PSYCHOLOGY
Unit 4
Trial Examination
SOLUTIONS BOOK
Use this page as an overlay for marking the multiple choice answer sheets. Simply photocopy the page onto an overhead projector sheet. The correct answers are open boxes below. Students should have shaded their answers. Therefore, any open box with shading inside it is correct and scores 1 mark.

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SECTION A – Multiple-choice Questions

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SECTION B – Short Answer Questions

Question 1

Answer

The behaviour
- Occurs in response to an appropriate stimulus and follows set (fixed) response(s) or
- Involves a complex sequence of behaviours or
- Is species-specific and is not learned (occurs without prior experience)

2 marks Students make any two of the above points
1 mark Students make one of the above points

Question 2

Answer

- Long-term potentiation (LTP) refers to the long-lasting strengthening of connections between neurons.
- It enhances the ability of any two connected neurons to communicate with each other, making learning possible.

2 marks Students make both of the above points
1 mark Students make one of the above points

Question 3

a. Answer

- Firstly, through classical conditioning, Albert learned to associate the rat (previously, a neutral stimulus) with the noise (UCS), so that the rat became the CS, eliciting the CR.
- Then, as a result of generalisation, Albert learned to associate a range of white objects (including the beard) with the CS.

2 marks Students make both of the above points
1 mark Students make one of the above points

b. Answer

- Informed consent was not given or
- Activity caused distress and possibly lasting harm or
- Debriefing was not provided

1 mark Students make one of the above points
Question 4
a. **Answer**
   
   A phobia is an intense response to a stimulus (object/situation/event) that
   - involves excessive/unreasonable fear of that particular stimulus
   - causes distress and/or interferes with everyday functions

   1 mark Students make both of the above points

b. **Answer**
   
   - Flooding involves placing the individual directly in the feared situation and maintaining that contact until the conditioned phobic response is extinguished.
   - Mario may be seated next to an enclosure containing a snake and kept there as long as he showed the fear response.

   2 marks Students make both of the above points
   1 mark Students make one of the above points

c. **Answer**
   
   - Graduated exposure or systematic desensitisation

   1 mark Students make the above point

Question 5
a. **Answer**
   
   - The organism was ‘instrumental’ in the process of learning, i.e. the organism’s own actions led to the formation of the association between the response and its consequences.

   1 mark Students make the above point

b. **Answer**
   
   - The cats made a number of different responses until one was reinforced. The reinforced response was then repeated. These are the elements of ‘trial-and-error’ learning.

   1 mark Students make the above point

Question 6
a. **Answer**
   
   - Because the tantrum behaviour is reinforced, it is likely to increase in frequency.

   1 mark Students make the above point

b. **Answer**
   
   - Ignore the behaviour leading to its extinction or
   - Follow behaviour with appropriate punishment, reducing its likelihood.

   1 mark Students make one of the above points

Question 7
a. **Answer**
   
   - Attention: Ben must have actively observed his brothers play or
   - Retention: Ben must have memorised the moves and rules or
   - Reproduction: Ben must have felt able to copy the observed behavior or
   - Motivation/reinforcement: acting out the behaviour must have been followed by reinforcement.

   2 marks Students make two of the above points
   1 mark Students make one of the above points

b. **Answer**
   
   - Model was perceived positively (were liked/admired/had high status) or
   - There was perceived similarity between model and learner or
   - Model demonstrated behaviour the learner wanted to acquire or
   - Model demonstrated behaviour the learner felt capable of imitating.

   1 mark Students make one of the above points
Question 8
Answer
- Behaviour is not statistically common or
- Behaviour is socially unacceptable or
- Mental health professionals would consider such behaviour to be maladaptive or
- According to the medical model, such behaviour would indicate the likelihood of mental illness.

2 marks Students make two of the above points
1 mark Students make one of the above points

Question 9
a. Answer
- Dimensional
 1 mark Students make the above point
b. Answer
- A score that indicates the extent of the client’s impairment along a continuum or
- A profile of the client’s scores on the dimensions that were measured.
 1 mark Students make one of the above points

Question 10
a. Answer
- Increase in heart rate or blood pressure or breathing rate or
- Slowing down of digestion or
- Increased blood flow to muscles or
- Dilation of pupils.
 2 marks Students make two of the above points
1 mark Students make one of the above points
b. Answer
- Perception of threat activates the hormonal system, leading to the secretion of adrenaline and cortisone or perception of threat activates the hypothalamus, in turn activating the glands that are part of the HPA axis to release hormones.
- These hormones mediate the physiological changes observed during the fight-flight response.
 2 marks Students make both of the above points
1 mark Students make one of the above points

Question 11
a. Answer
- During the ‘shock’ stage (1st part of alarm reaction), arousal is reduced, and the body’s ability to deal with the stressor falls.
- During the countershock stage (2nd part of the alarm reaction), the sympathetic system is activated; the body rebounds and its resistance to the stressor increases.
 2 marks Students make both of the above points
1 mark Students make one of the above points
b. Answer
- In Robyn’s case, the stressor persisted and Robyn entered stage 2, Resistance.
- In this stage, the ability to deal with the stressor increases.
- However, because of suppression of the immune system by the stress hormone, cortisol, the body’s ability to fight bacteria and viruses is compromised, leading to, in Robyn’s case, throat infections.
 3 marks Students make all of the above points
2 marks Students make two of the above points
1 mark Students make one of the above points
Question 12

a. Answer  Explanations may focus on the contribution of one of the following, or a combination.  

**Major depression:**
- biological factors, including the role of genes and neurotransmitters (serotonin and noradrenalin)
- psychological factors, including learned helplessness and/or stress
- sociocultural factors, including the role of social stressors as risk factors

**Addictive disorder (gambling):**
- biological factors, in particular, the role of the dopamine reward system
- psychological factors, including the role of conditioning and/or social learning
- sociocultural contributing factors, in particular, permission and availability

**Schizophrenia**
- biological factors, including role of genes and neurotransmitters (dopamine)
- psychological contributing factors, in particular, impairments to cognitive processing
- social-cultural contributing factors, including poverty and disadvantage

3 marks Students identify a relevant theory for the chosen disorder and provide 2 or 3 explanatory points or they list all the relevant contributing factors.

2 marks Students identify a theory but provide a partial answer only or they only list some of the contributing factors.

1 mark Students provide a correct but very superficial explanation.

b. Answer  Responses must be consistent with theory/theories highlighted above.

**Major depression:**
- use of medication such as antidepressants or
- cognitive behaviour therapy and psychodynamic therapy

**Addictive disorder (gambling):**
- cognitive behaviour therapy and psychodynamic therapy

**Schizophrenia**
- use of medication or
- cognitive behaviour therapy

1 mark Students name a relevant example of treatment/therapy
SECTION C – Extended Answer Question

10 marks   Allocate marks as follows:

Introduction
Hypothesis:
- First-year university mathematics students will solve significantly fewer problems when exposed to temperatures higher or lower than that those considered optimal for performance.
  2 marks   Students operationally define the IV and DV and identify the population
  1 mark    Students fail to identify any one of the above components
IV and DV:
- IV: temperature to which participants were exposed while solving problems
- DV: ability to perform in the workplace operationalised as mean number of problems correctly solved under each condition
  2 marks   Students make both of the above points
  1 mark    Students make one of the above points

Conclusions
- Significance of results:
  - p<0.05 for comparison of I and II. Therefore the difference between the means in condition I and II was significant at the 0.05 level of significance.
  - p>0.05 for comparison of I and III. Therefore the difference between means in conditions I and III was not significant.
- Can conclude that the temperatures above the optimal reduced capacity to solve problems but temperatures below optimal did not have this effect
  2 marks   Students make both of the above points
  1 mark    Students make one of the above points

Implications/generalisations:
- Difficult to generalise because sample is not representative of the population.
  1 mark   Students make the above point

Evaluation:
- Study used repeated measures groups design, avoiding participant effects, but introducing order effects.
- Study did not use double-blind procedures, possibly introducing experimenter effects.
- The sample may not adequately represent the population: it is composed of students in a narrow age group.
- Task may not adequately represent ‘work’:
  3 marks   Students make any three of the above points
  2 marks   Students make any two of the above points
  1 mark    Students make any one of the above points

Description of procedures designed to reduce shortcomings:
- Counterbalancing to counter order effects or
- Use a more representative sample of participants and of ‘work’.
  1 mark    Students make one of the above points

END OF SUGGESTED SOLUTIONS