

Candidate Surname:	Other Names:
Centre Number:	Candidate Number:
Wednesday 27 April 2022	
<b>Physical Education:</b>	
<b>Components 1 &amp; 2</b>	
<i>Total Marks for this paper is 80</i>	
Time: 1 hour 30 minutes	

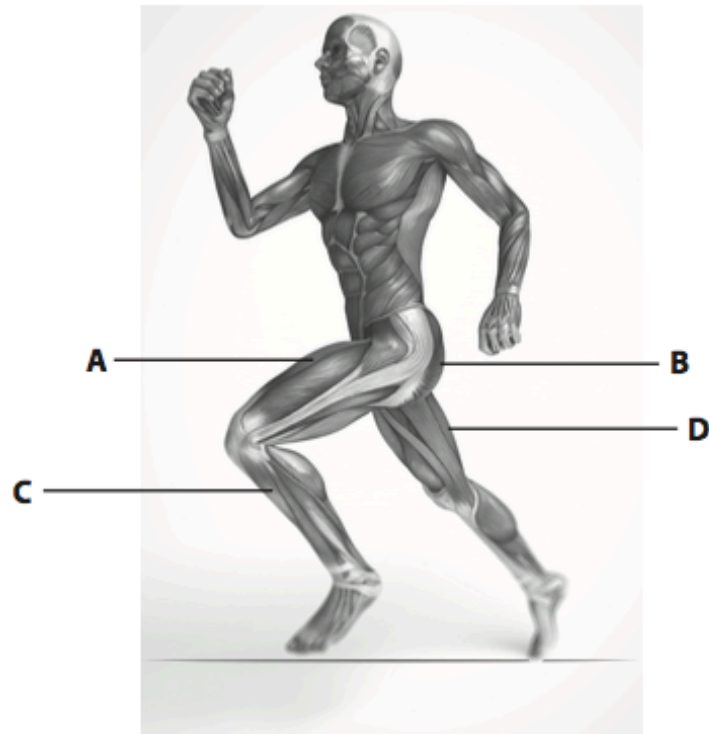


**Answer ALL questions.**

**Write your answers in the spaces provided.**

**Some questions must be answered with a cross in a box ☒. If you change your mind about an answer, put a line through the box ☒ and then mark your new answer with a cross ☒.**

**1** **Figure 1** shows the muscular system while running.



(Source: © Sebastian Kaulitzki/Shutterstock)

**Figure 1**

**For Questions 1(a), 1(b) and 1(c) use Figure 1 to decide whether A, B, C or D is correct.**

(a) Which **one** of the following is the gluteus maximus?

(1)

- A** Muscle A
- B** Muscle B
- C** Muscle C
- D** Muscle D

(b) Which **one** of the following states the role of muscle D? (1)

- A** Extension of the leg at the hip
- B** Extension of the leg at the knee
- C** Flexion of the leg at the knee
- D** Plantar flexion of the ankle

(c) Which **one** of the following muscles works antagonistically with muscle D? (1)

- A** Muscle A
- B** Muscle B
- C** Muscle C
- D** Muscle D

(d) Which **one** of the following blood vessels carries oxygenated blood back to the heart? (1)

- A** Aorta
- B** Pulmonary artery
- C** Pulmonary vein
- D** Vena cava

(e) Which **one** of the following is responsible for clotting the blood? (1)

- A** Plasma
- B** Platelets
- C** Red blood cells
- D** White blood cells

(f) The data in **Table 1** shows oxygen levels in the blood before and after gas exchange.

	Oxygen level <b>before</b> gas exchange	Oxygen level <b>after</b> gas exchange
<b>A</b>	High	High
<b>B</b>	High	Low
<b>C</b>	Low	High
<b>D</b>	None	Low

**Table 1**

Which **one** of the following is the **most** likely level of oxygen in the blood before and after gas exchange at the muscle during exercise?

(1)

- A** High – High
- B** High – Low
- C** Low – High
- D** None – Low

(g) Which **one** of the following is found inside the lungs?

(1)

- A** Bronchioles
- B** Diaphragm
- C** Semi-lunar valves
- D** Septum

**2** Complete the following statements.

(i) The bones of the skeleton protect the .....

For example, in a football match if two players clash heads when trying to head

the ball, the ..... protects the

.....

**(3)**

(ii) The ..... are responsible for clotting the blood.

**(1)**

(iii) The skeleton produces ..... blood cells to help  
fight infection.

**(1)**

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4 Exercise causes short-term effects on our body systems.

Complete **Table 2** by:

- (a) Stating **one** short-term effect of exercise on each of the named body systems.
- (b) Giving a specific example of the importance of this short-term effect on the performer during exercise.

	<b>(a) Short-term effect of exercise</b>	<b>(b) Importance to the performer exercising</b>
<b>Cardiovascular system</b>	(1)	(1)
<b>Muscular system</b>	(1)	(1)
<b>Respiratory system</b>	(1)	(1)

**Table 2**

5 **Figure 5** shows a performer during a weight training session.



(Source: © Nicholas Piccillo/Shutterstock)

**Figure 5**

(a) Identify the class of lever system in use when the performer moves from standing onto her toes in **Figure 5**.

(1)

(b) Give another example of the use of **this** lever system, at the ankle, in a sporting situation of your choice.

(1)

(c) The lever system being used in **Figure 5** provides a mechanical advantage.

Define the meaning of the term mechanical advantage.

(1)

6 Miss Convoy is a PE teacher. She runs an after school weight training class.

**Figure 5** shows the weight training room.



(Source: © Jasminko Ibrakovic/Shutterstock)

**Figure 5**

Before the first weight training class everyone completes a PARQ.

(a) State **one** reason why everyone is asked to fill in a PARQ.

(1)

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The weight training class starts with a warm-up and ends with a cool down.

(b) (i) Explain why Miss Convoy makes sure that the class stretches as part of the warm-up.

(2)

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(ii) State **one** purpose of a cool down.

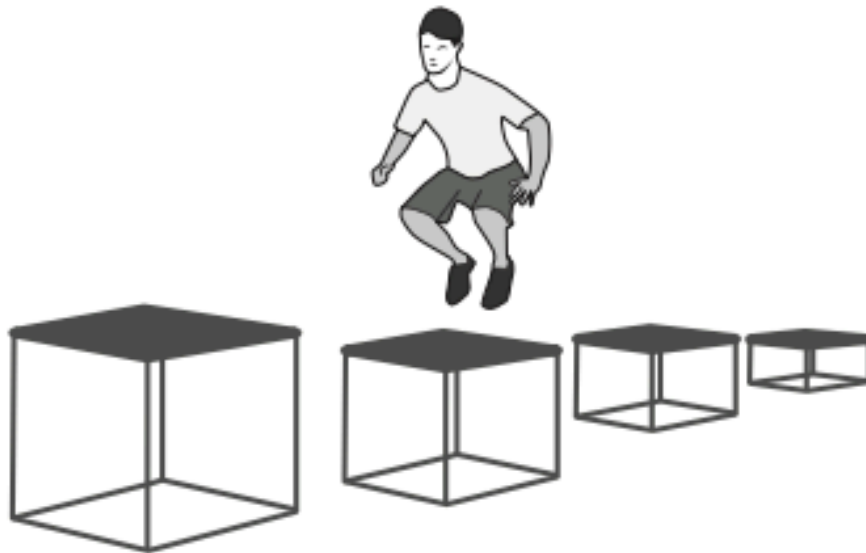
(1)

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7 **Figure 6** shows Mason during a training session.



**Figure 6**

(a) Identify, using **Figure 6**, the method of training Mason is using.

(1)

(b) State **one** advantage and **one** disadvantage of the training method shown in **Figure 6**.

(i) Advantage

(1)

(ii) Disadvantage

(1)









- 1 a) Which **one** of the following is **most** likely to decrease the risk of osteoporosis? (1)
- A Swimming
  - B Having an appropriate amount of sleep
  - C Cycling
  - D Long distance running

- b) Which one of the following affects optimum weight? (1)
- A Fitness
  - B Bone structure
  - C Race
  - D Age

- c) Which **one** of the following is the **most** likely risk of drinking too much alcohol over a long period of time? (1)
- A Arthritis
  - B Liver damage
  - C Lung cancer
  - D Osteoporosis

- d) Which one of the following is an example of a sedentary lifestyle? (1)

<input type="checkbox"/>	A Not eating five portions of fruit and vegetables each day
<input type="checkbox"/>	B Sleeping eight hours every night
<input type="checkbox"/>	C Not exercising on a regular basis
<input type="checkbox"/>	D Playing football at work during lunch

For Questions 1(e) and 1(f), use the information in Figure 1 to decide whether A, B, C or D is correct.

Figure 1 shows the percentage of people who have diabetes and are underweight, normal weight, overweight or obese in 2016.

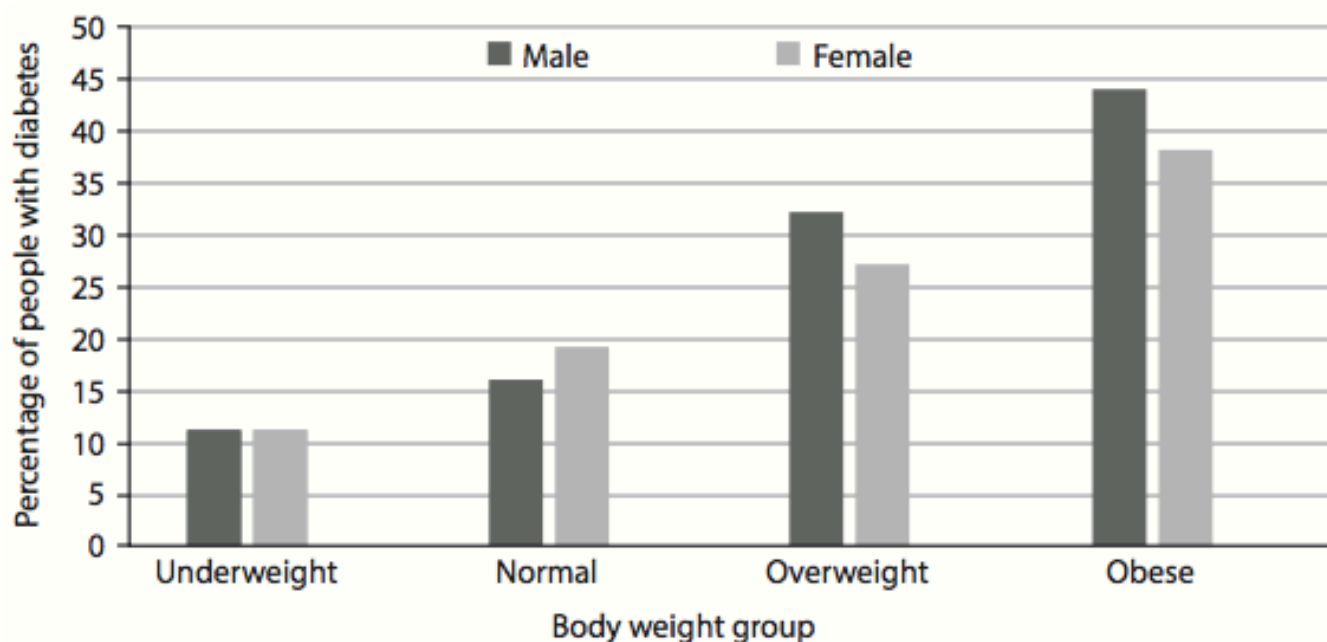


Figure 1

- e) Identify which one of the following body weight groups has the highest percentage of people with diabetes. (1)
- A Underweight
  - B Normal
  - C Overweight
  - D Obese
- f) Identify the body weight group where the percentage of males and females with diabetes is between 15% and 20%. (1)
- A Underweight
  - B Normal
  - C Overweight
  - D Obese

2 Matilda has been training with friends to run in a marathon. This is a social health benefit for Matilda.

(a) State **two** other types of health benefit.

(2)

1 .....

2 .....

(b) Matilda does not smoke cigarettes, however some of her friends smoke regularly.

Explain **one** reason why **not** smoking would be an advantage for Matilda when running a marathon.

(2)

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3 One emotional health benefit of taking part in regular physical activity is that it can make you feel good.

(a) Identify **one** other emotional health benefit of regular participation in physical activity.

(1)

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.....

Regular participation in physical activity can also give physical health benefits.

(b) Give **one** example of a physical health benefit of regular participation in physical activity.

(1)

.....

.....

4 Complete the following statements about the benefits of regular participation in physical activity.

Participation in physical activity can provide social health benefits, for example

.....  
.....

An increase in self-esteem, however, is an example of a ..... (2)  
health benefit.

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5 Explain **one** strength and **one** weakness for the SMART target below.

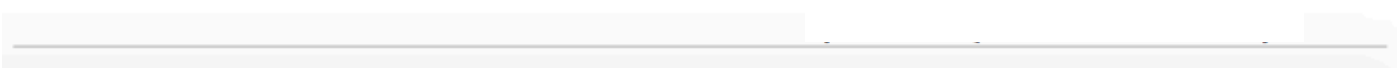
'I keep dropping the ball in netball so I want to improve my coordination in the next month.'

(a) Strength (2)

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.....  
.....  
.....  
.....

(b) Weakness (2)

.....  
.....  
.....  
.....  
.....



6 Lucas is a 100 m backstroke swimmer. He uses goal setting at the start of the season to improve his performance.

Give **three** reasons why goal setting is important for Lucas.

(3)

1 .....

.....

.....

2 .....

.....

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3 .....

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7 Some lifestyle choices have a negative impact on performance in physical activity and sport.

Explain how drinking alcohol can negatively affect performance.

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..... (3)

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