**PHED 3 Revision Paper B**

**Question 1**

Weightlifting is a sport where the performer generates maximal strength contractions. Describe how muscles recruit muscle fibres to produce maximal force and describe how energy is provided for the repeated maximal contractions that occur during training for weightlifting. *(14 marks)*

**Question 2**

**Figure 1** shows the *oxygen consumption* (VO2) of a subject during a period of rest,

sub-maximal exercise and recovery.

F

E

D

B

A

C

**Figure 1**

(a) (i) State which letter (**A-E**) represents *oxygen deficit* **and** which letter (**A-E**)

represents *EPOC*. *(2 marks)*

(ii) How long did the exercise last **and** what does letter **F** represent? *(2 marks)*

(b) EPOC consists of fast and slow components. What are the functions of the *slow* *component*, **and** how are these functions achieved? *(3 marks)*

## Question 3

(b) **Figure 3** shows the relationship between VO2 max of male games players and their percentage distribution of slow-twitch (type 1) muscle fibres.

Figure 3

(i) What do you understand by the term *VO2 max*? *(2 marks)*

(ii) Describe and explain the relationship between the VO2 max of the male games players and their percentage distribution of slow-twitch (type I) muscle fibres. *(5 marks)*

## Question 4

Athletes competing in the high jump will often fail to clear the bar in the early stages of a competition for different reasons, even though they go on to clear greater heights.

**Figure 5** shows a high jumper at take off.



# Figure 5

(a) Use *Newton’s Three Laws of Motion* to explain how the high jumper takes off from

the ground. *(7 marks)*

## Question 5

Team game players often look to their leader to assist their performance. Discuss the different ways that leaders develop and using appropriate theories discuss the idea that leaders need to be adaptable in their approach. *(14 marks)*

## Question 6

**Figure 6** shows the types of attributions that are common in sport.

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Locus of causality | |
|  |  | Internal | External |
| Stability | Stable | Ability | Task Difficulty |
| Unstable | Effort | Luck |

Figure 6

(a) Using **Figure 6**, describe attribution theory and explain what is meant by *self-serving*

*bias*. *(4 marks)*

(b) People who fail in sport may at some time experience *learned helplessness*. Explain what this means. *(3 marks)*

## Question 7

Elite performers need to control both their psychological and physiological performance.

(a) (i) What are the similarities and differences between *aggressive* *behaviour* and

*assertive* *behaviour* in sport? *(2 marks)*

(ii) Discuss the *social learning* theory of aggression. *(5 marks)*

## Question 8

Morgan’s profile of mood state (POMS) is a questionnaire given to performers to establish their relative measures on the six mental health states of fatigue, vigour, tension, depression, anger and confusion.

(a) Research has shown that the profile for POMS differs between elite and non-elite performers. Describe these differences. *(3 marks)*

(b) What are the advantages **and** disadvantages of using questionnaires to provide psychological information? *(4 marks)*

## Question 9

Some performers appear to perform well in front of an audience, while others seem to perform badly, ‘*choking’* under the pressure. Use *social facilitation* theory to explain this observation. *(7 marks)*