**Joseph Banks Secondary College**

**Semester One Examination, 2019**

**Question/Answer Booklet**

**UNIT 1 ATAR PSYCHOLOGY**

**Year 11**

**MARKING KEY**

**TIME ALLOWED FOR THIS PAPER**

Reading/planning time before commencing work: Ten minutes

Working time for paper: Two and a half hours

MATERIALS REQUIRED/RECOMMENDED FOR THIS PAPER

To be provided by the supervisor

This Question/Answer Booklet

**TO BE PROVIDED BY THE CANDIDATE**

Standard materials: pens (blue/black preferred), pencils (including coloured), sharpener, correction tape/fluid, eraser, ruler, highlighters

Special items: non-programmable calculators approved for use in the WACE examinations

IMPORTANT NOTES TO CANDIDATES

No other materials may be taken into the examination room.

It is your responsibility to ensure that you do not have any unauthorised notes or other material 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.

**Structure of this paper**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Section | Number of questions available | Number of questions to be answered | Suggested working time (minutes) | Marks available | Percentage of exam |
| Section One:  Research methods | 3 | 3 | 45 | 32 | 20 |
| Section Two:  Short answer | 4 | 4 | 60 | 56 | 55 |
| Section Three:  Extended answer | 1 | 1 | 45 | 30 | 25 |
|  |  |  | **Total marks** | **118** | **100** |

**INSTRUCTIONS TO CANDIDATES**

1. Sitting this examination implies that you agree to abide by the school rules for the conduct of examinations.
2. Answer all questions by writing your answers in this booklet in the spaces provided.
3. You must be careful to confine your responses to the specific questions asked and to follow any instructions that are specific to a particular question.
4. Spare answer pages may be found at the end of this booklet. If you need to use them, indicate in the original answer space where the answer is continued (i.e. give the page number).

**Section One: Research Methods**

This section has **three (3)** questions. Attempt **all three** questions.

Suggested working time: 45 minutes **(32 marks)**

**Question 1** **(10 marks)**

A researcher was interested in determining the effect of music therapy on a person’s stress levels. The researcher collected 200 university students. 100 students were allocated to Group One (Music Therapy) and 100 students were allocated to Group Two (Control Group). Students were asked to complete a questionnaire to indicate each person’s stress level before commencing the study. Group One underwent music therapy (listening to or composing music) for two hours a day for one semester. The students completed the questionnaire again at the end of the semester and stress levels were compared.

At the conclusion of the study, the researcher found the following results:

|  |  |  |
| --- | --- | --- |
|  | **Stress Level** | |
| **Group** | **Pre-experiment level** | **Post-experiment level** |
| **Group One – Music Therapy** | 112 | 68 |
| **Group Two – Control Group** | 109 | 112 |

\*\*\* a higher number indicates a higher stress level\*\*\*

1. Write an operational hypothesis for this study. (3 marks)

**It is hypothesised that 100 university students who undergo music therapy for two hours a day (Group 1) for a semester will report lower stress levels on a questionnaire, than 100 university students who do not undergo music therapy over the semester (Group 2) and then complete the same questionnaire**

* **3 marks = all points above included**
* **2 marks = most points above included**
* **1 mark = some points above included**
* **0 marks = no points included or incorrect prediction**

1. For the study identify:
   1. The independent variable for the study (1 mark)

* **Music therapy or no music therapy – 1 mark)**
* **Listening to music or not listening to music – 1 mark**
* **Note: just ‘music therapy’ is incorrect**
  1. The dependent variable for the study (1 mark)
* **Stress level – 1 mark**
* **Level of stress – 1 mark**
* **Note: just ‘stress’ is incorrect (could be referring to type of)**
  1. **One (1)** variable the researcher controlled in this study. (1 mark)
* **Type of student (university student) – 1 mark**
* **Sample size (CG, EG or overall) – 1 mark**
* **Amount of time undergoing music therapy – 1 mark**
* **Time exposed to music therapy – 1 mark**
* **Data collection method (questionnaire) – 1 mark**
* **Or any other correct answer – 1 mark**

1. Define the term ‘extraneous variable’. (2 marks)

**Any variable, other than the independent variable, that impacts the dependent variable (the results).**

* **2 marks = correct response**
* **1 mark = mostly correct response**

1. Identify **one (1)** potential extraneous variable from this research and explain the impact it may have had on the results. (2 marks)

* **Type of music students find relaxing**
* **Stresses during the day – not constant**
* **Sleep levels**
* **Subjective nature of the questionnaire**
* **Family/personal issues – other sources of stress**
* **1 mark = Relevant EV identified**
* **1 mark = Correct explanation of how it may impact results**

Question 2 (12 marks)

Dr Webb was interested in the effects of social media on teens. She asked her friend Amy if she could use her four adolescent children in her study and follow their use of social media. Amy agreed that her 13-year-old twins Monica and Ashley, her 15-year-old son Tim, and her 18-year-old son Xavier could be a part of Dr Webb’s study.

(a) What type of research method is Dr Webb using? (1 mark)

**Case study (1 mark)**

(b) Using this research method identify three different techniques Dr Webb might implement to gather her data. (3 marks)

Response can include any three of the following:

* **Interviews**
* **Direct observation**
* **Examination of past records**
* **Psychological testing**

**One mark for each correct answer**

(c) List one advantage and one disadvantage of this type of design. (2 marks)

Advantage:

* **Convenient**
* **Dr Webb will gather rich and detailed data**

Disadvantage:

* It can be costly
* **Cannot necessarily generalise the findings**

**One mark for each correct advantage and disadvantage**

(d) Amy was not the only one who needed to give permission for her children to be a part of Dr Webb’s study. Identify another individual who needed to give consent and explain why they also needed to give consent. (2 marks)

**Xavier (1). He is legally considered an adult and therefore needs to give his own consent (1).**

(e) Dr Webb continued to follow the social media use of Amy’s children for the next five years. At which time Tim finished school and decided to move overseas to go to university. He told Dr Webb that he would no longer be participating in her study. Name the ethical right he followed. (1 mark)

* **Withdrawal right**

(f) The table below represents some of the data Dr Webb collected on Amy’s children in 2011.

Table 1: Number of hours spent in 2011 on various forms of social media

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Facebook** | **Instagram** | **Snapchat** | **Twitter** |
| **Monica** | 1555 | 460 | 856 | 29 |
| **Ashley** | 1200 | 980 | 320 | 26 |
| **Tim** | 765 | 460 | 10 | 49 |
| **Xavier** | 205 | 6 | 2 | 31 |

1. Calculate the average amount of time Amy’s children spent on Facebook in 2011. (1 mark)

**931.25 hours**

1. In regards to their use of Instagram, identify the mode. (1 mark)

**460 hours**

1. Identify the range for the amount of time the siblings spent on Snapchat.

(1 mark)

**854 hours**

**Question 3 (10 marks)**

Dr Swift was interested in whether the speed at which people walk is related to the tempo (quickness) of the music they are listening to while walking. She hypothesised that the faster the tempo of a piece of music, the faster the listener would walk.

Using beats per minute (bpm) as a measure of music tempo, Dr Swift conducted an investigation with 28 sixteen-year-old students who walked on a treadmill for one hour under one of the following four conditions:

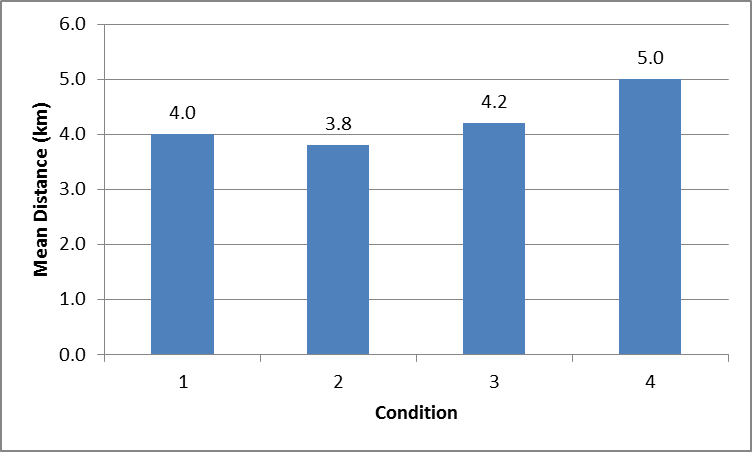
Condition 1: Walking without listening to music

Condition 2: Walking listening to music at 40-70 bpm

Condition 3: Walking listening to music at 85-110 bpm

Condition 4: Walking listening to music at 120-140 bpm

The results of the investigation are shown in the graph below:



1. Describe the findings of the above investigation. (3 marks)

* **Students must only describe the data:** 
  + **no opinions to be included**
  + **no discussion of whether hypothesis was supported**
* **3 marks = all data referred to**
* **2 marks = most data referred to**
* **1 mark = some data referred to**

**\*\*\*If student describes all data perfectly BUT refers to hypothesis a maximum of 2 marks to be awarded\*\*\***

* **Condition 1 (no music) – roughly 4.0kms walked**
* **Condition 2 (40-70bpm) – roughly 3.8kms walked**
* **Condition 3 (85-110bpm) – roughly 4.2kms walked**
* **Condition 4 (120-140bpm) – roughly 4.5kms walked**

1. What conclusions can be drawn from the data collected by Dr Swift about the effect of music tempo on walking speed? In your response include a clear statement about whether Dr Swift’s hypothesis was supported. (3 marks)

* **To get any marks students must state the hypothesis was supported – 1 mark**
* **Uses data to support their statement – 1-2 marks**
* **For full marks: student must include that the 40-70bpm (condition 2) walked slower than those with no music (control group)**

1. Identify and describe **two (2)** ethical considerations related to this study. (4 marks)

* **1 mark = identifying a relevant consideration**
* **1 mark = correct explanation**
* **Relevant considerations include:**
  + **Professional conduct**
  + **Informed consent (must refer to purpose and procedure provided and consent from parents/guardians)**
  + **No harm**
  + **Confidentiality**
  + **Debriefing**
  + **Withdrawal rights**
  + **Voluntary participation**
  + **Note: *deception* to be marked incorrect as it is not a relevant consideration**

**End of Section One**

**Section Two: Short answer**

This section has **four (4)** questions. Attempt **ALL** questions.

Suggested working time: 60 minutes **(56 marks)**

**Question 4** **(10 marks)**

1. What is the role of the corpus callosum? (2 marks)

**Any of the following responses for 2 marks:**

* **Sends messages from hemisphere to the other**
* **Coordinates the two hemispheres of the brain**

1. Identify **two (2)** roles of the:
   1. left hemisphere: (2 marks)

* **any two of the following for one mark each:**
* **control movement in the right side of the body**
* **receiving sensation from the right side of the body**
* **understand and produce language**
* **analytical thinking**
* **sequential processing**
* **logical reasoning**
* **mathematics**
* **reading**
  1. right hemisphere: (2 marks)
* **any two of the following for one mark each:**
* **control movement in the left side of the body**
* **receiving sensation from the left side of the body**
* **detection of emotion**
* **spatial ability**
* **recognition of patterns**
* **musical ability**
* **art appreciation**
* **emotional expression**

1. Describe the effect of physical activity/exercise on depression. Ensure you refer to empirical evidence to support your answer.

* **1 McCann & Holmes 1984**
* **1 Studied mildly depressed female college students for 10 weeks**
  + **⅓ participants assigned to relaxation techniques,**
  + **⅓ assigned to aerobic exercise**
  + **⅓ received no treatment.**

**\*no significant difference between groups prior**

**2 Depression levels after:**

**No treatment/control group= no significant change**

**Relaxation group= decrease in depression by 6 scores**

**Aerobic Exercise group= decrease in depression by 11 scores**

(d)Identify **one (1)** example of each of the following methods of investigating the human brain:

1. Still picture scans: (1 mark)

* **CAT – 1 mark**
* **MRI – 1 mark**

1. Dynamic picture scans: (1 mark)

* **fMRI – 1 mark**
* **PET – 1 mark**

**Question 5 (15 marks)**

1. Name and describe **two (2)** of Gardner’s Multiple Intelligences. (4 marks)

**Students can refer to any of:**

* **Linguistic**
* **Logical-mathematical (cannot have just one of the names)**
* **Musical**
* **Bodily (kinaesthetic)**
* **Spatial**
* **Interpersonal**
* **Intrapersonal**
* **Existential**
* **Naturalistic**
* **1 mark = correctly identifying it**
* **1 mark = correctly describing it**

1. Write the formula used to calculate a person’s *Intelligence Quotient (IQ)* score. (1 mark)

**IQ = MA / CA x 100 student must have all parts for one mark**

1. Name the two factors that comprise Spearman’s two-factor theory of intelligence. (2 marks)

* **General intelligence = 1 mark**
* **Specific intelligence = 1 mark**

1. Patrick was sitting on his couch when his girlfriend sat down next to him. He soon habituated the smell of the perfume she was wearing.
   1. Define ‘habituation’. (1 mark)

**When predictable and unchanging stimuli fail to command attention = 1 mark**

* 1. Describe **one (1)** advantage of being able to habituate information. (2 marks)
* **We can ignore repetitive stimuli = 1 mark**
* **This means we are not constantly distracted by every little thing in our environment = 1 mark**
* **Or a similar response that addresses the above points**

e) Elisa is trying to study for her Psychology test but she can hear her sister and her sister’s friend gossiping about the boys they like in the room next door. Name and explain the type of attention she is using.

(2 marks)

|  |  |
| --- | --- |
| Description | Marks |
| Divided attention (1) which is the ability to distribute one’s attention and undertake more than one activity at same time (1). | 0-2 |
| Total | 2 |

f) Which type of attention should Elisha be using? Name and explain this type of attention.

(2 marks)

|  |  |
| --- | --- |
| Description | Marks |
| Selective attention (1) which involves attending to certain stimuli while ignoring other stimuli (1). | 0-2 |
| Total | 2 |

**Question 6 (13 marks)**

1. How does ‘pro-social behaviour’ differ to ‘altruistic behaviour’? (2 marks)

* **1 mark = PSB is any helping behaviour that may include self-interest on behalf of the helper**
* **1 mark = altruism is assisting with no thoughts of self-interest on behalf of the helper**

1. Name and describe **one (1)** of the psychological concepts that allows people to understand why the bystander effect occurs. (3 marks)

**Students can choose from either:**

* **Diffusion of responsibility = 1 mark, OR;**
* **Audience inhibition = 1 mark**
* **Then;**
  + **1 mark = clearly defining the term**
  + **1 mark = explaining how it stops people from acting pro-socially (i.e. becoming bystanders instead of being active helpers)**

1. Identify **two (2)** of the three determinants of liking. (2 marks)

**Students can choose from any two of the following for 1 mark each:**

* **Proximity**
* **Similarity**
* **Reciprocity**

1. Dunphy (1963) identified five stages in the development of adolescent groups. Describe the features of the three stages identified below. (6 marks)

**Any of the following points for one mark each, maximum of two marks for each stage**

*Stage 1*:

* **Formation of cliques (4-10 members usually of the same sex)**
* **Each clique relatively isolated from the other**
* **Cliques meet reasonably often to plan social activities, share secrets and gossip**
* **Cliques had a tight structure and an authority figure as leader**
* **Membership required deference to the leader and conformity in dress, interests, attitudes etc...**

*Stage 2*:

* **Unisex cliques interact with each other**
* **Only eligible for membership to a crowd if already a member of a clique**
* **Crowd activities allows interaction between the sexes**

*Stage 3*:

* **Changing structure of the crowd**
* **Higher ranking clique members forming heterosexual cliques**
* **Reflects the start of dating**

**Question 7 (18 marks)**

1. Define ‘communication’. (2 marks)

**Communication involves the sending and receiving of messages, or;**

**When one person sends a message and another person receives the message**

* **2 marks = correct response**
* **1 mark = mostly correct response**

1. Name the **three (3)** parts of the ear identified above. (3 marks)

Part 1: **outer ear/pinna = 1 mark**

Part 2: **ear drum = 1 mark**

Part 3: **cochlear = 1 mark**

1. Identify and describe the type of hearing loss associated with part 3. (3 marks)

* **Sensorineural hearing loss = 1 mark**

**Students need to include any two any of the following points for one mark each:**

* **Is due to a problem in the cochlear or the hearing nerve**
* **It can be acquired or be present at birth**
* **Is usually a loss of both clarity and loudness**
* **Note = maximum 1 mark to be awarded for an accurate description but *sensorineural* has not been identified.**

1. List **two (2)** interventions that can be used with the hearing impaired to improve their communication. (2 marks)

**Any two of the following for one mark each:**

* **Hearing aid**
* **Cochlear implant**
* **Teaching AUSLAN / sign language**
* **Teaching lip reading**

1. Identify **one (1)** example of non-verbal communication and describe the meaning it communicates. (2 marks)

Example: **students’ own responses. Examples include a smile, a handshake, a thumbs-up = 1 mark**

Meaning: **students’ own responses. Should be linked to the example identified = 1 mark**

1. Describe **two (2)** components of active listening. (2 marks)

**Any two of the points identified on the text box on p.61 of the textbook for one mark each**

1. Identify and describe **two (2)** barriers to effective listening. (4 marks)

**1 mark = accurately identifying it**

**1 mark = accurately describing it**

**Responses can refer to any two of the following:**

* **Being distracted and only listening with half an ear**
* **‘topping the speaker’**
* **being judgemental**

**End of Section Two**

**Section Three: Extended Response**

This section has **one (1)** question. You must attempt this question.

Suggested working time: 45 minutes **(30 marks)**

**Question 8**

Explain how factors relevant to *biological influences*, *cognition*, *relational influences* and *communication* can influence a student’s behaviour, participation and success at school.

Include relevant *psychological evidence* in your answer.

In constructing your argument you should:

* Clearly define *behaviour*
* Explain how factors relevant to *biological influences* influence behaviour, participation and success at school
* Explain how factors relevant to *cognition* influence behaviour, participation and success at school
* Explain how factors relevant to *relational influences* influence behaviour, participation and success at school
* Explain how factors relevant to *communication* influence behaviour, participation and success at school
* Consider how these factors interact to influence behaviour, participation and success at school
* Finish with a conclusion

**Question marks available = 25 marks**

* Discussion = 12 marks
* Evidence = 12 marks
* Communication = 6 marks

**Discussion:**

* *9 – 12 marks*: refers to numerous and relevant syllabus content; covers all four content areas; writes in a logical and detailed manner that addresses the question
* *4 – 8 marks*: refers to some relevant syllabus points, covers two to three content areas, writes in a logical manner and includes enough detail to answer the question
* *0 – 3 marks*: response lacks all of the above points

**Evidence:**

* *9 – 12 marks*: refers to numerous psychological theories and supporting empirical evidence relevant to all four content areas
* *4 – 8 marks*: refers to some psychological theories and supporting empirical evidence relevant to two to three content areas,
* *0 – 3 marks*: response lacks all of the above points

**Communication:**

* *5 – 6 marks*: psychological terminology used consistently throughout, response is well-written using sentences and paragraphs, easy to follow response
* *3 – 4 marks*: some psychological terminology used throughout, response is well-written using sentences and paragraphs, easy to follow response, a simple response
* *0 – 2 marks*: response lacks the above points

Introduction:

* Define ‘behaviour’: the outward manifestations of a person’s internal thoughts, emotions (mood) and personality. Behaviour is also influenced by external factors.
* Outline the factors they will be discussing in their response.

For each theory referred to in the essay the student needs to:

* Outline/define/describe the theory
* Explains its relevance to behaviour and/or participation and/or success at school
* Refer to relevant empirical evidence

|  |  |  |  |
| --- | --- | --- | --- |
|  | Behaviour | Participation | Success |
| B. Influences | - drug taking  - exercise  - brain lobes/parts (function and damage)  -frontal lobe (regulative behaviour, cognitive abilities, emotional responses – Phineas Gage) | - drug taking | - frontal lobe (regulative behaviour, cognitive abilities, emotional responses – Phineas Gage)  - drug taking  - exercise |
| Cognition | - attention and states of consciousness (selective att, divided att, daydreaming)  - habituation and dishabituation (ADHD)  - EQ |  | - Intelligence (IQ, EQ, MI) |
| R. Influences | - prosocial and antisocial (bullying) behaviour  - bystander effect, audience inh, D of Res (related to bullying)  - Dunphy’s theory of adolescent groups | - Dunphy’s theory of adolescent groups  - bullying | - Dunphy’s theory of adolescent groups – norms for the groups you socialise with influence your success at school) |
| Communication | - terms of address  - assertive communication  - active listening in the classroom | - hearing impairments | - hearing impairments (degree of impairment)  - active listening |

The above factors do not act in isolation, but are linked. For example:

* A student with hearing impairment (communication) may find themselves socially isolated, or even bullied (relational influences)
* Depending on the norms for a friendship group (a clique – R. Inf) – whether it be smoking, drug-taking (B. Inf), studying or surfing – will influence their success at school