



GCE A LEVEL

A550U20-1



PHYSICAL EDUCATION – A level component 2
Evaluating Physical Education

WEDNESDAY, 5 JUNE 2019 – AFTERNOON

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.

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. Track and field athletics involves running, jumping and throwing. The energy system contributions vary from event to event and consequently, athletes need to design training programmes to meet their specific needs and must consider the most appropriate nutrition.

Figure 1 – Energy system contributions during events

Event	% Aerobic energy system contribution	% Anaerobic energy system contribution	2016 Rio Gold Medal (men's)
Hammer		100%	78.68 m
400m Hurdles	5%	95%	47.73 secs
1500m	50%	50%	3:50.00 mins
3000m Steeplechase	70%	30%	8:03.28 mins

- (a) Using **Figure 1**, analyse how and why the contributions of the energy systems differ across athletics events. [8]
- (b) Explain the physiological adaptations that could result from altitude training. [4]
- (c) Describe the process of carbo-loading and explain why it may aid the performance of a marathon runner. [4]
- (d) Explain distraction-conflict theory and describe a cognitive stress management technique which could be used to reduce its effects. [3]
- (e) Analyse why, despite the risks, athletes continue to use performance-enhancing drugs and evaluate the success of strategies used to combat doping in sport. [6]
- (f) Analyse why many athletes choose to undertake regular mobility training as part of their programmes. [5]

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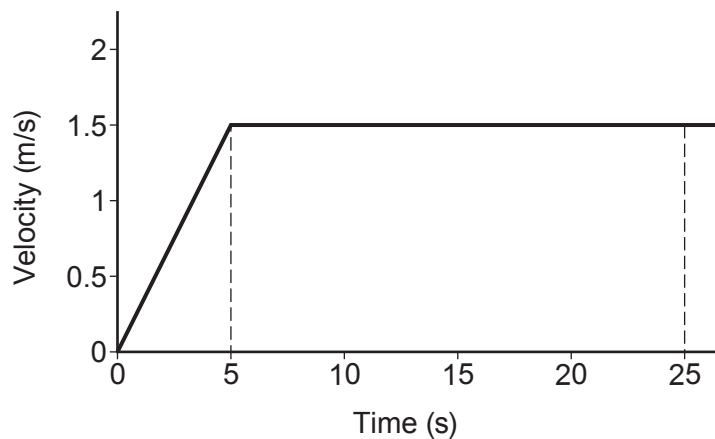
2. Swimming involves four main strokes: front crawl, back crawl, breaststroke and butterfly. Breaststroke is a particularly challenging stroke because of the discontinuous propulsive action of the arms and legs and its complex time synchronisation (Soares *et al.*, 1999). In order to increase speed, breaststroke swimmers need to concentrate on the power generated during the stroke phase as well as reducing drag during the non-propulsion phase.

Figure 2 – shows a performer competing in the 100 m breaststroke event



- (a) Identify the type of joint labelled **A** in **Figure 2** and the movement action at this joint during the complete breaststroke arm action. [2]

Figure 3 – shows a velocity-time graph of the start of the 100 m breaststroke event



- (b) (i) Define *linear motion*. [1]
- (ii) Calculate the initial acceleration of the swimmer and the distance covered by the swimmer during the first 25 seconds of the race. [4]
- (c) Outline the factors influencing fluid friction during the 100 m breaststroke and explain ways in which swimmers may reduce the effects of drag. [6]

Different swimming strokes use different motor programmes. Coaches will often vary the types of practice and forms of guidance depending on their knowledge of these motor programmes.

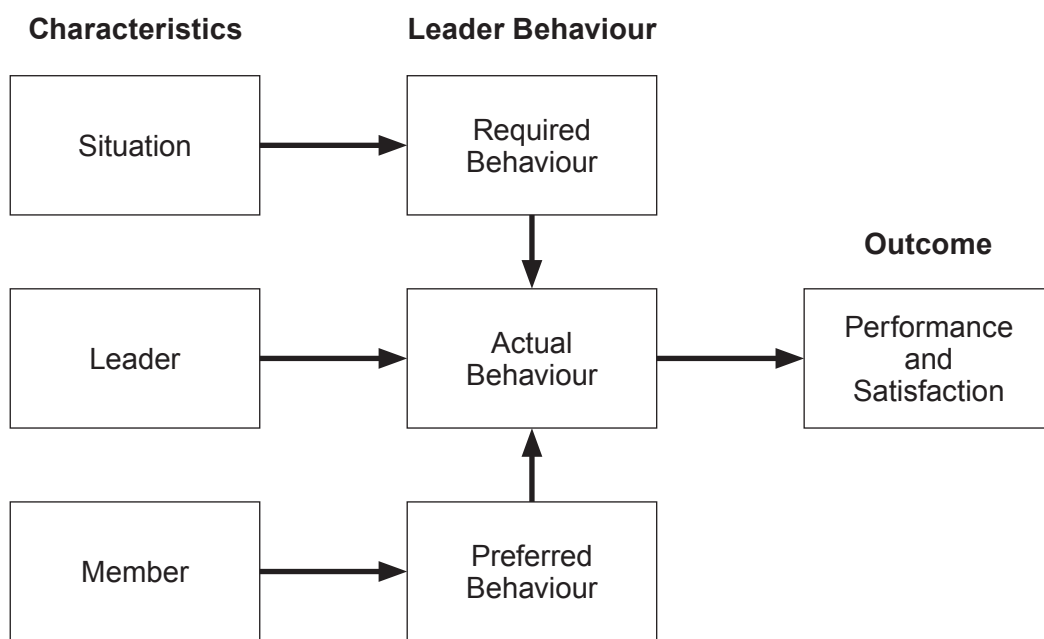
- (d) Using sporting examples, explain the role of motor programmes in performing a sporting activity. [4]
- (e) Explain, using specific examples, how a coach may use different forms of guidance when teaching young children to swim. [4]
- (f) Evaluate the effectiveness of a coach using persuasion and cognitive dissonance to encourage positive attitudes towards training. [6]
- (g) Define core stability and explain its importance in reducing sports injury rates. [3]

3. For many years, cricket has been a male-dominated sport. However, things may be changing. In 2017, the England Women's cricket team won the World Cup beating India in a thrilling final which was the most-watched game in the history of women's cricket.

- (a) In the context of the historical development of cricket, explain the distinction between an amateur and a professional. [2]

England's captain, Heather Knight, is an extremely talented cricketer who was the first female player to score fifty runs and take a five wicket haul in a one-day international. She was involved in the 2017 Ashes series and has been a respected member of the squad for a number of years.

Figure 4 – shows Chelladurai's multi-dimensional model of leadership



- (b) Analyse the importance of this model of leadership in relation to building successful teams. [9]
- (c) Discuss the barriers faced by females participating in cricket and analyse reasons behind the surge in popularity of the women's game. [6]
- (d) Explain the importance of anticipation in sport and identify ways in which a performer may improve their response time. [4]

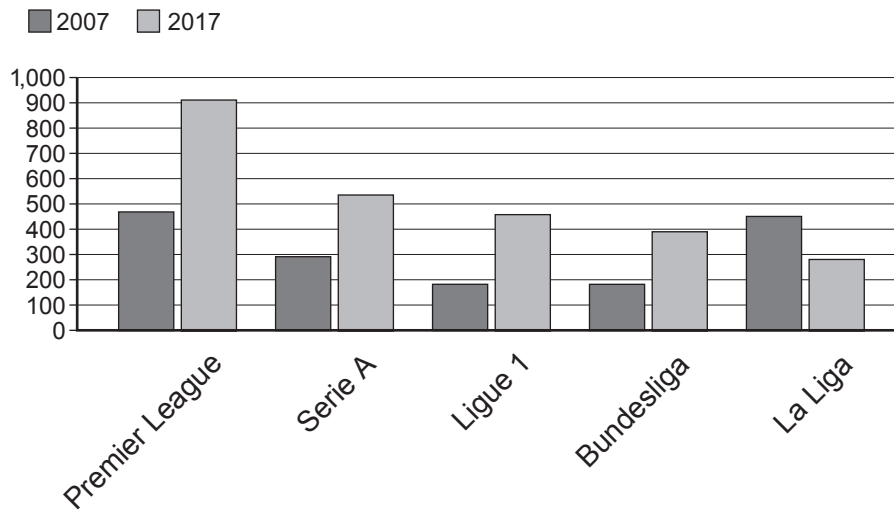
In the build-up to major events such as a Test series, cricketers will set themselves targets as part of their preparation.

- (e) Explain, using examples, the main principles behind effective goal setting. [4]

4. Neymar's transfer smashes the previous record set when Paul Pogba returned to Manchester United from Juventus for £89m in August 2016... His £782 000-a-week wages mean PSG's total outlay is £400m.

(BBC Sport website, Friday 4 August 2016)

Figure 5 – Transfer spending trends in Europe's top 5 leagues



Discuss the impact of the increasing commercialisation and globalisation of sport. [20]

END OF PAPER