Neap

Trial Examination 2021

VCE Physical Education Units 3&4

Written Examination

Question and Answer Booklet

Reading time: 15 minutes
Writing time: 2 hours

Student's Name: _____

Teacher's Name: _____

Structure of booklet

Section	*Number of questions*	*Number of questions to be answered*	*Number of marks*
A	15	15	15
B	15	15	105
			Total 120

Students are permitted to bring into the examination room: pens, pencils, highlighters, erasers, sharpeners and rulers.

Students are NOT permitted to bring into the examination room: blank sheets of paper and/or correction fluid/tape.

No calculator is allowed in this examination.

Materials supplied

Question and answer booklet of 21 pages

Answer sheet for multiple-choice questions

Instructions

Write your **name** and your **teacher's name** in the space provided above on this page, and on the answer sheet for multiple-choice questions.

All written responses must be in English.

At the end of the examination

Place the answer sheet for multiple-choice questions inside the front cover of this booklet.

Students are NOT permitted to bring mobile phones and/or any other unauthorised electronic devices into the examination room.

Students are advised that this is a trial examination only and cannot in any way guarantee the content or the format of the 2021 VCE Physical Education Units 3&4 Written Examination.

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SECTION A – MULTIPLE-CHOICE QUESTIONS

Instructions for Section A

Answer **all** questions in pencil on the answer sheet provided for multiple-choice questions.
Choose the response that is **correct** or that **best answers** the question.
A correct answer scores 1; an incorrect answer scores 0.
Marks will **not** be deducted for incorrect answers.
No marks will be given if more than one answer is completed for any question.

Question 1

Which one of the following is a characteristic of the associative stage of learning?

A. The individual experiences extremely rapid improvement.
B. The individual begins to identify and correct their own errors.
C. The individual performs skills automatically.
D. The individual displays inconsistent performance.

Question 2

A tennis player feels impact in their racquet as it hits a tennis ball.

Which one of the following types of feedback is this an example of?

A. intrinsic feedback
B. extrinsic feedback
C. augmented feedback
D. terminal feedback

Question 3

Open skills are characterised by unpredictable environments.

Which one of the following is an example of an open skill?

A. a soccer player performing a penalty kick
B. a darts player playing darts
C. a surfer competing during an ocean event
D. a basketballer performing a free throw

Question 4

The body's preferred fuel source at rest is

A. phosphocreatine.
B. carbohydrate.
C. protein.
D. fat.

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Question 5

The lactate inflection point is defined as the

A. last point at which lactate entry into and removal from the blood are balanced.

B. utilisation of lactate to produce glucose.

C. ability to keep working at a high intensity even after accumulation of lactate.

D. production of metabolic by-products.

Question 6

A football player who shifts their concentration from observing other players on the field to mentally rehearsing their upcoming movements has shifted their concentration from

A. broad-external to narrow-internal.

B. broad-internal to narrow-external.

C. narrow-external to narrow-internal.

D. broad-internal to broad-external.

Question 7

When an athlete enters a period of oxygen deficit, their

A. oxygen supply exceeds their oxygen demand.

B. oxygen supply is less than their oxygen demand.

C. oxygen supply and oxygen demand are equivalent.

D. VO_2 maximum is elevated.

Question 8

During exercise, an athlete's cardiac output will increase if

A. there is a decrease in their venous return.

B. their stroke volume is decreased.

C. there is an increase in their heart rate.

D. their lung volume is decreased.

Question 9

Which one of the following fitness tests assesses aerobic power?

A. body mass index

B. phosphate recovery test

C. sprint test

D. 20 m shuttle run test

Question 10

A chronic cardiovascular adaptation that occurs as a result of consistent aerobic training is

A. an increased resting heart rate.

B. an increase in maximum ventilation.

C. an increase in left ventricle size.

D. increased levels of ATPases.

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Question 11

Performing an overarm throw is

A. an example of a first-class lever.

B. an example of a second-class lever.

C. an example of a third-class lever.

D. not an example of a lever system.

Question 12

An acute cardiovascular response to intense physical activity is

A. increased blood pressure.

B. decreased venous return.

C. increased motor unit recruitment.

D. decreased cardiac output.

Question 13

Which one of the following would be most likely to cause fatigue in a 400 m race?

A. accumulation of H^+ ions

B. depletion of phosphocreatine stores

C. increased body temperature and excess sweating

D. depletion of triglyceride stores

Question 14

In which one of the following competitions would a higher lactate inflection point provide the greatest competitive advantage for an athlete?

A. gymnastics competition

B. 200 m race

C. tennis match

D. 3 km race

Question 15

Which one of the following statements about levers is correct?

A. Third-class levers have the resistance between the force and axis.

B. Second-class levers have a mechanical advantage of greater than one.

C. First-class levers always have a mechanical advantage of less than one.

D. The force arm of a lever is calculated as the horizontal distance from the resistance to the force.

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SECTION B

Instructions for Section B

Answer **all** questions in the spaces provided.

Question 1 (8 marks)

Emma is a 26-year-old professional soccer player who plays for a national team. She trains with her team five times a week for 5–6 hours each session and plays up to 25 games every year. She has two older brothers who are also soccer players and she has played soccer since the age of twelve.

a. Identify and discuss **one** sociocultural factor that may have affected Emma's soccer skill development. 3 marks

b. Emma comes across the results of fitness tests she completed when she was 14 years old and not yet a professional soccer player. The results are shown in the following table.

Fitness test	Result	Rating
20 m shuttle run/beep test	13.2	excellent
timed sit-ups	15	below average
20 m sprint test	18 seconds	poor
Illinois agility test	17.4	very good
1 RM leg press	20 kg	poor

Based on the data above, identify and justify which fitness components Emma would have had to work on during her training program. 3 marks

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c. A junior soccer player at the cognitive stage of learning is much more likely to engage in massed practice than Emma.

Discuss the defining factors of massed practice and state **one** disadvantage associated with this type of practice. 2 marks

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Question 2 (4 marks)

Discuss the advantages and disadvantages of a junior baseball player using a longer and heavier bat. Refer to relevant biomechanical principles in your answer.

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Question 3 (6 marks)

Dayna wishes to improve one fitness component and maintain two other fitness components. To do so, she has created the weekly training program shown in the following table.

Monday	continuous training, 20 min, 70% max heart rate (HR)	rest	resistance training, 3 sets × 15 reps, at 50% of 1 RM
Tuesday	fartlek, 40 min, 75% max HR	rest	burpees 5 sets × 10 reps 1.5 min rest after each set
Thursday	resistance training, 3 sets × 15 reps, at 50% of 1 repetition maximum (RM)	fartlek, 40 min, 80% max HR	rest
Friday	box jumps 3 sets × 20 reps, 1.5 min rest after each set	rest	continuous training, 25 min, 90% max HR

a. **i.** Identify **one** of the fitness components that Dayna is trying to maintain. 1 mark

_____

ii. For the fitness component identified in **part a.i.**, critique the effectiveness of Dayna's training program in maintaining her current level. 2 marks

_____

_____

_____

_____

b. Identify the fitness component that Dayna is trying to improve. 1 mark

_____

c. Identify **one** area in which this training program could be improved.
Justify your response. 2 marks

_____

_____

_____

_____

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Question 4 (12 marks)

A training program is designed to improve an athlete's performance, often in preparation for a big event or competition, by improving their physiological abilities in relation to a particular sport and consequently their overall performance.

a. What is the first step when designing a training program? 1 mark

b. Complete the table below by filling in the missing fitness components and **one** associated recognised fitness test. 3 marks

Fitness component	Recognised fitness test
	• SEMO agility test • Illinois agility test
aerobic power	
	• body mass index • waist circumference

c. Jacqueline plays netball for her local under-16s netball team.

Identify **two** relevant fitness components that would benefit Jacqueline in her netball games and discuss why these components would be important for Jacqueline. 4 marks

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d. For each of the two fitness components identified in **part c.**, identify and explain **one** factor that would affect Jacqueline's development of the component. 4 marks

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Question 5 (4 marks)

a. List **two** chronic adaptations to the respiratory system that result from aerobic training. 2 marks

b. Select **one** of the chronic adaptations listed in **part a.** and explain why it is an advantage. 2 marks

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Question 6 (7 marks)

a. The first stage of a qualitative movement analysis is preparation and the final stage is error correction.

Identify the **two** other stages of a qualitative movement analysis. 2 marks

b. Identify **two** reasons why a qualitative movement analysis is conducted. 2 marks

c. Outline **three** methods which would increase the objectivity and lessen the subjectivity of a qualitative movement analysis. 3 marks

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Question 7 (13 marks)

a. Doug is a junior baseball player. Every time he pitches, the ball goes above the batter's head.

Referencing relevant biomechanical principles and the appropriate angle of release, discuss why this may be happening and explain how Doug could modify his pitching in order to allow the batter to be able to actually hit the ball. 5 marks

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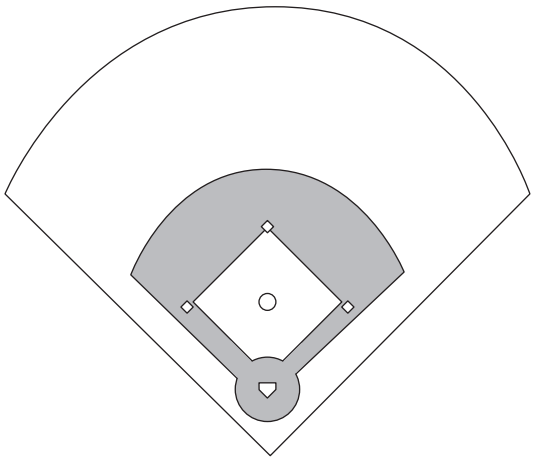
b. Adele is the coach of the under-12s baseball team at Doug's school. Her students currently play at a local full-sized baseball field with adult equipment, as shown in the following diagram.



Referencing relevant biomechanical principles, identify and explain **two** task constraints that Adele could implement during training sessions in order to allow her under-12s baseball players to develop their baseball skills. 4 marks

c. Sab plays as an outfielder in Doug's baseball team.

Explain, with reference to the biomechanical principle of impulse, why a baseball player such as Sab wears a glove to catch the ball. 4 marks

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Question 8 (9 marks)

Simon is an athlete who competes in the 400 m running race. His average time for this race is 43.03 seconds.

Discuss what occurs physiologically when Simon is competing in a 400 m running race, referencing relevant interplay between energy systems and fatigue. 9 marks

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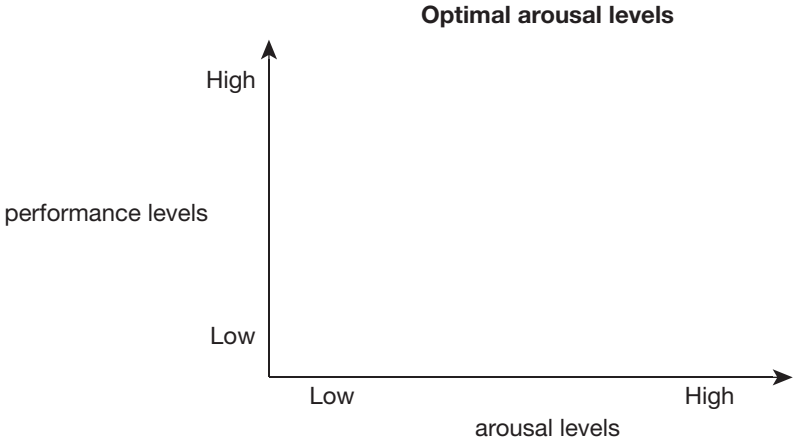
Question 9 (8 marks)

a. Optimal arousal levels differ depending on different sports.

On the axes below, draw and label the optimal arousal levels for both a darts player and an Australian football player. 2 marks



b. State **two** disadvantages of arousal levels being too low. 2 marks

c. Give **two** strategies for increasing arousal levels and **two** strategies for decreasing arousal levels. 4 marks

	Strategy 1	**Strategy 2**
Increasing arousal levels		
Decreasing arousal levels		

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Question 10 (3 marks)

a. Sherry has recently joined her local under-10s soccer team. She has no previous soccer experience.

State the stage of learning she is most likely to be in. 1 mark

_____

b. Sherry trains with her team twice a week, with sessions running for three hours. During each training session, her coach requires players to repetitively practice the same skill for extended durations of time.

State the distribution and variability of practice that Sherry participates in. 2 marks

_____

_____

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Question 11 (10 marks)

Sue is a badminton player. During a game, she often sprints in order to reach the shuttlecock and hit it over the net. However, she does have intermittent breaks when her opponent is serving and when play is finished. A match consists of three games of 45 minutes each with several minutes rest in between.

a. Discuss Sue's energy system interplay during a three-game match of badminton. 6 marks

b. Sue's coach observes the performance of her last badminton match.

Give **one** example of knowledge of results and **one** example of knowledge of performance feedback that Sue's coach could give her. 2 marks

c. Outline how knowledge of performance feedback and knowledge of results are important. 2 marks

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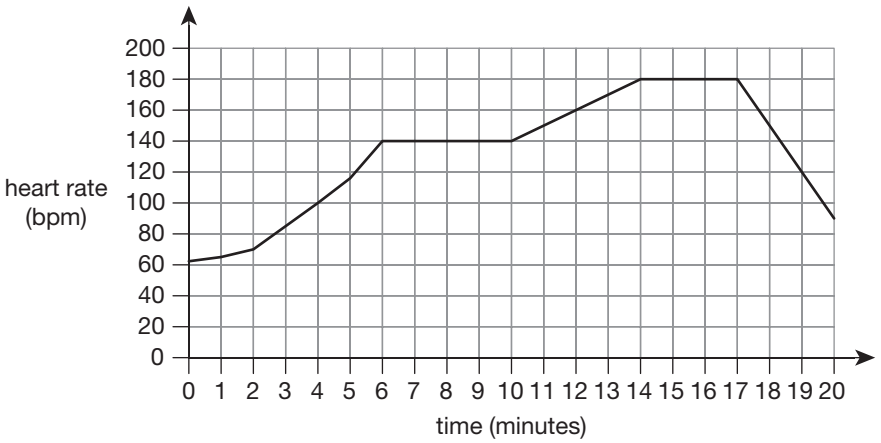
Question 12 (9 marks)

Cornelia, a runner, has gone on a 20-minute run. The following graph details her heart rate as she progresses along a cross-country route.

Heart rate data for 20-minute run



a. On the graph above, label the periods of steady state, oxygen debt and oxygen deficit. 5 marks

b. Name and outline the **two** stages of excess post-exercise oxygen consumption (EPOC), including what occurs during these stages. 4 marks

Question 13 (4 marks)

Athletes often seek to manipulate their stability when engaging in different activities. Ballerinas often apply rosin, a chalk-like powder made from hardened tree sap, to their feet and shoes in order to decrease the likelihood of slipping.

a. Outline why rosin would prevent slipping. Refer to biomechanical principles in your response. 1 mark

b. Explain why increasing body mass leads to increased stability. Refer to Newton's second law of motion in your response. 2 marks

c. Describe **one** other method by which a dancer may increase their stability. 1 mark

Question 14 (4 marks)

a. Describe the difference between speed and velocity. 2 marks

b. A hockey puck has an acceleration of 0.

Explain whether or not the hockey puck is moving. 2 marks

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Question 15 (4 marks)

a. Gaya is a professional golfer who competes in tournaments all over the world.

Define intrinsic feedback and give an example that Gaya may experience while golfing. 2 marks

b. Gaya enjoys playing golf and is motivated by a desire to improve her world ranking.

Discuss whether this is a form of intrinsic or extrinsic motivation. Include a comparison of the two types of motivation in your response. 2 marks

END OF QUESTION AND ANSWER BOOKLET

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Trial Examination 2021

VCE Physical Education Units 3&4

Written Examination

Multiple-choice Answer Sheet

Student's Name: _____

Teacher's Name: _____

Instructions

Use a **pencil** for **all** entries. If you make a mistake, **erase** the incorrect answer – **do not** cross it out. Marks will **not** be deducted for incorrect answers.
No mark will be given if more than **one** answer is completed for any question.

All answers must be completed like this example: [A] B C D

Use pencil only

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

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