



GCE A LEVEL

A550U20-1



THURSDAY, 8 JUNE 2023 – MORNING

PHYSICAL EDUCATION – A level component 2

Evaluating Physical Education

2 hours

A550U201
01

ADDITIONAL MATERIALS

A WJEC pink 16-page answer booklet.

INSTRUCTIONS TO CANDIDATES

Use black ink or black ball-point pen.

Answer **all** questions.

Write your answers in the separate answer booklet provided.

INFORMATION FOR CANDIDATES

The number of marks is given in brackets at the end of each question or part-question.

You are reminded of the necessity for good English and orderly presentation in your answers.

Diagrams, charts and graphs can be used to support answers when they are appropriate.

Answer **all** questions.

1. England and Manchester United defender, Harry Maguire, made a swift recovery following an ankle injury, six weeks prior to Euro 2020, by using a skin temperature monitoring and therapeutic device.

Figure 1: Harry Maguire



Joints are classified according to their range and type of movement.

- (a) Identify the type of synovial joint **and** the movement patterns possible at the ankle joint. [3]

In 2001, UEFA launched its injury surveillance study involving 69 European top-level teams. So far, results show that the overall burden of match injuries has fallen by 2% per season.

- (b) Describe injury treatment methods that can be implemented in sports such as football to ensure that player availability is increased. [3]

The risk of injury increases when the demands of a sport such as football cannot be met.

- (c) Explain the possible causes of fatigue that affect sporting performance. [4]

It is important to understand how individuals differ in the way they master the skills involved in sports such as football and how some are able to perform at a higher level by using different forms of feedback.

(d) (i) Outline the difference between skill and ability. [2]

(ii) Explain, using sporting examples, how performers may use different types of feedback to help improve their performance. [4]

“The outcome of sport contests is often decided by narrow margins, as elite players and teams tend to be physically, technically and tactically well prepared. Subsequently, psychological and team-related factors often prove to be the difference between winning and losing; this especially seems to be the case in interactive team sports, like football.” (Asamoah and Grobbelaar, 2017)

(e) Explain, using practical examples, two factors affecting the formation of a cohesive team. [4]

After the coronavirus pandemic brought the world of football to a standstill, extensive work was needed to address how best to help players prepare for their return to world-class competition and minimise performance plateaus.

(f) (i) Evaluate, using practical examples, how the use of different types of goals can help performers achieve maximum productivity and avoid plateaus in their performance. [10]

(ii) Analyse how a performer could use the training principle of periodisation to ensure they reach their physiological peak at the correct time. [7]

2. Tom Daley and Matty Lee overcoming the stresses of Olympic pressure and executing a forward $4\frac{1}{2}$ somersault during their 10 metre men's synchronised platform dive to secure gold at the Tokyo Olympics 2020.

Figure 2: Tom Daley and Matty Lee



- (a) Describe the types of stress that can have an impact on performance in sports such as diving. [2]
- (b) Explain, using diving examples, Newton's three laws of motion. [6]

As Tom Daley and Matty Lee prepare to take their dive, their breathing rate must be regulated.

- (c) Describe the role of the chemoreceptors in the regulation of respiration. [3]

3. Team GB's Jonny Brownlee finally ended his Olympic gold medal jinx by winning the triathlon mixed team relay event, finishing 14 seconds ahead of the United States and France. Many have suggested that having the right mix of personalities in a team is critical to success.

Figure 3: GB mixed relay triathlon team, Tokyo Olympics



- (a) Evaluate, using sporting examples, the trait, social learning and interactionist perspectives of personality development. [9]
- (b) Analyse, using appropriate theories, how arousal can influence performance in sport. [8]

Figure 4: Jonny Brownlee's heart rate and stroke volume during aerobic exercise

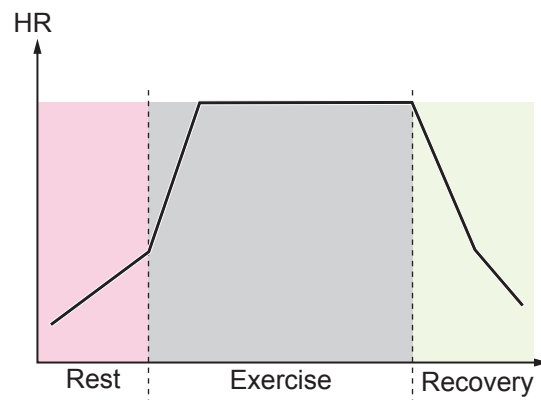
Individual	heart rate (bpm)	stroke volume (ml)
Jonny Brownlee	100	140

- (c) Define stroke volume and, using the data in **Figure 4**, calculate Jonny Brownlee's cardiac output (Q). [3]

Venous return is the return of blood to the right atrium through the veins. The greater the return of blood to the heart, the greater the volume of blood available in the ventricles for ejecting.

- (d) Outline **three** mechanisms which assist venous return during exercise. [3]

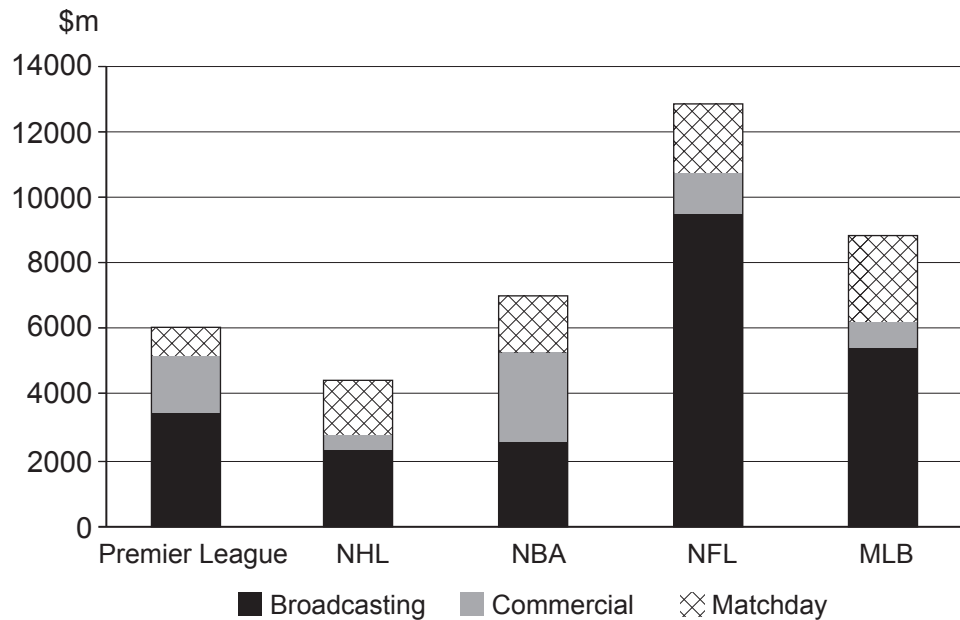
Figure 5: The heart rate (HR) response to sub-maximal (aerobic) exercise



- (e) Explain, using **Figure 5**, the changes to heart rate. [3]
- (f) Discuss the view that “doping in sport should be embraced and dirty blood should be accepted as part and parcel of modern sport”. (*Men’s Health*, 2017) [11]

4. In April 2020, in response to the coronavirus pandemic, the World Economic Forum stated that “no games mean no TV deals and no matchday income means no clubs.”

Figure 6: Revenue breakdown of major sports leagues, 5-year average (\$m)



Discuss, with reference to this statement, the influence of the media, sponsorship and commercialisation on sport.

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