TSSM
Creating VCE Success

THIS BOX IS FOR ILLUSTRATIVE PURPOSES ONLY

'2018 Examination Package' -
Trial Examination 4 of 7

STUDENT NUMBER

									Letter
Figures									
Words									

PHYSICAL EDUCATION

Units 3 & 4 –Written examination

*(*TSSM's *2014 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	13	13	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 21 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 is **not** an example of a type of practice?
A. Massed
B. Augmented
C. Blocked
D. Distributed

Question 2
Identify the energy system pathway outlined below:

$$\text{Glycogen} \rightarrow \text{Glucose} \rightarrow \text{Pyruvic acid} \rightarrow CO_2 + H_2O + \text{ATP}$$

A. ATP – CP
B. Anaerobic glycolysis
C. Aerobic glycolysis
D. Aerobic lipolysis

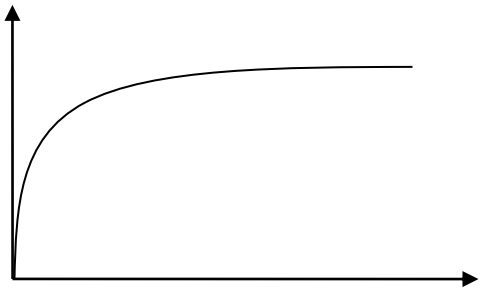
Question 3
What is the ATP yield per molecule for aerobic lipolysis?
A. <1
B. 2
C. 36-38
D. >100

Question 4
Rank the energy systems according to their power output, from most powerful to the least powerful.
A. ATP-CP, anaerobic glycolysis, aerobic lipolysis, aerobic glycolysis
B. ATP-CP, anaerobic glycolysis, aerobic glycolysis, aerobic lipolysis
C. Anaerobic glycolysis, ATP-CP, aerobic glycolysis, aerobic lipolysis
D. Aerobic lipolysis, aerobic glycolysis, anaerobic glycolysis, ATP-CP

Question 5
Identify the most appropriate training method to develop muscular power.
A. Interval
B. Fartlek
C. Plyometrics
D. Circuit

SECTION A – continued

Question 6
Name the training principle the diagram below represents.



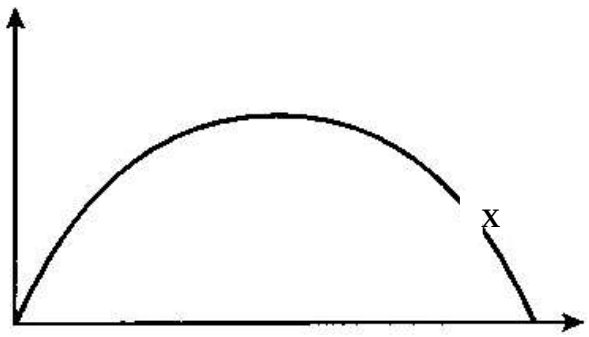
A. Specificity
B. Diminishing returns
C. Detraining
D. Individuality

Question 7

What are the important elements of informed consent?
A. Explanation of risks
B. Information about participant's general level of health
C. Assurance of confidentiality
D. All of the above

Question 8
Field tests:
A. Are very accurate
B. Can be adapted to be more specific
C. Can be expensive
D. Are impractical

Question 9
The X on the graph below indicates that the athlete is:



A. Optimally aroused
B. Over-aroused
C. Under-aroused
D. Asleep

SECTION A – continued
TURN OVER

Question 10
Which of the following is not appropriate when conducting post-fitness testing?
A. Conduct the same warm-up prior to tests
B. Perform tests in order from best to poorest pre-test result
C. Conduct tests under the same environmental conditions
D. Perform tests at the same time of day

Question 11
Hypotonic sports drinks:
A. Contain 6–8% carbohydrates
B. Contain <8% carbohydrates
C. Contain >8% carbohydrates
D. Contain no carbohydrates

Question 12
Feedback in the form of seeing a basketball free throw successfully go through the hoop for a point is an example of which type of feedback?
A. Knowledge of results
B. Knowledge of performance
C. Knowledge of success
D. Knowledge of process

Question 13
'Sleep deficit' causes:
A. Increased processing time
B. Enhanced concentration
C. Strengthening of the immune system
D. Increased production of cortisol

Question 14
Carbohydrate gels are going to be most beneficial for:
A. Events <10 seconds duration
B. Events 30-60 seconds duration
C. Events >60 minutes duration
D. Team sports

Question 15
A work: rest ratio of 1:7 would be best enhanced by which of the following training methods?
A. Short interval
B. Medium interval
C. Long interval
D. Fartlek

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 (5 marks)

The 500m short track speed skating is a Winter Olympics event. The World record for the event is 39.937 seconds set by American JR Celski in Calgary, Canada in 2012.

a. State the fuel most likely depleted during this event.

_____

1 mark

b. State the dominant energy system for this event.

_____

1 mark

c. What would be the most appropriate form of recovery for this event? Justify your response.

_____

_____

_____

_____

3 marks

SECTION B – continued
TURN OVER

Question 2 (9 marks)

a. Which of Newton's Laws is referred to as the Action / Reaction law?

_____

1 mark

b. What do the words action & reaction refer to in this law? Explain using an example from the sport of basketball.

_____

_____

_____

_____

2 marks

c. Outline how a trampolinist will use Newton's 3rd Law to effect when performing a routine.

_____

_____

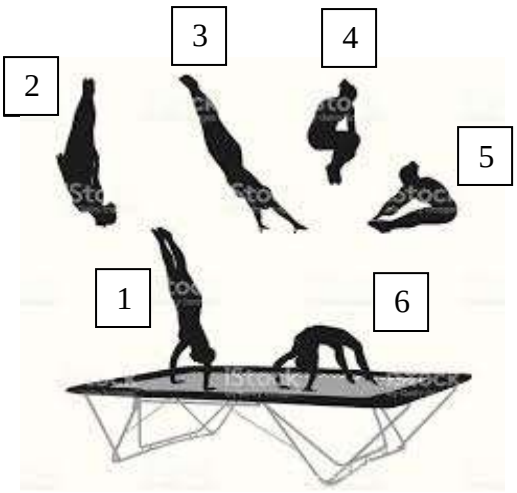
_____

2 marks

SECTION B – Question 2 – continued

d. Study the diagram below and complete the table (using the numbers from the figures) where each of the following would occur.

.



Highest Angular Velocity	
Lowest Moment of Inertia	
Lowest Angular Velocity	
Conserved Angular Momentum	

4 marks
Total 9 marks

SECTION B – continued
TURN OVER

Question 3 (10 marks)

a. List and explain three changes that could be adopted to enable greater stability for the athlete pictured below.

Source: http://www.apexoregon.com/wp-content/uploads/2013/11/Foam-SL.jpg

_____

_____

_____

_____

_____

6 marks

b.

i. Which fitness component is being practised in the above example?

_____

ii. What is the name of a recognised fitness test for this component?

_____

1 + 1 = 2 marks

SECTION B – Question 3 – continued

c. Tennis requires emphasis on both stability and agility.

i. List an example of when a stable body position provides an advantage.

_____

_____

ii. List an example where stability should be reduced to provide an advantage.

_____

1 + 1 = 2 marks

Total 10 marks

Question 4 (15 marks)

The table below shows exercises from part of a lower body resistance training program.

Exercise	Sets	Reps
Front Squats	4	3
Deadlifts	5	2
Walking dumbbell lunges	3	6 each side
Glute-hamstring raises	3	6

a.

i. State the fitness component most likely to be developed by the exercise prescription above.

_____

SECTION B – Question 4 - continued
TURN OVER

ii. Justify your selection to part **i.**

_____

_____

_____

_____

1 + 2 = 3 marks

b. Suggest a likely speed of contraction for the movements being performed in the program and an appropriate recovery time between sets.

Speed of contraction: _____

Recovery time: _____

2 marks

c. Describe two factors affecting the fitness component identified in Part **a.**

Factor 1:

_____

_____

_____

Factor 2:

_____

_____

_____

4 marks

SECTION B – Question 4 - continued

d. Suggest two ways progressive overload could be applied to this workout and how it should be implemented.

_____

_____

_____

_____

2 marks

e. List and explain a chronic muscular adaptation the athlete would achieve from long term participation in this program

_____

_____

_____

_____

2 marks

f. Suggest and draw two swiss ball and/or core training exercises that could be used to compliment the resistance training exercises of this workout.

Exercise 1	Exercise 2

2 marks

Total 15 marks

SECTION B – Question 4 - continued
TURN OVER

g.

Question 5 (4 marks)

At the 2012 London Olympic Games Usain Bolt completed his second successive Olympic Games 100m & 200m gold medal wins.

Define the following terms and provide an example of their relevance to these sprint events

VELOCITY & ACCELERATION

_____

_____

_____

_____

_____

_____

4 marks

SECTION B – continued

Question 6 (5 marks)

Australian Test Captain Steve Smith batted for over four hours in extremely hot conditions during his innings of 237 runs. Just prior to being dismissed, Smith made many skill errors and appeared to show a lack of judgement, both with his stroke play and running between wickets.

a. Identify which stage of skill learning Steve Smith would be classified under.

_____

1 mark

b. Outline two key characteristics of performers at this level of skill learning.

_____

_____

_____

_____

2 marks

b. Outline two considerations, targeted at this level of skill that Australian Cricket coach Darren Lehman would bear in mind when working with elite performers.

_____

_____

_____

_____

2 marks
Total 5 marks

SECTION B –continued
TURN OVER

Question 7 (14 marks)

Kenya's Wilson Kipsang set the marathon world record with a time of 2:03:23 in Berlin.

a. State two acute responses that Kipsang would have experienced at the beginning of the marathon.

_____

_____

2 marks

b. Identify and explain two fitness components Kipsang would have required to complete the marathon.

Fitness component 1: _____

Explanation:

_____

_____

_____

Fitness component 2: _____

Explanation: _____

_____

_____

4 marks

c. Discuss a likely cause of fatigue experienced during a marathon.

_____

_____

_____

_____

_____

_____

4 marks

SECTION B – Question 7 - continued

d. Outline a recovery strategy for the cause of fatigue identified in part **c.**

4 marks
Total 14 marks

Question 8 (8 marks)

Describe the interplay of the energy systems during a 2:03:23 marathon. Include reference to oxygen deficit, steady state and excess post-exercise oxygen consumption in your response.

SECTION B – Question 8 – continued
TURN OVER

8 marks

Question 9 (4 marks)

a. Explain the relationship between the length of a golf club and the resultant angular momentum

2 marks

b. Outline an example in sport where implement size is limited to enable greater success of participants

2 marks
Total 4 marks

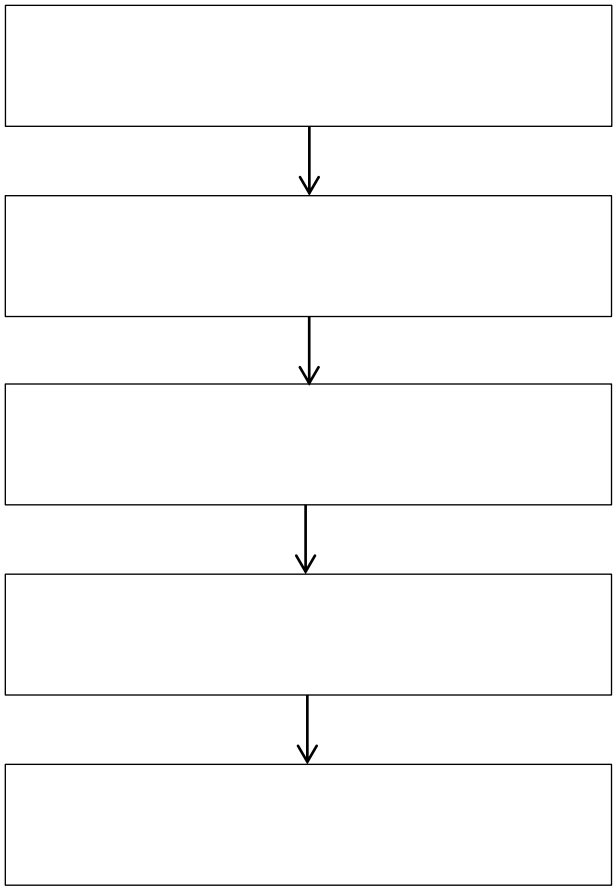
SECTION B – continued

Question 10 (11 marks)

There are a number of steps involved in the development of a training program.

a. Place the following steps in the correct order:

- Training session design and implementation
- Fitness reassessment
- Activity analysis
- Fitness assessment
- Training method selection



5 marks

b. Outline the purpose of conducting an activity analysis.

_____

_____

_____

2 marks

SECTION B – Question 10 - continued
TURN OVER

c. Explain one type of data that can be collected during a games analysis and how it can be used.

4 marks

Total 11 marks

Question 11 (4 marks)

Compare and contrast the importance of frequent feedback for a beginner and more advanced performer.

4 marks

SECTION B - continued

Question 12 (10 marks)

Below is the second 6 weeks of a 12-week training program to prepare for a 250km bike ride.

	Mon	Tue	Wed	Thur	Fri	Sat	Sun	Total Km
Week 7	Rest	30	40	30	Rest	100	120	320
Week 8	Rest	30	30	30	Rest	70	70	230
Week 9	Rest	30	40	30	Rest	80	120	300
Week 10	Rest	30	40	30	Rest	60	180	340
Week 11	Rest	30	30	30	Rest	60	60	210
Week 12	Rest	30	30	30	Rest	30	**Event Day**	370

Adapted from:
https://www.bicyclenetwork.com.au/media/vanilla/file/ATB12/Bupa%20Around%20the%20Bay%2012%20Week%20Training%20Program_250km(2).pdf

a. Recommend an appropriate heart rate zone for the above training sessions.

_____

1 mark

b. Circle the muscle fibre type that would be most beneficial to an individual participating in the training program.

- Type I
- Type IIa
- Type IIb

1 mark

SECTION B – Question 12 - continued
TURN OVER

c. Identify and explain a chronic muscular adaptation that may occur as a result of the training program.

_____

_____

_____

_____

2 marks

d. Identify and explain a chronic adaptation in response to the training program for each component of the cardiovascular system.

Blood: _____

_____

_____

Blood vessels: _____

_____

_____

Heart: _____

_____

_____

6 marks

Total 10 marks

SECTION B - continued

Question 13 (4 marks)

Variability is often used at elite levels of sport as a practice technique to prepare athletes for the game environment.

a. Provide an example from basketball where variability might be used during a training drill to simulate more match like conditions

_____

_____

_____

_____

_____

_____

2 marks

b. Deliberate practice is also used by many elite basketballers to enhance their shooting skills and technique.

Describe this type of practice and the role that an expert coach may play

_____

_____

_____

_____

2 marks
Total 4 marks

END OF QUESTION AND ANSWER BOOK