

**‘2018 Examination Package’ -
Trial Examination 3 of 7**

STUDENT NUMBER

Figures

Words

Letter

--

PHYSICAL EDUCATION

Units 3 & 4 –Written examination

(TSSM’s 2013 trial exam updated for the current study design)

Reading time: 15 minutes

Writing time: 2 hours

QUESTION AND ANSWER BOOK

Structure of book

<i>Section</i>	<i>Number of questions</i>	<i>Number of questions to be answered</i>	<i>Number of marks</i>
A	15	15	15
B	14	14	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 white out liquid/tape.
- No calculator is permitted in this examination.

Materials supplied

- Question and answer book of 20 pages.

Instructions

- Print your name in the space provided on the top of this page.
- All written responses must be in English.

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

SECTION A – Multiple-choice questions

Instructions for Section A

Answer **all** questions.

Choose the response that is **correct** or that **best answers** the question.

A correct answer scores 1, an incorrect answer scores 0.

Marks are **not** deducted for incorrect answers.

If more than 1 answer is completed for any question, no mark will be given.

Question 1

A regular continuous training program will achieve which of the following respiratory adaptations at maximal exercise?

- A. Increased respiratory rate, increased tidal volume & increased ventilation.
- B. Decreased respiratory rate, increased tidal volume & increased ventilation.
- C. Increased respiratory rate, decreased tidal volume & increased ventilation.
- D. Decreased respiratory rate, increased tidal volume & decreased ventilation.

Question 2

Resistance training programs can be designed to develop muscular strength, hypertrophy, power & endurance. Which of the following statements best describes a training program designed to increase muscular power?

- A. Load – 85-100% 1RM
- B. Repetitions – 15+
- C. Rest – 3-5 minutes between sets
- D. Speed of contraction – slow to moderate

Question 3

A muscle contraction that involves the muscles lengthening while generating force is known as an:

- A. Eccentric contraction
- B. Concentric contraction
- C. Isokinetic contraction
- D. Isometric contraction

Question 4

Which of the following combinations of training methods would best bring about adaptations to the anaerobic energy systems?

- A. Continuous, fartlek, intermediate-interval & resistance training.
- B. Fartlek, short-interval, plyometric & resistance training.
- C. Long-interval, pilates, continuous & plyometric training.
- D. Resistance, swiss ball, flexibility & short-interval training.

Question 5

The energy system that has the greatest ATP yield is:

- A. ATP-CP System
- B. Anaerobic system
- C. Anaerobic glycolysis
- D. Aerobic system

SECTION A - continued

Question 6

A swimmer completes a 100m freestyle race in a 50m pool. What are the distance and displacement respectively for this swimmer?

- A. 100m & 100m
- B. 100m & 50m
- C. 100m & 0m
- D. 50m & 100m

Question 7

Identify the incorrect statement about the role of protein in the body.

- A. Assists chemical reactions in the form of enzymes.
- B. Promotes muscle growth and repair.
- C. Under normal exercise conditions contributes energy for approximately 20% of ATP resynthesis.
- D. Is broken down into essential and non-essential amino acids.

Question 8

Field fitness tests are used by VCE Physical Education classes because they:

- A. Are conducted under controlled conditions.
- B. Can be conducted by their peers and allow simultaneous testing.
- C. Can use expensive and sophisticated equipment.
- D. Are the most accurate indication of physical capabilities.

Question 9

Which of the following fitness tests is considered to be a maximal test?

- A. Yo-Yo intermittent test
- B. VO₂ Max Test
- C. Cooper's 12 minute run
- D. 20m Shuttle Run Test

Question 10

Identify the most appropriate order for conducting the following fitness tests:

- A. Yo-yo test
 - B. Skinfold measurement
 - C. Vertical jump
 - D. Semo agility test
-
- A. Skinfold measurement, Semo agility test, Yo-yo test, Vertical Jump test
 - B. Skinfold measurement, Semo agility test, Vertical jump, Yo-yo test
 - C. Yo-yo Test, Skinfold measurement, Semo agility test, Vertical jump
 - D. Semo agility test, Vertical jump, Yo-yo test, Skinfold measurement

SECTION A – continued
TURN OVER

Question 11

The planning of a training program involves many steps. The correct order for planning a training program is:

- A. Pre-testing fitness assessment, activity analysis, selection of training methods, pre-testing fitness assessment, program evaluation.
- B. Activity analysis, post-testing fitness assessment, selection of training methods, pre-testing fitness assessment, program evaluation.
- C. Activity analysis, pre-testing fitness assessment, selection of training methods, post-testing fitness assessment, program evaluation.
- D. Selection of training methods, pre-testing fitness assessment, post-testing fitness assessment, program evaluation, activity analysis.

Question 12

The energy system which resynthesizes ATP at the fastest rate is?

- A. ATP-PC
- B. Aerobic Glycolysis
- C. Lactic Acid
- D. Anaerobic Glycolysis

Question 13

Identify the incorrect application of the training principle of frequency. Performing...

- A. Full body static stretching on a daily basis.
- B. Plyometric drills involving the same muscle group on consecutive days.
- C. Continuous training 5-6 days per week.
- D. Resistance training the same muscle groups on 3 non-consecutive days per week.

Question 14

Which of the following is NOT a benefit of tapering?

- A. Decreased the risk of injury.
- B. Maximised recovery.
- C. Increased total volume of training prior to performance.
- D. Enhanced freshening up mentally before the event.

Question 15

A performer who is extremely proficient and highly consistent when performing skills is most likely to be in which stage of skill learning?

- A. Automatic
- B. Cognitive
- C. Associative
- D. Autonomous

END OF SECTION A

SECTION B- Short answer questions

Instructions for Section B
Answer **all** questions in the spaces provided.
Answer this section using a **pen**.

Question 1 (6 marks)

A projectile is an object or body which is released into the air.

- a.** List the two external forces acting on projectiles as they move through the air.

2 marks

- b.** List and explain two factors affecting projectile motion, which would influence the distance a golf ball travelled if struck with a 9 iron compared to a driver.

4 marks
Total 6 marks

SECTION B – continued
TURN OVER

Question 2 (9 marks)

The types of practice used by a coach will depend on a number of factors.

- a.** Which type of practice involves practising skills repetitively in the same conditions, for a set period of time?

1 mark

- b.** Outline three specific examples of how the type of practice listed above could be implemented at a cricket training session.

3 marks

- c.** Outline a different type of practice to the one listed in part **a.** and provide two examples of how the training session would be varied for participants using this type of practice.

3 marks

SECTION B – Question 2 - continued

- d. Using the type of practice outlined in part c. list two reasons why this type of training may be preferred by elite level cricketers.

2 marks
Total 9 marks

Question 3 (8 marks)

There are a number of ways in which skills are classified.

- a. Outline the difference between open and closed skills, providing an example of a skill which can be performed in a more open or closed format.

4 marks

- b. Classify the skills in the following table

Skill	OPEN / CLOSED
Basketball Free Throw	
Surfing in a crowded beach	
Ten Pin Bowling	
Batting in Baseball	

4 marks
Total 8 marks

SECTION B – continued
TURN OVER

Question 4 (4 marks)

Usain Bolt won the 100m sprint (9.63 seconds) and the 200m sprint (19.32 seconds) at the London 2012 Summer Olympic Games.

With reference to interplay of the energy systems, compare and contrast the predominant energy systems of both events.

4 marks

Question 5 (7 marks)

The photo below depicts a soccer player preparing to clear the ball from defence with a long kick.



<https://www.google.com.au/search?q=soccer+kick&safe=strict&source=lnms&tbm=isch&sa>

a. Which class of lever is being used to kick the ball?

1 mark

SECTION B – Question 5 - continued

b. Levers in the body are used to create movement.

i. Identify the three components of a lever and indicate these on the diagram above.

_____ 1 marks

ii. levers are generally designed to serve one of two purposes. Outline the purpose of the lever in this soccer example.

_____ 1 mark

c. Complete the table below to identify each training consideration to develop the fitness required for a soccer kick.

SOCCER KICK	
Fitness Component	
Recognised Fitness Test	Vertical Jump Test
Training Method	
Training Method	
Type of Muscular Contraction	

4 marks
Total 7 marks

SECTION B – continued
TURN OVER

Question 6 (7 marks)

At the 2012 London Olympic Games, Australian swimmer James Magnussen's confidence was down after a disappointing performance in the 4 x 100m freestyle relay. Magnussen later revealed that he had several sleepless nights, his hands were shaking, and his heart was "beating out of my chest" leading into the 4x100 metre freestyle relay.

- a. Explain a psychological strategy Magnussen could have used to assist him to swim to the best of his ability in the 4x100 metre freestyle relay.

2 marks

Magnussen recovered after the disappointment of the 4 x 100m freestyle relay to win silver in the 100 m freestyle final.

- b. Discuss a psychological strategy Magnussen could have used to enhance his confidence prior to the 100 m freestyle final.

2 marks

The inverted U-hypothesis is used to explain arousal and its impact on performance.

- c. Draw and label the U-hypothesis.

3 marks
Total 7 marks

SECTION B – continued

Question 7 (7 marks)

a. A common sight at the 2012 London Olympics rowing competition was to see exhausted rowers collapsed in their boat at the end of the races. Some rowers even required assistance to be helped from their boats.

i. In relation to oxygen consumption what state are the rowers currently experiencing?

_____ 1 mark

ii. From a physiological point of view what is happening during this phase?

_____ 2 marks

b. Identify and describe the phase the rowers would have experienced at the commencement of the races.

_____ 2 marks

c. Discuss a strategy the rowers could have used to limit the impact of the phase identified in part **b.**

_____ 2 marks
Total 7 marks

**SECTION B – continued
TURN OVER**

Question 8 (7 marks)

a. State the equation for cardiac output.

1 mark

Fill in the cardiac parameters identified in part a. in A. and B. in the table below.

Cardiac output parameters	Rest		Submaximal		Maximal	
	Trained	Untrained	Trained	Untrained	Trained	Untrained
A.						
B.						

b. For two 30 year old males, one trained and one untrained, indicate the responses of the cardiac parameters identified in part a. at rest, submaximal and maximal intensities. (In the boxes, write increase, decrease or same)

3 marks

c. Explain how the cardiovascular adaptations of a trained individual would enhance their performance.

3 marks
Total 7 marks

SECTION B – continued

Question 9 (11 marks)

Cricket is Australia's most popular summer sport. The game of cricket often requires players to compete in hot conditions for up to 6 hours a day.

a. Identify the most likely cause of fatigue experienced by cricketers.

1 mark

b. Explain how the cause of fatigue identified in part **a.** affects the body.

4 marks

Cricketers regularly use sports drink throughout a match day.

c. Compare and contrast hypotonic, isotonic and hypertonic sports drinks.

6 marks

Total 11 marks

SECTION B - continued
TURN OVER

Question 10 (10 marks)

The Phosphate recovery test is a test regularly used by team sports. It involves players performing repeated high-intensity, short duration efforts. A common test protocol utilised is 8 x 5 second sprints every 30 seconds.

a. Identify the fitness component tested.

_____ 1 mark

b. Identify a test other than the Phosphate Recovery test that assesses the same fitness component.

_____ 1 mark

c. List two factors affecting this fitness component.

1. _____

2. _____

2 marks

d. Identify an appropriate recovery strategy for during and after the Phosphate Recovery Test and explain why each method would be appropriate.

During: _____

Explanation:

1 + 2 = 3 marks

After: _____

Explanation:

1 + 2 = 3 marks

Total 10 marks

SECTION B - continued

Question 11 (6 marks)

Explain the interplay of the energy systems during the Phosphate Recovery Test, including reference to appropriate fatigue mechanisms.

6 marks

**SECTION B – continued
TURN OVER**

Question 12 (6 marks)

a. Define the term arterio-venous oxygen difference.

1 mark

b. How does the arterio-venous oxygen difference change during exercise?

1 mark

c. Explain the role of the chronic adaptations that allow for an increased arterio-venous oxygen difference and how they enhance performance.

4 marks

Total 6 marks

SECTION B - continued

Question 13 (6 marks)

Assume the golfer was hitting using the same club and with the same amount of force from each of the varying height elevations A, B & C below.

A

B

C

a. Which of the tee positions A, B or C would require the lowest angle of release? _____

Outline the reason for your response

2 marks

b. Discuss the concept of summation of forces in action during a golf drive off the tee compared to a chip to approach the green.

4 marks

Total 6 marks

SECTION B – continued
TURN OVER

Question 14 (11 marks)

The table below shows a weight training program performed by a track cyclist.

Exercise	Load	Sets	Reps	Rest between sets	Sessions per week	Speed of execution
Single leg presses	50% of 1RM	4	3-6	4 mins	3	Fast
Bench Press						
Leg curls						
Squats						

a. Name the fitness component this training program is designed to develop.

1 mark

b. Which exercise in the program is the least specific to a track cyclist?

1 mark

c. Explain the training principle of specificity.

1 mark

SECTION B- Question 14 - continued

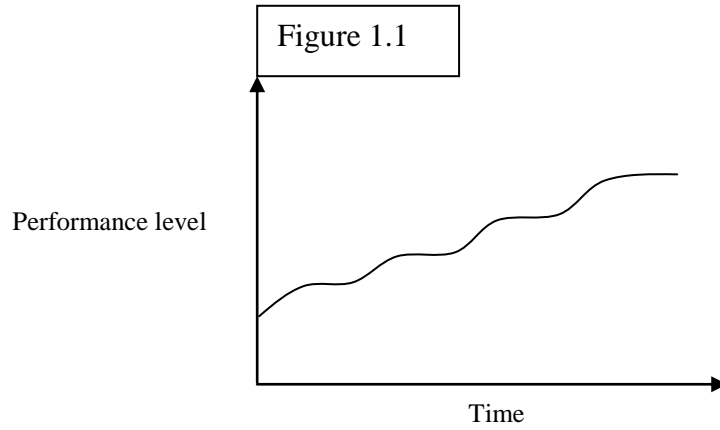
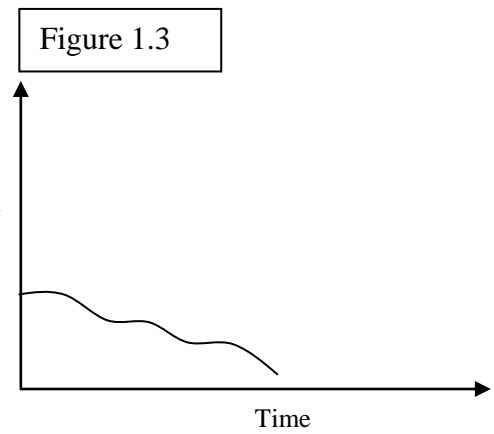
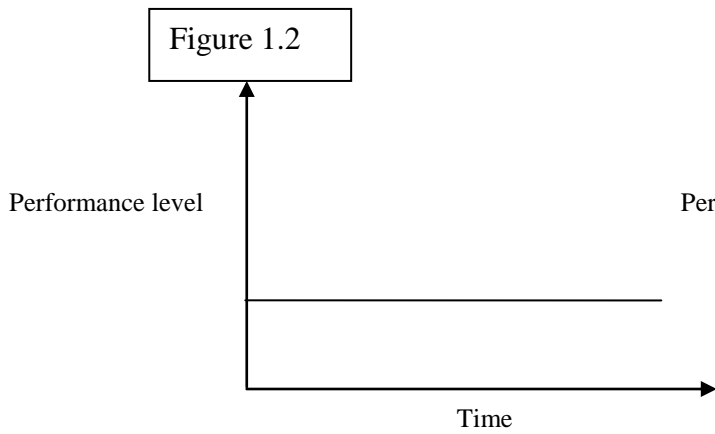


Figure 1.1 demonstrates the application of progressive overload correctly resulting in improved fitness levels.



d. Discuss the application of progressive overload in figure 1.2 and figure 1.3.

Figure 1.2: _____

Figure 1.3: _____

1 + 1 = 2 marks

**SECTION B - Question 14 – continued
TURN OVER**

- e. As a result of weight training, skeletal muscles experience hypertrophy which enables an increase in storage of PC. How does this assist in improved performance in anaerobic events?

2 marks

- f. Identify a chronic muscular adaptation, other than muscle hypertrophy or increased muscle PC storage that this athlete is likely to experience after 3 months of training.

1 mark

- g. Sleep is essential for athletes to enhance the quality of training and performance. List three considerations which would ensure good quality sleep for athletes.

3 marks

Total 11 marks

END OF QUESTION AND ANSWER BOOK