

Trial Examination 2013

VCE Psychology Unit 1

Written Examination

Suggested Solutions

SECTION A: MULTIPLE-CHOICE QUESTIONS

1	☐ A	☐ B	☐ C	☒ D
2	☐ A	☒ B	☐ C	☐ D
3	☐ A	☐ B	☒ C	☐ D
4	☐ A	☐ B	☐ C	☒ D
5	☐ A	☐ B	☒ C	☐ D
6	☐ A	☒ B	☐ C	☐ D
7	☒ A	☐ B	☐ C	☐ D
8	☐ A	☒ B	☐ C	☐ D
9	☒ A	☐ B	☐ C	☐ D
10	☒ A	☐ B	☐ C	☐ D
11	☐ A	☐ B	☒ C	☐ D
12	☐ A	☐ B	☒ C	☐ D
13	☐ A	☐ B	☐ C	☒ D
14	☐ A	☐ B	☒ C	☐ D
15	☐ A	☒ B	☐ C	☐ D

16	☐ A	☐ B	☐ C	☒ D
17	☐ A	☒ B	☐ C	☐ D
18	☒ A	☐ B	☐ C	☐ D
19	☐ A	☐ B	☒ C	☐ D
20	☐ A	☐ B	☐ C	☒ D
21	☒ A	☐ B	☐ C	☐ D
22	☐ A	☐ B	☐ C	☒ D
23	☐ A	☐ B	☐ C	☒ D
24	☒ A	☐ B	☐ C	☐ D
25	☐ A	☒ B	☐ C	☐ D
26	☐ A	☐ B	☐ C	☒ D
27	☐ A	☒ B	☐ C	☐ D
28	☐ A	☒ B	☐ C	☐ D
29	☒ A	☐ B	☐ C	☐ D
30	☐ A	☐ B	☒ C	☐ D

31	☒ A	☐ B	☐ C	☐ D
32	☐ A	☒ B	☐ C	☐ D
33	☐ A	☐ B	☐ C	☒ D
34	☐ A	☐ B	☒ C	☐ D
35	☐ A	☐ B	☐ C	☒ D
36	☐ A	☐ B	☒ C	☐ D
37	☐ A	☐ B	☐ C	☒ D
38	☐ A	☐ B	☐ C	☒ D
39	☐ A	☒ B	☐ C	☐ D
40	☐ A	☐ B	☒ C	☐ D
41	☐ A	☐ B	☒ C	☐ D
42	☒ A	☐ B	☐ C	☐ D
43	☒ A	☐ B	☐ C	☐ D
44	☒ A	☐ B	☐ C	☐ D

Question 1 D

While some psychologists do practise psychoanalysis, or assist with relationship issues, or engage in research, overall the role of the profession is to assist people to adjust successfully to their environment in order to live meaningful and satisfying lives.

Question 2 B

Most of the information contained in psychology text books is based on empirical evidence gathered through systematic research whose findings have been reported in scientific journals. (Case studies are included at times to highlight a particularly significant individual case, but comparatively they are in the minority.)

Question 3 C

Psychology is defined as the study of behaviour and mental processes; hence the relationship between these is the major focus of research in psychology.

Question 4 D

Cognition includes intellectual functions such as thinking, reasoning, memory, problem solving and language. The other options refer to social, emotional and perceptual development respectively.

Question 5 C

The evaluating of a specific child's abilities by conducting psychological tests is the work of an educational and developmental psychologist. A research psychologist conducts studies for scientific reasons; a paediatrician is a medical doctor specialising in childhood illnesses; a psychiatrist deals with serious mental disorders.

Question 6 B

An in depth assessment of an individual is a case study.

Question 7 A

Counselling psychologists assist with personal problems and relationship issues. A clinical psychologist diagnoses and treats mental and behavioural disorders.

Question 8 B

The scenario describes the qualifications of a psychologist.

Question 9 A

An hypothesis is a tentative, testable prediction about the relationship between the variables that are to be investigated.

Question 10 A

Cross-sectional studies involve studying participants from various age groups concurrently in order to investigate differences between the cohorts. Longitudinal studies investigate a particular cohort over a period of time, in this case it would involve tracking the same group of primary school children from Prep through to grade 6 (over a period of seven years). In the scenario each child was assessed only once, the two weeks being required for the psychologist to visit the sixty participants.

Question 11 C

A requirement of debriefing is to provide access to the results of a study one has participated in.

Question 12 C

Light, which enables vision in human beings, is part of the electromagnetic spectrum that has wavelengths of approximately 380 to 740 nanometres.

(Humans are unable to detect UV and IR radiation with the naked eye.)

Question 13 D

The retina is the eye structure that is able to detect light (when the photoreceptors are activated).

Question 14 C

Age-related reading difficulties are commonly due the inability of the lens to bulge sufficiently to focus light reflected off small stimuli such as letters on a page or computer screen onto the retina. Retinal damage such as in age-related macular degeneration (AMD) or diabetic retinopathy lead to progressive visual impairment beginning with 'blind spots', not problems with focus (experienced as blurry vision). Death of neurons in the brain would result in permanent visual impairment and blindness. 'Clouding' occurs in the lens when cataracts are formed.

Question 15 B

The neural pathway begins when the photoreceptor cells in the retina transduce light into electrochemical energy for transmission to the visual cortex in the brain in the form of neural impulses.

From the cornea through to the photoreceptors in the retina the energy is physical in the form of light (electromagnetic energy).

Question 16 D

In the darkness of the cinema Chloe's pupils would have dilated in order to let in as much light as possible; therefore when she emerged into bright light, for a very brief moment she would have been 'blinded' due to too much light entering her eyes.

Question 17 B

Transduction is the process of converting electromagnetic energy (light) into electrochemical energy, which can then be transmitted to the brain; organisation refers to assembling elements of a visual stimulus into a whole image that can then be interpreted by the brain.

Question 18 A

Reception is the first phase in sensation, which involves only physiological processes; it occurs when the photoreceptor cells in the back of the retina detect light.

Question 19 C

Observing clusters of lights as opposed to areas of darkness is an example of figure-ground organisation, whereby the more important part of a visual stimulus tends to stand out from its less important background.

Question 20 D

Camouflage, as described in the scenario, occurs when there is no clear boundary (contour) visible between an object and its background; therefore the figure-ground principle is lost.

Question 21 A

Placing the more distant hills higher on the page than the house is applying the depth cue of 'height in the visual field'; drawing the flowers overlapping the wall is known as 'interposition'.

Question 22 D

The shape of buildings such as houses (rectangular or rounded) in the interpretation of the Müller-Lyer illusion demonstrates a socio-cultural influence.

Question 23 D

Current developmental psychology embraces a lifespan approach whereby changes, both progress and decline, in various aspects of development (not just physical) are studied through to old age.

Question 24 A

While many theories describe development as occurring in stages, this is for convenience only, as psychologists are fully aware that there are differences amongst individuals in their rate of development and there are no hard and fast age-related boundaries.

Question 25 B

'Nature' refers to the genetic makeup of an individual also known as 'heredity', while 'nurture' refers to environmental influences, both physical and psychological.

Question 26 D

Hair colour is clearly genetically determined, while social skills are acquired through interacting with others. Intelligence has a considerable heritability factor, while eye colour is genetic. Predisposition for body shape can be inherited from a parent, but may be strongly influenced by environmental factors such as diet and exercise.

Question 27 B

Bowlby found that secure attachment by the age of twelve months was important for the ability to form strong positive emotional bonds with others later in life.

Question 28 B

Avoidant attachment was described by Ainsworth as characterised by an infant's indifference to its mother, while resistant attachment involves negative behaviours and emotions, such as clinging to the mother, showing signs of anxiety or anger when she leaves and being upset when she returns.

Question 29 A

A caregiver whose child demonstrates avoidant attachment is likely to be inconsistent, neglectful and even abusive.

Question 30 C

Animals are used in research studies when for ethical reasons it would be inappropriate to use humans in case of harming them. The purpose is to generalise from the animals to humans (for the ultimate wellbeing of both humans and animals). While sadly the animals may experience discomfort and may even need to be euthanised at times, there are strict ethical guidelines prescribed to ensure that they are treated as humanely as is possible.

Question 31 A

Investigating brain function via a scan involves diagnosis from a biological perspective as the scan may reveal abnormalities in the structure or function of the brain.

Question 32 B

A child who has not yet mastered the concept of 'object permanence' would not be aware that his mother still exists when she is out of sight. Without this concept a child would simply forget about her when she is not present.

Question 33 D

The ability to comprehend abstract concepts develops at around twelve years of age in the stage Piaget called 'formal operational'.

Question 34 C

'Egocentrism', the ability to not understand that another person's perspective may be different to one's own view is overcome by around seven years of age within Piaget's 'pre-operational' stage.

Question 35 D

While psycho-social development does depend on mental abilities, it also requires interaction with others. Social development begins at birth, not at three months of age. Moral dilemmas might be experienced when there are conflicting interpretations of what is 'right' or 'wrong'.

Question 36 C

Erikson's view of successful psycho-social development describes how individuals learn to exist comfortably due to understanding themselves and their place in their social setting.

Question 37 D

At sixteen years of age Hamish would be in Stage 5 of Erikson's theory, where the crisis of identity versus role confusion needs to be resolved before progressing successfully into young adulthood.

Question 38 D

A three-year-old child is in the pre-conventional stage of Kohlberg's theory of moral development and can only learn right from wrong by being rewarded or punished. Giving Luke a treat and praising him for appropriate behaviour would be Frida's best option. Punishment in the form of smacking would only reinforce the idea that violence is appropriate. Luke is too young to understand the concept of abiding by societal rules. Ongoing hitting and poking would clearly be detrimental to the baby's wellbeing and would not teach Luke appropriate moral values.

Question 39 B

Kohlberg was specifically interested in the reasons why people make moral decisions. His theory proposes that moral development occurs as individuals become more sophisticated in framing their judgements about moral values and behaviour.

Question 40 C

Making moral decisions based on rules is a characteristic of the 'conventional' stage. A person in the 'post-conventional' stage would be able to use their discretion and waive a rule depending on the unique circumstances surrounding the misdemeanour.

Question 41 C

‘Compensation’ in Baltes’ theory refers to substituting a behaviour that is no longer possible due to old age by one that can be performed. ‘Optimisation’ refers to the overall need to make the most of one’s abilities in order to age successfully. ‘Selection’ refers to choosing suitable activities that compensate for reduced or lost abilities and that lead to best possible outcomes (optimisation).

Question 42 A

Impaired vision is a deficit in perception. Cognition refers to mental abilities, behaviour is physical and psycho-social would involve interaction with other people.

Question 43 A

Stage theories are not the result of pure conjecture, but are based on research findings. While development is described in ‘stages’ theorists know that in fact development is a continuous process, and is not rigid and identical for every individual. However, they do suggest that for most people development progresses in stages that are age-related.

Question 44 A

The two types of study design used to investigate lifespan development are cross-sectional and longitudinal, as they can track progressive changes and reveal group trends. Case studies focus on individuals rather than group trends; experiments are used to establish cause-and-effect relationships between variables; observational studies are a tool for recording overt behaviours.

SECTION B – SHORT-ANSWER QUESTIONS**Question 1**

- a. 'Pseudoscience' refers to fake sciences that are not based on empirical research findings and therefore lack reliability and validity.

1 mark

- b. Astrology: the belief that personality and life events are determined by the positions of stars and planets.

1 mark

*Students may choose any of the pseudosciences including phrenology, numerology, graphology, etc.
Marks awarded for naming and appropriately describing the pseudoscience*

Question 2

- a. Sport psychologist: works with elite athletes (individuals or teams) and their support staff in order to assist them to reach their full potential.

1 mark

- b. Clinical psychologist: diagnoses and treats serious psychological conditions and mental disorders.

1 mark

- c. Forensic psychologist: works in the legal and criminal justice systems assisting with psychological issues, such as assessment of individuals impacted by crime, both victims and perpetrators.

1 mark

Question 3

The cognitive perspective focuses on understanding psychological phenomena by investigating mental processes such as learning, thinking, problem solving, reasoning, memory and language, while the behavioural perspective involves ascertaining the impact of environmental factors on human outcomes.

2 marks

Marks awarded for the distinction between mental processes and environmental effects

Question 4

Psychologists use a range of psychotherapies to treat their patients, while psychiatrists may prescribe medication and perform medical procedures in addition to psychotherapy.

1 mark

Marks awarded for the additional use of medication/medical procedures by psychiatrists

Question 5

Sensation refers to the physiological processes of detecting the visual stimulus (reception, transduction and transmission), while perception involves both physiological and psychological processes as the stimulus is given meaning (selection, organisation and interpretation).

2 marks

Marks awarded for the distinction made between physiological and psychological processing

Question 6

‘Convergence’ refers to the inward turning of the eyes as an object approaches the observer, while ‘linear perspective’ refers to the apparent convergence of parallel lines as they recede into the distance. The key difference is that convergence is a primary depth cue dependent on the functioning of the eyes and brain; linear perspective is a secondary depth cue that is seen in the environment. (OR: Convergence is a binocular depth cue requiring the use of both eyes, while linear perspective is monocular and is apparent with just one eye.)

3 marks

*2 marks for the correct description of each depth cue**1 mark for identifying the major difference***Question 7**

- a. Perceptual set refers to the mental predisposition to interpret a visual stimulus in a particular way (due to factors such as prior experience, context or motivation).

1 mark

- b. The ambiguous stimulus known as the ‘rat-man’ tends to be interpreted as a rat after viewing a series of animals, or a man after viewing a series of faces. (Prior experience has created an expectancy.)

1 mark

Question 8

Room has a trapezoid floor plan (is not a regular rectangle); the ceiling slopes down and the floor slopes up; features inside the room are deliberately distorted to give the appearance that the room is a regular shape; the observer must look through a peephole with one eye and therefore the depth cues of retinal disparity and convergence are lost.

3 marks

Question 9

- a. ‘Maturation’ refers to the physical growth of the body, including bones, tendons, muscles, as well as the nervous system.

1 mark

- b. An infant will not be able to crawl until its body has grown sufficiently in strength OR
A child will not be able to begin talking until its brain has developed sufficiently.

1 mark

*Students earn mark for any appropriate example that depends on the maturation of the body***Question 10**

- a. the visual cliff

1 mark

- b. Infants could discern the drop when they were of crawling age; the ability to crawl was associated with the ability to perceive depth.

1 mark

Students must associate the depth perception with crawling

Question 11

- a. sensorimotor

1 mark

- b. Infants learn about their environment by co-ordinating movement with sensory experiences (such as reaching for an object and testing it in their mouth.)

1 mark

Students must refer to the use of senses and movement

Question 12

A person aged 65 years or more who is coping successfully will experience a sense of achievement and wellbeing when looking back on their life (integrity), while someone who has regrets about wasting their life or not having achieved anything of value would feel bitter and unfulfilled (despair).

2 marks

Question 13

- a. Moral development refers to coming to an understanding of right from wrong (societal values for appropriate behaviour).

1 mark

- b. Moral and cognitive development are interrelated. Moral development can only occur as an individual's thinking becomes increasingly sophisticated.

1 mark

Students must indicate that both types of development occur together

Question 14

According to Baltes 'successful ageing' means that the individual is able to maintain a happy and fulfilling lifestyle in spite of the difficulties and constraints brought about because of increasing age.

2 marks

1 mark for stating that happiness is maintained

1 mark for mentioning age-related problems

Question 15

- a. Childhood – ADHD: the child cannot maintain concentration and acts erratically and inappropriately.

2 marks

Students may choose any other disorder that is typical of childhood – attachment disorder, autism spectrum disorder, pervasive developmental disorder are other possibilities

1 mark for an appropriate choice

1 mark for the brief description

- b. Adolescence – Anorexia nervosa: the adolescent perceives oneself as being overweight when clearly they are not and starve themselves to the point of being dangerously underweight.

2 marks

Students may choose any other disorder that can develop during adolescence – anxiety disorders and depression are other possibilities

1 mark for an appropriate choice

1 mark for the brief description

Question 16

An ethics committee has the role of approving or disallowing a proposal for a research study. The ethics committee assesses the proposed study for its usefulness to building upon the body of scientific knowledge and for its design to ensure that participants are protected and not exploited in any way.

2 marks

1 mark for approving the study on the basis of its scientific merit

1 mark for ensuring that the processes involved will not be harmful to participants

SECTION C – EXTENDED ANSWER QUESTION

Teachers may make a judgement about the quality of student responses by allocating marks as follows:

Standard	Mark	Descriptor
VH	9 – 10	Information is comprehensive, completely accurate and appropriate, and demonstrates excellent understanding of research methodology
H	7 – 8	Information is comprehensive, very accurate and appropriate, and demonstrates sound understanding of research methodology
M	5 – 6	Information is quite comprehensive, quite accurate, generally appropriate, and demonstrates moderate understanding of research methodology
L	3 – 4	Information is somewhat limited, lacking in accuracy or could be more appropriate, and demonstrates some understanding of research methodology
VL	1 – 2	Information is inadequate, lacks accuracy or is not appropriate, and demonstrates minimal understanding of research methodology
NS	0	Information is not shown

Alternately teachers may allocate marks for correct bits of information regarding the scenario (while deducting marks for incorrect responses), from the aspects of research listed below:

- Research hypothesis: It was hypothesised that exposure to stories would enhance the cognitive abilities of six-year old children at Valesville Primary School.
- Independent variable: reading and discussion of stories (on a nightly basis for a minimum of 30 minutes over a fortnight)

Teachers decide whether the IV needs to be operationalised

- Dependent variable: cognitive ability (scores on cognitive ability test)

Teachers decide whether the DV needs to be operationalised

- Population: Six-year old pupils at Valesville Primary School
- Sample: The 34 six-year old children from Valesville Primary School who participated in the research
- Type of study: an experiment (as there was a control and an experimental group and Ms Scott was seeking a cause-and-effect relationship between exposure to stories and enhancement of cognitive abilities)
- Type of data: quantitative (as the table contains numbers – scores and percentages)

Students could also suggest ‘summary’ or ‘descriptive’ statistics

- Extraneous variables: individual differences in cognitive ability of the children resulting in biased groups as the sample was quite small; the parents in the experimental condition may not all have read to their children as instructed; parents in the control condition may have read to their children even though they were instructed not to; variations in the quality of the parents’ reading and discussion
- Conclusion: That the cognitive ability of the six-year old Valesville Primary School children was enhanced after the fortnight’s exposure to stories
- Generalisation: The results can be generalised back to the population of six-year olds at Valesville Primary School (because the sample was randomly selected from the population), but cannot be generalised to other populations: children at different schools might have different cognitive abilities or potential; different age groups may respond differently to exposure to stories; populations from different socio-economic backgrounds may respond differently to a reading/discussion activity.
- Professional conduct: Ms Scott did abide by prescribed ethical principles. She followed informed consent, voluntary participation and debriefing procedures as required, and maintained confidentiality.

10 marks