TSSM
Creating VCE Success

THIS BOX IS FOR ILLUSTRATIVE PURPOSES ONLY

'2018 Examination Package' -
Trial Examination 1 of 7

STUDENT NUMBER

									Letter
Figures									
Words									

PHYSICAL EDUCATION

Units 3 & 4 –Written examination

*(*TSSM's *2011 trial exam updated for the current study design)*

Reading time: 15 minutes
Writing time: 2 hours

QUESTION AND ANSWER BOOK

Structure of book

Section	*Number of questions*	*Number of questions to be answered*	*Number of marks*
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 22 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

Which of the following options shows the correct order of importance of the energy systems during a 400m sprint?

A. Anaerobic glycolysis, ATP-CP, Aerobic lipolysis
B. Anaerobic glycolysis, ATP-CP, Aerobic glycolysis
C. ATP-CP, Anaerobic glycolysis, Aerobic glycolysis
D. ATP-CP, Aerobic glycolysis, Anaerobic glycolysis

Question 2

Which of the following would accelerate the most on impact if struck with the same force?

A. Volleyball
B. Cricket ball
C. Golf ball
D. Tennis ball

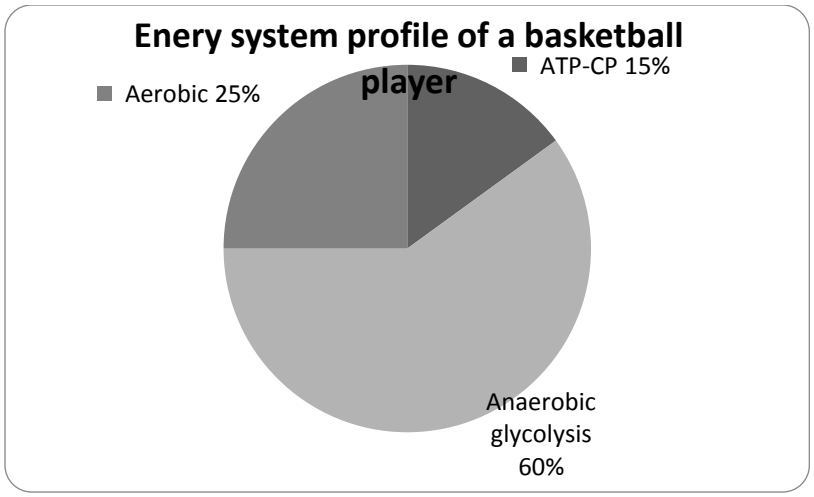
Question 3

The work periods and rest periods for a games analysis were calculated to have a work: rest ratio of 1:7. The dominant system used during the work periods would be:

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

SECTION A - continued

Question 4



Using the data provided, which of the following training methods would be the most appropriate for basketball?

A. Long interval
B. Continuous
C. Fartlek
D. Plyometrics

Question 5

Identify which set of adaptations are most likely to be those of an aerobically trained athlete.

A. Increased oxidation of fat, decreased size and number of mitochondria
B. Decreased oxidation of fat, increased size and number of mitochondria
C. Increased alveoli-capillary surface area and oxidation of fat
D. Increased glycogen and CP stores and alveoli-capillary surface area

Question 6

Read the following resistance training program protocol:
Two sets of 15 repetitions with a weight of 50-60% of your one repetition maximum.
Which fitness component would you develop most effectively?

A. Muscular power
B. Local muscular endurance
C. Muscular strength
D. Muscle hypertrophy

Question 7

Which of the following statements regarding the ATP-CP system is correct?

A. Produces 0.7 ATP per PC molecule
B. Has a slow rate of ATP production
C. Has a high yield of ATP production
D. Involves complex chemical reactions

Question 8
Which of the following is a technique used to decrease arousal levels in athletes?
A. Positive self-talk
B. Controlled breathing
C. Energising imagery
D. Elevated breathing rate

Question 9
Which of the following is the most appropriate progressive overload for a weight training program consisting of 4 sets of 3 repetitions?
A. 5 sets of 3 reps
B. 5 sets of 4 reps
C. 4 sets of 4 reps
D. 4 sets of 2 reps

Question 10
The most appropriate fitness test to assess agility for a basketball player is the:
A. Illinois agility test
B. VicFit agility test
C. Semo agility test
D. 5-0-5 agility test

Question 11
Below is a sample of an interval training program.

Sets	Repetitions	Distance	Rest interval
2	3	400m	90 seconds

Which type of interval training is being employed?
A. Short
B. Intermediate
C. Fartlek
D. Long

Question 12
An increase in cardiac output at the commencement of exercise is due mainly to:
A. An increased tidal volume
B. A decreased heart rate
C. An increased stroke volume
D. All of the above

Question 13
What is the momentum of a rugby player who weighs 80kg and is travelling at a velocity of 10m/s?
A. 8 kg/m/sec
B. 80 kg/m/sec
C. 800 kg/m/sec
D. 8000 kg/m/sec

Question 14
During isokinetic resistance training:
A. The amount of weight being lifted remains constant throughout the range of motion
B. The muscle length remains constant while force is being produced
C. The muscle length shortens while force is being produced
D. The amount of weight being lifted varies throughout the range of motion

Question 15
Which statement best describes Knowledge of Performance?
A. Information obtained directly from the sensory systems of the body
B. Information about the outcome of the skilled performance
C. Information obtained about the process of how the skill was performed rather than the outcome
D. Information provided from modern apps which model the ideal technique

END OF SECTION A
TURN OVER

SECTION B- Short answer questions

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

Question 1 (10 marks)

The tennis serve is an extremely complex skill to perfect.

a. Identify five distinct sub routines which make up the service action from preparation of the serve until after the skill has been completed.

i. _____

ii. _____

iii. _____

iv. _____

v. _____

1 + 1 + 1 + 1 + 1 = 5 marks

b. With regard to the tennis service, describe whether it is an open or a closed skill.

_____

_____

_____

2 marks

SECTION B – Question 1 - continued

c. The tennis serve best exemplifies which fitness component?

_____

1 mark

d. Outline two changes which generally occur when comparing a tennis player's second serve to the first serve.

_____

_____

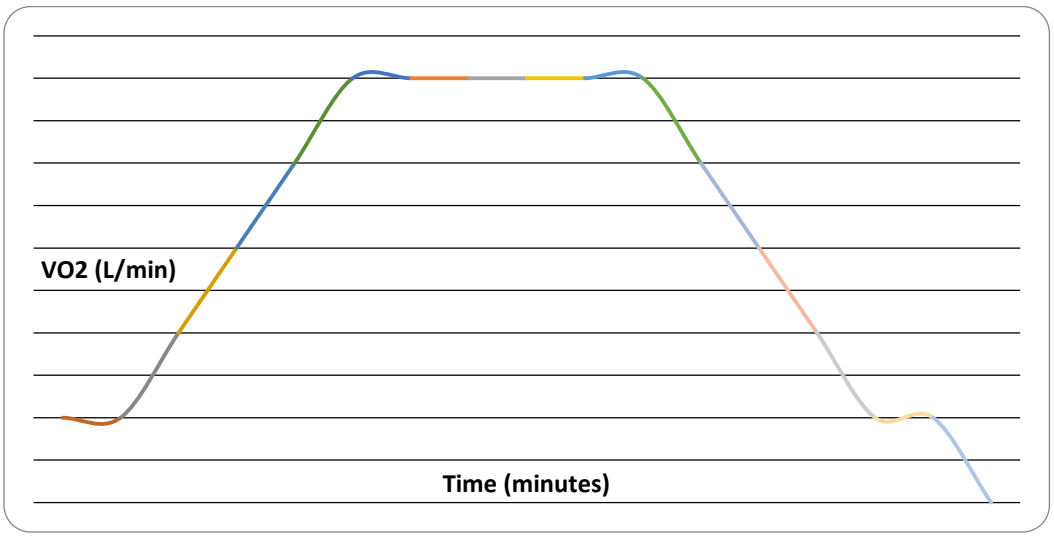
_____

2 marks

Total 10 marks

Question 2 (8 marks)

The graph below shows an individual's oxygen uptake during an exercise bout.



a. Referring to the graph above, identify what happens at the two minute mark and state why.

_____

_____

_____

2 marks

SECTION B – Question 2 – continued
TURN OVER

b. Identify two acute responses to exercise, one respiratory and one cardiovascular, that would enable the change identified in Part a. to occur.

Respiratory response:

_____

Cardiovascular response:

_____

2 marks

c. Explain what is happening between the 6 and 11-minute marks of the exercise bout.

_____

_____

_____

2 marks

d. Excess post-exercise oxygen consumption (EPOC) will take place at some point before, during or after the exercise bout.

Identify the time range that the individual is experiencing EPOC.

i. _____

ii. How do you know when EPOC has ceased? Make specific references to the graph provided.

_____

1 + 1 = 2 marks
Total 8 marks

SECTION B – continued

Question 3 (6 marks)

Athletes can be intrinsically or extrinsically motivated.

a. Clearly explain the difference between intrinsic and extrinsic motivation providing an example of each.

4 marks

b. Most coaches believe to be intrinsically motivated is of more benefit to athletes. Explain why they would believe this.

2 marks
Total 6 marks

SECTION B – continued
TURN OVER

Question 4 (5 marks)

a. Different golf clubs (driver, 5 iron and pitching wedge) were used by the same player who applied the same amount of force in three consecutive shots at the driving range.

	Distance Covered	**Height of shot (m)**	**Trajectory**
Club A	85m	42	High, steep curve
Club B	240m	24	Flat, gentle curve
Club C	150m	33	Flat, moderate curve

Based on the information contained in the table match the clubs (driver, 5 iron or pitching wedge) used for this experiment.

Club A _____

Club B _____

Club C _____

3 marks

Briefly explain force summation and outline how the golfer would have achieved a similar amount of force in each of the three shots.

_____

_____

_____

_____

_____

2 marks
Total 5 marks

SECTION B – continued

Question 5 (8 marks)

a. In the table below complete each skill classification.

Skill	Discrete, Serial or Continuous
Baseball pitch	
Road cycling	
Basketball lay up	
100m sprint	

4 marks

b. Which skill from above would be the most open skill?

_____

1 mark

c. Outline reasons for your answer to part **b.**

_____

_____

2 marks

d. For one of the skills list a specific example of knowledge of results that would be available immediately after the performance.

_____

1 mark
Total 8 marks

SECTION B – continued
TURN OVER

Question 6 (16 marks)

Melbourne Storm are aiming to complete back to back NRL premierships under coach Craig Bellamy. Many of the players are saying that it is the hardest pre-season training that they have ever completed.

a. Suggest and outline a nutritional recovery method the players can use to ensure that they are 100% recovered for their next training session.

_____

_____

_____

_____

2 marks

b. Suggest and outline a rehydration strategy the Storm players could use following a hard session.

_____

_____

_____

_____

2 marks

c. The mind can be trained as the body can be. Outline a psychological technique the Storm players could utilise to enhance their performance.

_____

_____

_____

_____

2 marks

SECTION B – Question 6 - continued

d. Outline the process Craig Bellamy and his staff should go through to develop and evaluate a new effective training program.

_____

_____

_____

_____

_____

_____

4 marks

e. List two types of data Bellamy and his staff could collect.

1. _____

2. _____

2 marks

f. Explain how each type of data could be used to develop an effective training program.

_____

_____

_____

_____

_____

_____

4 marks
Total 16 marks

SECTION B – continued
TURN OVER

Question 7 (6 marks)

Carbohydrates are a food fuel for two of the three energy systems that supply our bodies with ATP.

a. Provide a sporting example for each of the two energy systems that use carbohydrates as a food fuel.

_____

_____

2 marks

b. Compare and contrast the two energy systems that use carbohydrates as a food fuel.

_____

_____

_____

_____

_____

_____

4 marks
Total 6 marks

Question 8 (7 marks)

The Hawaii Ironman is a long distance triathlon requiring competitors to complete a 3.86 km swim, 180.25 km bike and a marathon 42.195 km run without a break often in hot conditions.

a. Other than dehydration and heat exhaustion, identify the most likely cause of fatigue for The Hawaii Ironman?

_____

1 mark

SECTION B – Question 8 - continued

b. Explain the consequences of the cause of fatigue identified above to ATP production.

_____

_____

_____

_____

3 marks

Sports drinks are used by triathletes to avoid dehydration.

c. Outline the difference between hypertonic, hypotonic and isotonic sports drinks.

Hypertonic: _____

_____

Hypotonic: _____

_____

Isotonic: _____

_____

3 marks

Total 7 marks

SECTION B – continued
TURN OVER

Question 9 (4 marks)

Define each of the biomechanical terms.

Biomechanical Term	Definition
Motion	
Mass	
Inertia	
Momentum	

Total 4 marks

Question 10 (10 marks)

Meaghan is a state level high jumper looking to improve her performance to hopefully make the national team. She has been told by her coach she needs to improve her power.

a. Define muscular power.

_____

_____

1 mark

SECTION B – Question 10 – continued

b. Suggest appropriate weight training parameters for Meaghan to improve her muscular power.

Sets	Reps	Load	Rest

4 marks

c. Justify the load you have selected in the table above.

_____

_____

_____

_____

1 mark

d. Discuss the considerations with regards to the following training principles that Meaghan will need to keep in mind when training for muscular power.

Progressive overload:

_____

_____

Frequency:

_____

_____

Intensity:

_____

_____

Specificity:

_____

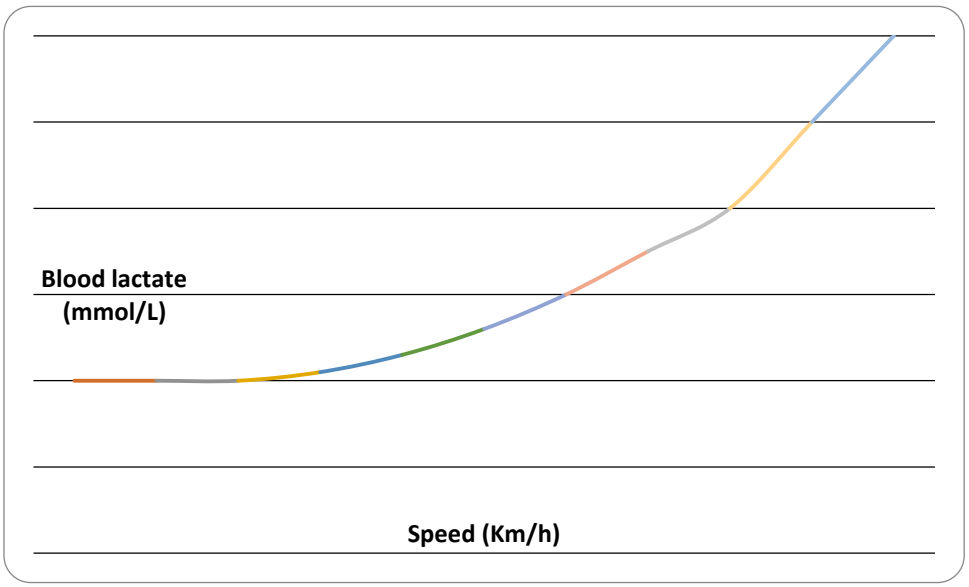
_____

4 marks
Total 10 marks

SECTION B – continued
TURN OVER

Question 11 (9 marks)

The table below represents blood lactate concentration of an individual during an exercise session.



a. Describe the relationship of the graph.

_____

_____

1 mark

b. Explain lactate inflection point.

_____

_____

_____

_____

2 marks

SECTION B – Question 11 - continued

c. Identify the type of athlete a high lactate inflection would benefit and how it would enhance their performance.

_____

_____

_____

_____

2 marks

d. Name the type of recovery that should be used following this exercise session and explain the physiological reason why.

_____

_____

_____

_____

_____

_____

4 marks
Total 9 marks

SECTION B – continued
TURN OVER

Question 12 (4 marks)

The 100m sprinter relies heavily on the ability to accelerate during this event.

a. Which of Newton's Laws is the Law of Acceleration?

_____

1 mark

b. List an application of each of Newton's Laws for the 100m sprinter.

1. _____

2. _____

3. _____

3 marks
Total 4 marks

Question 13 (4 marks)

a. List two considerations for a beginner learning to kick a drop punt in football for the first time.

_____

_____

_____

_____

2 marks

b. For the same skill performed by an elite player, outline two factors that would be obvious for observers watching the player execute the drop punt in a game situation.

_____

_____

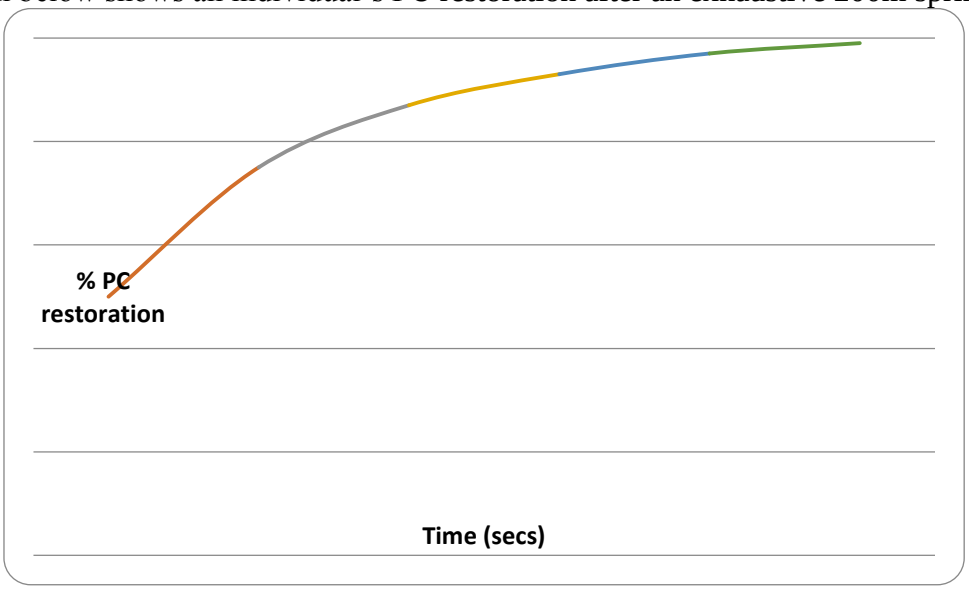
_____

2 marks
Total 4 marks

SECTION B – continued

Question 14 (8 marks)

The graph below shows an individual's PC restoration after an exhaustive 200m sprint.



a. Referring to the graph, discuss the relationship between PC restoration and time.

_____

_____

_____

_____

2 marks

b. What are the implications if the individual was to complete a 200m sprint after 120 seconds?

_____

_____

_____

_____

2 marks

SECTION B – Question 14 - continued
TURN OVER

c. Name and describe the type of recovery that should be used between 100m sprints. Explain why.

_____

_____

_____

_____

_____

_____

4 marks
Total 8 marks

END OF QUESTION AND ANSWER BOOK