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**PSYCHOLOGY**

**UNIT 1**

**2023**

**MARKING GUIDE**

***TIME ALLOWED FOR THIS PAPER***

Reading time before commencing work: Ten minutes

Working time for the paper: Three hours

***MATERIALS REQUIRED/RECOMMENDED FOR THIS PAPER***

**To be provided by the supervisor:**

* This Question/Answer Booklet; Formula and Constants sheet

**To be provided by the candidate:**

* Standard items: pens, pencils, eraser or correction fluid, ruler, highlighter.
* Special items: Calculators satisfying the conditions set by the SCSA for this subject.

***IMPORTANT NOTE TO CANDIDATES***

No other items may be taken into the examination room. It is **your** responsibility to ensure that you do not have any unauthorised notes or other items of a non-personal nature in the examination room. If you have any unauthorised material with you, hand it to the supervisor **before** reading any further.

**Section One: 70% (130 Marks)**

This section has **five** questions. Answer **all** questions. Write your answers in the space

provided. Suggested working time for this section is 120 minutes.

**Question 1 (22 marks)**

1. Identify the parts of the human nervous system in the diagram below.

(4 marks)

**The human nervous system**

**Central nervous system**

(ii) *Brain*

(iii)

*Spinal Cord*

(i) *Peripheral nervous system*

**Somatic nervous system**

(iv)

*Autonomic Nervous System*

1. (i) Outline the role of the somatic nervous system (3 marks)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| controls voluntary movement of the (skeletal) muscles | 1 |
| receives sensory information (from sensory receptors/the body) and transmits it to the CNS/brain. | 1 |
| transmits motor information from the CNS/brain to the body. | 1 |
| **Total** | **3** |

(ii) Identify the function of an interneuron (1 mark)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| connects neurons within the brain and spinal cord | 1 |
| **Total** | **1** |

(iii) Describe the structure and function of the myelin sheath (3 marks)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| forms an insulating/fatty layer around the axon of neurons | 1 |
| Any twoof   * increases the speed/efficiency of transmission of electrical impulses along the neuron * maintains the strength of the impulse message as it travels down the axon | 1-2 |
| **Total** | **3** |

1. (i) Name the division of the nervous system that is activated in this scenario. (1 mark)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| Sympathetic (nervous system) | 1 |
| **Total** | **1** |

(ii) List **two** responses related to the division in c (i) that Bredo is likely to experience during this scenario. (2 marks)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| Any **two** of:   * increased heart rate * dilated pupil, * digestion stops to redirect blood/oxygen to the muscles | 1-2 |
| Note: accept any correct answers  (must indicate an unconscious response) | |
| **Total** | **2** |

(d) (i) Label the diagram of a neuron below. (5 marks)

|  |  |  |
| --- | --- | --- |
|  | **Description** | **Marks** |
| A | Myelin sheath | 1 |
| B | Soma/cell body | 1 |
| C | Axon terminal | 1 |
| D | Dendrite | 1 |
| E | Axon | 1 |
| **Total** | | **5** |

(ii) Draw a diagram below to illustrate the process of neural transmission. You must include **more than one** neuron and label the direction of transmission and synapse. (3 marks)

Synapse (1)

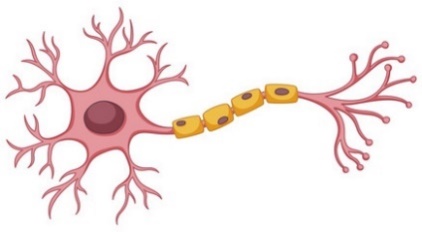
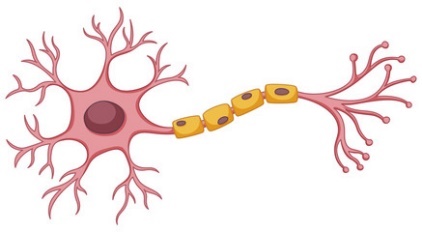


Diagram correctly shows axon terminals transmit to dendrites (1)

Direction of transmission (1)

**Question 2 (33 marks)**

1. Identify the population and sample for this study. (2 marks)

|  |  |  |
| --- | --- | --- |
|  | **Description** | **Marks** |
| **Population** | Adults | 1 |
| **Sample** | 26 Adults aged 18-34 | 1 |
| **Total** | | **2** |

1. (i) The study was approved by the ethics committee of the School of Psychology at Nottingham University. Describe the role of an ethics committee after they have granted approval and the study is underway. (2 marks)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| Ethics committee monitors the ethical conduct throughout the study | 1 |
| They ensure that all ethical guidelines are being followed | 1 |
| **Total** | **2** |

(ii)  An ethical consideration that the committee was monitoring closely was privacy. Outline privacy and provide an example of how the researchers could ensure it is maintained at all stages of the research. (2 marks)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| The participant has the right to have the collection, storage, and sharing of their personal information protected. | 1 |
| Researchers could ensure that all documents/questionnaires/data only include information directly relevant to the study/remove any information participants provide that is not directly relevant to the study. | 1 |
| **Total** | **2** |

1. The researchers were interested in comparing contralateral control of finger movements in a series of tasks. With reference to the hemispheres of the brain, explain contralateral control in terms of handedness. (4 marks)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| The right hand side of the brain controls movements in the left-hand side of the body | 1 |
| The left hand side controls movements in the right-hand side of the body | 1 |
| Left-handed people will use their right hemisphere more/be right hemisphere dominant | 1 |
| Right-handed people will use their left hemisphere more/be left hemisphere dominant. | 1 |
| **Total** | **4** |

1. (i) Identify the type of data being collected in this test. (1 mark)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| Quantitative | 1 |
| **Total** | **1** |

1. Identify **one** extraneous participant variable and describe how it could affect the result of the test. (2 marks)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| Identifies one relevant participant variable e.g. tiredness, whether they had sore fingers, poor concentration etc. | 1 |
| Extraneous variable will affect the speed that the participant is able to tap the keyboard. | 1 |
| **Total** | **2** |

1. Explain why the researchers would repeat the same tapping test in this study. (3 marks)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| Increases reliability | 1 |
| Limits the effect of extraneous variables on the results | 1 |
| So that individual/single events/circumstances do not skew the outcome | 1 |
| **Total** | **3** |

1. (i) Use the data provided in the table below to construct a graph on the grid provided.

(6 marks)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| Title describes the data/variables | 1 |
| X axis correctly labelled | 1 |
| Y axis correctly labelled | 1 |
| Correct form of graph used | 1 |
| Data plotted accurately | 1 |
| Correct scale used | 1 |
| **Total** | **6** |

**Question 2 (continued)**

1. Explain **one** conclusion about the performance of left handers and right handers in relation to the hypothesis that can be drawn from the data on page 9.

(3 marks)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| The hypothesis is supported | 1 |
| Participants placed more pegs on the board with their dominant hand | 1 |
| Scores for both groups with their dominant hand were 11 – 12 higher than for the non-dominant hand (accept other relevant description) | 1 |
| **Total** | **3** |

1. (i) State the brain function measured by an EEG. (1 mark)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| Electrical activity of the brain | 1 |
| **Total** | **1** |

(ii) Propose a directional hypothesis for this experiment. (4 marks)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| IV – use of dominant hand/non-dominant hand to tap a keyboard | 1 |
| DV – response time to instructions | 1 |
| Direction – shorter/longer response time | 1 |
| Population - adults | 1 |
| **Total** | **4** |

(iii) Researchers at a different university decided to repeat the experiment using an fMRI. Outline the additional information about brain function that an fMRI can provide compared to an EEG. (3 marks)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| fMRI is able to generate a detailed image of where in the the brain activity is occurring | 1 |
| fMRI is able to show changes in brain activity in specific locations | 1 |
| EEG can only provide data about the existence of electrical activity in the brain in a particular moment | 1 |
| **Total** | **3** |

**Question 3 (28 marks)**

(a) (i) State **three** functions of the hindbrain. (3 marks)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| Any three of:   * connects the brain and spinal cord (1) * organisation of motor reflexes (1) * coordinates vital functions such as breathing/heart rate (1) * responsible for sleep/wake activity (1) * important for balance (1) | 1-3 |
| **Total** | **3** |

(ii) Describe **two** functions of the cerebellum. (4 marks)

|  |  |
| --- | --- |
| **Description** |  |
| enables voluntary movements (1) by co-ordinating sensations with responses from muscles (1) | 1-2 |
| helps maintain balance and posture (1) by processing nerve impulses from the inner ear (1) | 1-2 |
| **Total** | **4** |

(b) (i) Identify what this case study contributed to understanding the structure and function of the brain. (1 mark)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| Localisation of brain function | 1 |
| **Total** | **1** |

(ii) Explain why a case study is required to study the type of brain injury suffered by Phineas Gage. (3 marks)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| unique nature of the injury cannot be repeated | 1 |
| ethically unacceptable to create similar brain injuries | 1 |
| physical and psychological harm to participants must be avoided | 1 |
| **Total** | **3** |
| Note: accept other correct ethical guidelines | |

(iii) Describe how this method could be applied to a population of patients with damage to their occipital lobe. (4 marks)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| snowballing is a (non-probability) sampling method where existing participants in a study recruit other participants | 1 |
| used when the research population is difficult to access/the sampling frame is limited. | 1 |
| patient with damage to their occipital lobe (1) would recruit other patients they have met/encountered/know with damage to the occipital lobe.(1) | 1-2 |
| **Total** | **4** |

(iv) One limitation of a case study is that they are unable to be generalised to the population. Explain the concept “generalisability to the population”. (3 marks)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| generalisability is the extent/degree to which | 1 |
| researchers are able to apply their findings from a sample | 1 |
| to the population | 1 |
| **Total** | **3** |

1. Complete the table below to describe the functions of parts of the forebrain: (6 marks)

|  |  |  |  |
| --- | --- | --- | --- |
| **Description** | | | **Marks** |
| **Area of the brain** | **Location** | **Function** |  |
| *Hypothalamus* | *Under the thalamus, directly above the brainstem/hindbrain.* | Regulates emotional expression, sleep, blood pressure, body temperature, and motivated behaviours such as eating, drinking and sexual activity. | 1-2 |
| *Primary motor cortex* | Rear of the frontal lobe in both hemispheres of the brain. | *Initiation/execution/direction of voluntary motor movements* | 1-2 |
| Primary visual cortex | *Rear of the occipital lobe of the brain.* | *Processing of visual stimuli* | 1-2 |
| **Total** | | | **6** |

**Question 3 (continued)**

1. Compare **two** advantages of an MRI over a CT scan for identifying soft tissue abnormalities in the temporal lobe. (4 marks)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| MRI is able to produce higher quality/more detailed images of soft tissue | 1 |
| CT scan has low resolution/can only provide image of structures | 1 |
| MRI does not emit (ionising) radiation | 1 |
| CT scan involves use of radiation | 1 |
| **Total** | **4** |

**Question 4 (21 marks)**

(a) (i) Identify the independent variable in Harlow’s experiments. (1 mark)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| The cloth mother or the wire mother | 1 |
| **Total** | **1** |

(ii) Outline the **first two** steps in the method used by Harlow to test whether emotional needs were more important than physiological needs. (2 marks)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| Infant monkeys were separated from their mothers at birth | 1 |
| They were placed in cages with two surrogate mothers, one made of wire that provided food and a (terry)cloth mother that provided no food. | 1 |
| **Total** | **2** |

(iii) Identify the dependent variable in Harlow’s experiment. (1 mark)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| The amount of time the monkeys spent with the cloth mother compared to the wire mother. | 1 |
| **Total** | **1** |

(b) Outline **one** criticism of Harlow’s study with reference to its validity for testing human attachment. (2 marks)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| Animals are not psychologically (or physiologically) the same has humans | 1 |
| Therefore, the responses of animals cannot be applied to the human population | 1 |
| **Total** | **2** |

(c) Outline **two** results from this experiment. (2 marks)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| Any two of:   * monkeys spent more time with the cloth mother than the wire mother * monkeys would run to the cloth mother when scared but not to the wire mother * monkeys would return to the cloth mother after exploration but not to the wire mother. | 1-2 |
| **Total** | **2** |

(d) Based on the results of the experiments, state **one** finding about attachment relevant to Harlow’s aim. (1 mark)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| The need for comfort/attachment is greater than the need for food. | 1 |
| **Total** | **1** |

1. (i) Explain why a child of the age used in Ainsworth’s study is not able to provide informed consent. (3 marks)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| to provide informed consent, a participant must be over 18 | 1 |
| to provide informed consent, a participant must understand the information provided | 1 |
| young children do not have the cognitive (language skills, conceptual understandings) capacity to understand what they are agreeing to. | 1 |
| **Total** | **3** |

**Question 4 (continued)**

1. List **three** pieces of information required to obtain informed consent (3 marks)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| Any three of:   * aim/purpose/nature of the study * procedures for the study * identification of potential risks/harm * right to withdraw at any time without consequence * information about who is funding the study * explain confidentiality and limits to confidentiality * explain how information is to be collected/recorded * explain how information is to be stored and who will have access to it. | 1-3 |
| **Total** | **3** |

1. Outline how the Strange Situation procedure ensured that the children did not suffer psychological harm. (2 marks)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| the children’s mother was present or close by | 1 |
| at all times during the study | 1 |
| **Total** | **2** |

1. Describe the behaviour observed in Ainsworth’s study for each attachment type:

(4 marks)

|  |  |  |  |
| --- | --- | --- | --- |
| **Description** | | | **Marks** |
| **Attachment type** | **Mother leaves** | **Mother returns** |  |
| **Type A** | *No distress when mother leaves the room* | *Does not seek contact when mother returns.* | 1-2 |
| **Type C** | *Extreme distress when mother leaves the room.* | *Approaches the mother but avoids contact/pushes mother away.* | 1-2 |
| **Total** | | | **4** |

**Question 5 (26 marks)**

(a) Define the developmental stage of infancy. (1 mark)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| Birth to two years | 1 |
| **Total** | **1** |

(b) Outline **three** features of normal development of language during infancy. (3 marks)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| Babies start by cooing/gurgling (birth to 6 months) | 1 |
| Followed by babbling (at around 6 months) | 1 |
| They are saying their first words (by 12 months) | 1 |
| **Total** | **3** |

(c) Explain the term, ‘plasticity’ with reference to adaptive and developmental plasticity. (3 marks)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| plasticity is the capacity of the brain to change/modify connections/adapt | 1 |
| adaptive plasticity occurs when the brain changes in response to learning/experience, brain damage/disease. | 1 |
| developmental plasticity is when the brain changes as part of the developmental process. | 1 |
| **Total** | **3** |

(d) Outline the process of circuit formation. (4 marks)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| axons of new neurons grow out to target cells | 1 |
| form synapses with those cells | 1 |
| creating a neural circuit/interconnected neurons | 1 |
| neural circuits have specific functions | 1 |
| **Total** | **4** |

(e) Exo decides to use a mixed method of data collection. Explain how Exo would collect data in this way. (4 marks)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| collect data using both qualitative and quantitative methods | 1 |
| collecting subjective data (data based on individual feelings/perceptions) | 1 |
| Exo could create a checklist/rating scale where fixed responses can be counted. | 1 |
| he can also conduct interviews to collect qualitative data | 1 |
| **Total** | **4** |

1. (i) Name the stage of Piaget’s theory of cognitive development Exo is likely to be in.

(1 mark)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| Formal operational | 1 |
| **Total** | **1** |

(ii) Name and describe the indicator of cognitive development Exo will demonstrate at this stage. (3 marks)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| He will be capable of abstract thinking | 1 |
| Exo will approach problems in a methodical/logical manner | 1 |
| He will form hypotheses and test his understandings. | 1 |
| **Total** | **3** |

1. (i) Define the term ‘schema’. (2 marks)

|  |  |
| --- | --- |
| **Description** | **Marks** |
| Mental framework/structure for understanding concepts/collecting knowledge | 1 |
| that guides thinking and behaviour | 1 |
| **Total** | **2** |

(ii) Contrast assimilation and accommodation. (2 marks)

|  |  |
| --- | --- |
| **Description** |  |
| Assimilation occurs when new experiences are combined with an existing schema | 1 |
| Accommodation occurs when new experiences modify or change the existing schema | 1 |
| **Total** | **2** |

1. (i) Name the research design he has applied to this study. (1 mark)

|  |  |
| --- | --- |
| **Description** |  |
| Longitudinal study | 1 |
| **Total** | **1** |

(ii) Describe a limitation related to sample size for this type of design. (2 marks)

|  |  |
| --- | --- |
| **Description** |  |
| Sample attrition/reduction in sample size | 1 |
| Occurs when participants drop out of the study over time | 1 |
| **Total** | **2** |

**End of Section One**

**Section Two: Extended Answer 30% (61 marks)**

**Part A: Compulsory question**

**Question 6 (20 marks)**

|  |  |
| --- | --- |
| **Describe the location and function of the localised region that was the focus of Freeman’s research.** | |
| Pre-frontal cortex | 1 |
| Located at the front of the frontal lobe/cerebral cortex | 1 |
| Located behind the forehead and above the eyes | 1 |
| It is involved in (one mark fore up to **three**) correct functions   * making plans * predicting outcomes * regulation of emotion and behaviour/impulse control (1) by anticipating consequences of actions (1). * involved in anxiety * involved with working memory * involved in attention | 1-3 |
| **Subtotal** | **6** |
| **State four reasons why Freeman’s findings were controversial in psychology** | |
| Freeman reported that frontal lobotomies were effective despite there being a large number of poor outcomes/no improvements for patients/Freeman’s reporting of data was biased in favour of the procedure | 1 |
| procedure harmed patients/had many side-effects (and this was not reported) | 1 |
| patients were not informed of the risks/had no choice for the procedure/were unable to give informed consent | 1 |
| procedure lacked precision/lacked reliability/was poorly monitored | 1 |
| **Subtotal** | **4** |
| **Describe the structure and function of the corpus callosum** | |
| band of (highly myelinated) neural fibres | 1 |
| connects the two hemispheres of the brain | 1 |
| communicates/transmits neural signals/information between the two hemispheres | 1 |
| **Subtotal** | **3** |
| **Outline the key finding from Sperry’s split-brain experiments about the function of the brain** | |
| each hemisphere of the brain has different functions | 1 |
| left hemisphere processes language production/understanding | 1 |
| right hemisphere processes images | 1 |
| **Subtotal** | **3** |
| Note: accept answers that describe the findings directly related to the experimental procedure. | |

|  |  |
| --- | --- |
| **Describe two ethical guidelines for the use of animals in research** | |
| Names any two of:   * replacement * reduction * refinement | 1-2 |
| Description (must be applied correctly) of each requirement:   * replacement – where possible, avoid the use of animals * reduction – apply methods that obtain comparable levels of information from the fewest number of animals possible * refinement – apply methods that alleviate or minimise pain/distress and enhance wellbeing | 1-2 |
| **Subtotal** | **4** |
| Accept all relevant answers |  |
| **Total** | **20** |

**Part B: Select either Question 7 OR Question 8**

**Question 7 (41 marks****)**

|  |  |
| --- | --- |
| **Define the term ‘attachment’ according to Bowlby.** | |
| Establishment of a strong and enduring bond with a primary caregiver/Unique relationship between a parent/caregiver and an infant that is the foundation for future healthy development | 1 |
| **Subtotal** | **1** |
| **Explain Bowlby’s internal working model.** | |
| Internal working model is a cognitive/mental framework/internal representation for understanding the world. | 1 |
| Primary caregiver acts as a prototype for this model | 1 |
| Three components: model of others as trustworthy (1), model of self as valuable (1) model of self as effective when interacting with others (1). | 1-3 |
| Internal working model guides future social and emotional behaviour | 1 |
| **Subtotal** | **6** |
| **Apply the internal working model to Ecru’s hugging behaviour.** | |
| Ecru’s primary caregiver greeted her with hugs so she learned that others are trustworthy because this always made her feel safe and happy | 1 |
| Ecru was praised for using hugs to demonstrate affection | 1 |
| Ecru’s family always hugged her back showing this was an effective method of interaction | 1 |
| Ecru expects the other children to respond to her hugs in the same way as her internal working model | 1 |
| **Subtotal** | **4** |
| **Outline the evolutionary perspective applied by Bowlby to attachment.** | |
| Infants/children are dependent mother/primary caregiver in order to survive long enough to have children of their own/continue the species/survive to reproductive age. | 1 |
| attachment behaviours are innate/instinctive | 1 |
| babies are born with the tendency to display social releasers such as crying, smiling, crawling etc | 1 |
| social releasers are specific to humans | 1 |
| social releasers activate emotional/caring responses in the mother/primary caregiver | 1 |
| such as (any one):   * crying * distressed facial features or sounds * cooing/gurgling * smiling | 1 |
| **Subtotal** | **6** |

|  |  |
| --- | --- |
| **Describe critical and sensitive periods in the context of Bowlby’s theory.** | |
| Bowlby proposed that the most important (critical) period for a child to develop attachment is 0-2 years. | 1 |
| He later modified this to include a sensitive period of up to five years. | 1 |
| These periods are critical for a child to develop attachment to a mother/significant other. | 1 |
| **Subtotal** | **3** |
| **Explain the concept of maternal deprivation and its impact on attachment later in life.** | |
| Maternal deprivation occurs when a child is deprived of contact with their mother/primary caregiver (1) during the critical period (0-2 years) (1) | 1-2 |
| This results in failure to develop an attachment | 1 |
| Can result in cognitive, social and emotional difficulties later in life.  Note: Award marks for specific descriptions that reflect these difficulties. | 1 |
| **Subtotal** | **4** |
| **Explain how Ecru could apply an observational study to understanding attachment in a family group.** | |
| Ecru would observe the family in their (normal) environment  e.g. at home/in a laboratory | 1 |
| Ecru would record her observations during a set period/chosen activities | 1 |
| collate the observations after the study to identify common behaviours/activities/interactions (for further analysis). | 1 |
| **Subtotal** | **3** |
| **Outline how Ecru could gather quantitative data during an observational study.** |  |
| quantitative data is numerical | 1 |
| she could collect data that records the number of times/how often a target behaviour occurs | 1 |
| could use a subjective quantitative measure such as a checklist | 1 |
| **Subtotal** | **3** |
| **Explain how the extraneous researcher variables can be controlled in an observational study** | |
| Extraneous researcher variables occur when the researcher’s bias or expectations influence the collection/reporting of data. | 1 |
| researchers may collect data about her observations inconsistently for each family | 1 |
| can be controlled by using standardised procedures | 1 |
| Standardised procedures include (any two):   * observing the same activites/the same time period for each family * ensuring that the family structure is the same across all three families * ensuring that the same observation criteria are used for each observation | 1-2 |
| can be controlled by using standardised instructions | 1 |
| standardised instructions include the same information being provided to all participants and researchers (such as using a prepared script) | 1 |
| **Subtotal** | **7** |

|  |  |  |
| --- | --- | --- |
| **Use appropriate psychological terminology in a clear and logical way.** | | |
| Coherent and logically ordered paragraphs. Appropriate psychological terminology used consistently and correctly. Punctuation/grammar consistently correct. (Does not need essay style broad introduction or conclusion for full marks) | | 4 |
| Candidate writes coherent and logically ordered paragraphs. Uses a range of psychological terminology that is mostly correct. There may be some errors in punctuation/grammar evident, but these do not impede meaning | | 3 |
| Candidate writes using clear paragraphs. Uses simple psychological terminology. There may be some errors in punctuation/grammar evident, but these do not impede meaning. | | 2 |
| Candidate writes a response that attempts to use paragraphs, uses limited psychological terminology correctly and/or may have limited correct use of punctuation and grammar. | | 1 |
| **Subtotal** | | **4** |
| Note: accept all correct, relevant answers  Diagrams may be used in this section but must be described in the body of the text. | | |
| **Total** | **41** | |

**Question 8 (41 marks)**

|  |  |
| --- | --- |
| **Define the developmental stage of ‘adolescence’.** | |
| The period of human development that starts from puberty and ends with physiological and neurobiological maturity. | 1 |
| **Subtotal** | **1** |
| **Explain the social and emotional changes that occur during this stage.** | |
| Social changes are changes in relationships with others | 1 |
| Adolescents focus on their peers/peer related activities/place greater emphasis on social activities/seek more autonomy from parents | 1-2 |
| Emotional changes refer to changes in regulation and understanding of emotions | 1 |
| Adolescents may experience stronger/more intense emotions/quicker or more random mood swings/become more emotionally sensitive/increased awareness of emotions in people around them/develop increased empathy for others | 1-2 |
| **Subtotal** | **6** |
| **Explain the effect of changes in the amygdala on behaviour and emotions during adolescence.** | |
| The amygdala is responsible for immediate/impulse-based reactions | 1 |
| Regulates emotions such as fear/aggression/involved in reward processing/sexual instincts | 1 |
| During adolescence, the amygdala becomes more active | 1 |
| Adolescents therefore can become more sensitive to fear (fear-inducing) stimuli/less emotionally regulated/have a higher level of stress reactivity | 1 |
| Increased levels of fear or stress responses (may describe a relevant response) | 1 |
| Increase in risk-taking behaviours/heightened reactions to stressors/react more emotionally | 1 |
| **Subtotal** | **6** |
| **Outline the domain of physical development.** | |
| Physical development includes changes in the gross and fine motor skills | 1 |
| Gross motor skills are those involving larger muscles/whole body movements such as walking/running/jumping. | 1 |
| Fine motor skills involve the smaller muscles in the body such as in the hands/wrists/face (facial expressions)/tongue/toes. | 1 |
| **Subtotal** | **3** |
| **Describe the effect of the cerebellum on physical development during adolescence** | |
| The cerebellum is associated with balance and physical co-ordination. | 1 |
| During adolescence, the cerebellum reaches its adult volume/size. | 1 |
| Adolescents become increasingly able to perform complex gross and fine motor movements/are able to co-ordinate complex movements more effectively. | 1 |
| **Subtotal** | **6** |

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| **Explain how changes in the frontal lobe affect behaviour during the stage of adolescence**. | |
| The frontal lobe (pre-frontal cortex) develops last/more quickly during adolescence | 1 |
| During this stage, unused neural connections are pruned/increased myelination occurs | 1 |
| As the frontal lobe develops, adolescents rely more on their executive/complex./abstract functions (1) to make less emotional/more moderated decisions (1). | 1-2 |
| Adolescents demonstrate behaviour that is more regulated/more considered during this stage. | 1 |
| **Subtotal** | **4** |
| **Describe the application of a focus group to collect qualitative data.** | |
| A focus group brings together a small group of participants to respond to one or more moderated questions | 1 |
| The group’s conversation/discussion is facilitated/managed by a facilitator/researcher | 1 |
| Responses are recorded and collated/analysed following the discussion. | 1 |
| **Subtotal** | **3** |
| **Outline two strengths of using a focus group for the Swedish study.** | |
| Participants are able to discuss/share ideas with other members (1) that can lead to greater depth/richer data. | 1-2 |
| Data is able to be collected from multiple participants in a single setting/timeframe (1) which allows for effective use of time/resources (1).  \*Note: do not accept “cheaper”, “takes less time”. | 1-2 |
| Accept other relevant answers such as:   * Presence of a moderator can ensure that participants remain focused on the research question/s. (1) |  |
| **Subtotal** | **4** |
| **Define the concept ‘demand characteristics’ and discuss how they may have influenced the results in this study.** | |
| Demand characteristics occur when participants guess/deduce the aim/purpose of the research (or guess the hypothesis/anticipated findings of the research). | 1 |
| They alter their behaviour to fit in with/conform to the perceived expectations of the experimenter. | 1 |
| Demand characteristics can lead to results not reflecting accurately/truthfully the attitudes/feelings/beliefs of the participants. | 1 |
| Reduces validity/means the data may not have measured what it was intended to measure. | 1 |
| Participants in the Swedish study may have perceived that the study aimed to support the school-based mental health program and altered their responses to fit this perceived aim (1) by stating the program improved their interpersonal skills (1). | 1-2 |
| As adolescents, the participants are very concerned to fit in socially and may have altered their responses to conform/fit in/be liked by the researcher (social desirability bias) | 1 |
| **Subtotal** | **7** |

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| **Use appropriate psychological terminology in a clear and logical way.** | |
| Coherent and logically ordered paragraphs. Appropriate psychological terminology used consistently and correctly. Punctuation/grammar consistently correct. (Does not need essay style broad introduction or conclusion for full marks) | 4 |
| Candidate writes coherent and logically ordered paragraphs. Uses a range of psychological terminology that is mostly correct. There may be some errors in punctuation/grammar evident, but these do not impede meaning | 3 |
| Candidate writes using clear paragraphs. Uses simple psychological terminology. There may be some errors in punctuation/grammar evident, but these do not impede meaning. | 2 |
| Candidate writes a response that attempts to use paragraphs, uses limited psychological terminology correctly and/or may have limited correct use of punctuation and grammar. | 1 |
| **Subtotal** | **4** |
| **Total** | **41** |
| Note: accept all correct, relevant answers | |