advanced industrialised societies; and other similar ramifications. Feelings of inferiority, the questioning of Western tourist values, generational conflicts as younger members of the host community more easily adopt the behaviour patterns of the Western tourist, are also possible psychological consequences. Candidates need to identify several psychological consequences and fully explain them to achieve marks in the higher bands.

39. Analyse the positive and negative psychological consequences of travel for the tourist. [25 marks]

There is abundant literature supporting the notion that travel for the tourist has both positive and negative psychological consequences. Candidates should refer to research studies as they construct a well-balanced essay which gives approximately equal treatment to the positive and negative effects. On the positive side candidates may wish to discuss refined mental maps; appreciation of cultural diversity (particularly differences in cultural values); improved self-confidence; renewed interest in political and cultural affairs; the acquisition of social skills; the ability to decode non-verbal communication; other similar attributes.

Negative consequences may include, among others, a questioning and reassessment of one's own values and cultural assumptions (this, of course, could be a very positive outcome as well); stress-related disorders; communication problems; value conflicts. Issues of personal identity may also be included. If candidates address only positive or negative consequences, a maximum of *[13 marks]* should be awarded.

Organisational psychology

40. Explain why the structures of organisations vary according to different cultures.

[25 marks]

Examiners should allow for different interpretations of the term culture. It should include the use of the concept in a geographical, historical or sub-cultural context. The concept extends to each culture having a shared system of values and meanings, and the notion that each culture is relative to other cultures' ways of perceiving the world and doing things.

Candidates may select their own interpretation of “culture” and thus may choose to offer explanations which differentiate between collectivist and individualistic societies. Earley, for example, has shown how in his “in basket task”, that Chinese, collectivists, performed best when working with a group goal and anonymously. They performed worst when operating individually and with their marks on the work. American individualists performed best when operating individually with the work clearly identified as their own, and performed badly when operating as a group and anonymously. Organisations tend to use flat, collectivist structures in order to maximise output when working in collectivist societies, and to encourage individualism or very small team structures in more individualistic societies.

An explanation of sub-culture activity may be seen in Hofstede's comparison of low masculinity and high masculinity business areas. The former show less segregation by gender, more women in more qualified and better paid jobs, lower job stress, while high masculinity occupations include some occupations that are typically male and others female, with a belief in inequality of sexes, higher job stress and more industrial conflict. Of 53 countries those with the highest masculinity scores were Japan, Austria, Venezuela, Italy and Switzerland; those with the lowest scores were Costa Rica, Yugoslavia, the three Scandinavian countries and the Netherlands. These countries have organisations which reflect their organisational structures. For example, the small, mixed sex teams that operate in the Saab and Volvo factories of Sweden contrast with the male dominated structures of Japan. Other explanations using different examples could be equally valid.

Examiners are reminded to give marks primarily for explanations and not for mere descriptions of how the current state of organisations operate.

41. Stress is common in individuals working within organisations.

- (a) Discuss physiological stress that arises from working within organisations.**

[12 marks]

The stresses that candidates discuss will arise from different causes within organisations. Poor working conditions that cause excessive noise, for example, are likely to result in physiological stress to hearing mechanisms, whereas repetitiveness and boredom can create psychological stress. Although it is accepted that both types of stress are linked, candidates should be able to differentiate between the two, given their prominence in the syllabus.

For part (a) examiners should accept that physiologically related symptoms extend to exhaustion, including problems of waking up in the morning and feelings of extreme fatigue in the evening. Noisy environments gave rise to the stress of hearing loss, and people working under intense lighting conditions or using extremely bright colours in their work complain of visual difficulties. More recently, repetitive strain injury has also asserted itself as a stress related injury that occurs in several organisations.

- (b) How do organisations contribute to the development of psychological stress in individuals?**

[13 marks]

There is a considerable amount of evidence that candidates may use to support their answer including, for example, Kornhauser's studies of Detroit assembly workers where such factors as low status, style of supervision, feelings of futility, repetitiveness and poor working conditions were identified as leading to stress. Similar findings were reported at car manufacturers in Sweden where Karasek reported that stress was related to two main job characteristics – workload and discretion in how to do the work.

The more common stress complaints are anxiety and tension, negative self-concepts, hostility to others, social withdrawal, feelings of isolation and despair, nervousness. Many of these psychological stresses may also be related to working with IT and the use of more impersonal electronic means communication.

The question refers to how stress arises. Description of how stress may be reduced is not required and should not be rewarded.

42. Identify some of the barriers to communication within organisations, and assess ways in which these have been successfully overcome.

[25 marks]

Candidates may point out that one of the chief barriers to communication has to do with the individual's reluctance to share knowledge. For many people, knowledge is power and to share knowledge is therefore to divest oneself of power. While this may make good political sense it is usually inappropriate for organisations where communication, the sharing of knowledge, is essential for efficiency.

Candidates may incorporate Moreno's socio-metric techniques or patterns of communication in their essays. The latter includes reference to networks such as the wheel, circle, all-channel, y shape and chains. Each of these, according to need, may either promote or inhibit communication. The significant increase in the use of email or intranets within organisations as an inhibitor or a promoter of communication has not yet entered many texts, but candidates may well mention these.

Several case studies have documented the communication problems that arise from the increasing numbers of global organisations. For example, Hoecklin shows that the Toshiba company from Japan has established a large manufacturing presence in the UK. The UK culture was more attuned to individual performance and initiative. The Toshiba management had to show why the consensual Japanese way of working was necessary and the implications for other members of the team if one individual initiated a change that did not work for all.

Candidates should show awareness that even where a barrier to communication has been removed, others will be erected in their place and that constant vigilance is required on behalf of management.

Social psychology

- 43. Explain through reference to empirical research the ways in which socially contextualised conceptualisations of identity (“collectivist”) may be similar to *and* different from individualistic ones.**

[25 marks]

In some cultures the self may be positioned within a wider social context than in societies which are highly individualistic. The collective or individualistic nature of the self is highly culture-dependent and reflects values which are deeply situated and to a great extent latent or not easily acknowledged by those who follow them. In order for candidates to receive high marks their answers should treat this question with a sensitivity that avoids oversimplifying the differences between East and West, and which is grounded in psychological research rather than anecdotal commentary. Answers which lack sufficient empirical references should receive no more than **[10 marks]**.

- 44. (a) Identify and explain some of the psychological factors which contribute to interpersonal aggression.**

[15 marks]

Candidates should include several topics within their answer. There are various theoretical approaches to the study of interpersonal aggression. Candidates may wish to give attention to motivation and drive theories (*e.g.* frustration-aggression; catharsis; biological and gender differences, *etc.*). The work of Freud and Lorenz may be seen in many scripts but candidates must be careful to be precise in their reference to these two theorists by explaining only the relevant aspects of interpersonal aggression. Candidates need to identify the possible psychological factors and provide some brief explanation for each.

- (b) Evaluate research studies which suggest that environmental factors may contribute to interpersonal aggression.**

[10 marks]

Candidates should address the question of whether aggression is learned behaviour and if the existence of environmental conditions can lead to interpersonal aggression. The research on classical and operant conditioning theories may be applicable as well as social learning theory (Bandura). In addition, there is sufficient research to suggest that crowd behaviour, cultural norms, and physical attributes (*e.g.* temperature and spatial distance) may have a significant effect in producing aggressive behaviour. Candidates need to explain some of these environmental factors in the context of research studies. In order to receive maximum marks candidates should evaluate the research studies they refer to. Answers which do not include evaluation should receive no more than **[5 marks]** for part (b).

45. Assess the influence of social norms on attitudes and behaviour.

[25 marks]

Social norms have been defined as standards or guides for attitudes and behaviour, for example, Sumner, in his original research, states that norms specify behavioural expectations by defining what are correct and incorrect ways to respond to situations. This question asks candidates to assess (weigh the available evidence and reach a conclusion) the influence of norms on behaviour and attitudes. Topics may include folkways (*e.g.* appropriate clothing and manners), mores (especially strong norms identifying appropriate social and sexual relationships), or laws (norms maintained by political authority). Candidates may not necessarily refer to these by name but are likely to imply them in their discussion. The important point here is that candidates need to emphasise the powerful influence norms have on our attitude formation and our daily behaviour. Furthermore, this influence is subject to wide cultural variation. Highest marks should go to answers which devote significant attention to the role of culture in normative behaviour. How we interpret the world around us is shaped by the social context from which we view it. Thus, normative behaviour is highly variable. Simple descriptive accounts should be awarded a maximum of **[5 marks]**.
