



**ADVANCED SUBSIDIARY GCE
PHYSICAL EDUCATION**

2562

The Application of Physiological and Psychological Knowledge to Improve Performance

Candidates answer on the question paper

OCR Supplied Materials:
None

Other Materials Required:
None

**Tuesday 19 May 2009
Morning**

Duration: 1 hour 30 minutes



Candidate Forename		Candidate Surname	
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Centre Number						Candidate Number				
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INSTRUCTIONS TO CANDIDATES

- Write your name in capital letters, your Centre Number and Candidate Number in the boxes above.
- Use black ink. Pencil may be used for graphs and diagrams only.
- Read each question carefully and make sure that you know what you have to do before starting your answer.
- Answer **all** the questions.
- Do **not** write in the bar codes.
- Write your answer to each question in the space provided.
- Additional answer space is available on the lined pages at the back of this booklet. Answers on these pages **must** be clearly numbered.

INFORMATION FOR CANDIDATES

- The number of marks for each question is given in brackets [] at the end of each question or part question.
- The total number of marks for this paper is **60**.
- This document consists of **12** pages. Any blank pages are indicated.

Section A

Application of Anatomical and Physiological Knowledge to Improve Performance

1 (a) Fig. 1 shows a gymnast during a routine on the beam.



Fig. 1

(i) Using your anatomical and physiological knowledge, identify the type of joint, articulating bones, agonist and antagonist muscles of the gymnast's left ankle.

Joint Type:

Articulating Bones:

Agonist Muscle:

Antagonist Muscle: [4]

(ii) Name **one** strength training exercise that the gymnast could use to develop the rectus femoris and **one** to develop the deltoids.

Rectus Femoris:

Deltoids: [2]

(iii) When completing the landing phase of a vault, a gymnast must use the muscles around the knee to control the landing. What type of contraction is occurring in the rectus femoris during the landing?

Type of contraction: [1]

(b) Give two functional characteristics of a Type IIb, fast glycolytic muscle fibre.

Function 1:

Function 2: [2]

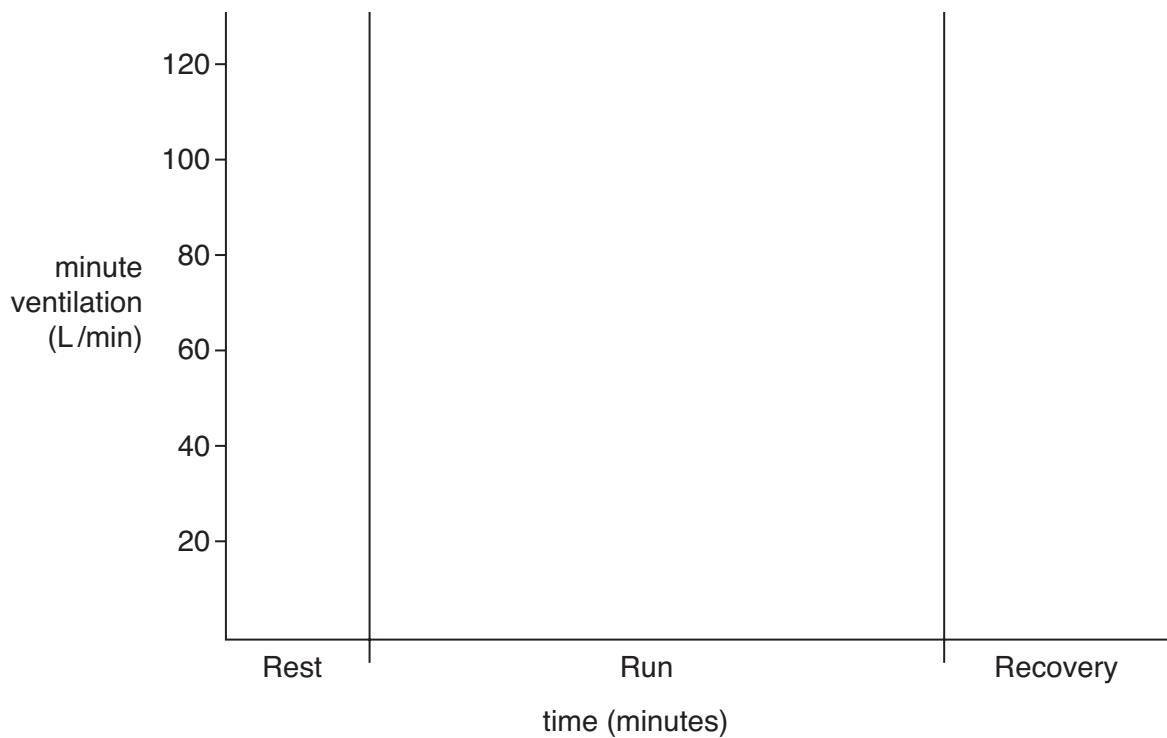
(b) During exercise minute ventilation of the lungs increases in order to supply the working muscles with more oxygen.

(i) Define minute ventilation (VE).

.....
 [1]

(ii) Draw a graph below to show the minute ventilation of an athlete performing a 30 minute sub-maximal training run;

- At rest
 - During the 30 minute sub-maximal training run
 - Ten minute recovery period
- [4]



[Total: 15]

Section B

Acquiring and Performing Movement Skills

3 (a) Abilities play an important part in Physical Education and sport.

(i) Identify **two** characteristics of abilities.

.....
.....
.....
..... [2]

(ii) Give an example of a gross motor ability and describe its use in Physical Education or sport.

.....
.....
.....
..... [2]

(b) A sports performer can use cognitive, motor and perceptual skills.

Use a practical example to explain perceptual skills.

.....
.....
.....
..... [2]

(c) The learning of physical skills can be said to progress through three phases.

(i) Identify the characteristics of the cognitive phase of learning.

.....
.....
.....
.....
..... [3]

- (ii) Use practical examples from Physical Education or sport to describe **two** different types of guidance that can be used during the cognitive phase of learning.

.....
.....
.....
..... [2]

- (d) Movement skills can be classified by a variety of different continua.

- (i) Describe the self paced and externally paced classifications.

Self paced
.....
Externally paced
..... [2]

- (ii) Use practical examples to describe discrete and serial skills.

Discrete
.....
Serial
..... [2]

[Total: 15]

(c) The learning and performance of movement skills can be improved with feedback.

(i) Why is an advanced performer able to use kinaesthetic feedback?

.....
.....
.....
..... [2]

(ii) Use a practical example to explain intrinsic feedback.

Intrinsic

.....
.....

Explain extrinsic feedback.

Extrinsic

.....
..... [3]

(d) Use practical examples to explain schema theory.

.....
.....
.....
.....
.....
..... [4]

[Total: 15]

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