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# **GCE MARKING SCHEME**

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**SUMMER 2016**

**PHYSICAL EDUCATION - PE2  
1312/01**

## **INTRODUCTION**

This marking scheme was used by WJEC for the 2016 examination. It was finalised after detailed discussion at examiners' conferences by all the examiners involved in the assessment. The conference was held shortly after the paper was taken so that reference could be made to the full range of candidates' responses, with photocopied scripts forming the basis of discussion. The aim of the conference was to ensure that the marking scheme was interpreted and applied in the same way by all examiners.

It is hoped that this information will be of assistance to centres but it is recognised at the same time that, without the benefit of participation in the examiners' conference, teachers may have different views on certain matters of detail or interpretation.

WJEC regrets that it cannot enter into any discussion or correspondence about this marking scheme.

**GCE Physical Education**  
**Summer 2016 Mark Scheme**

*Power is an essential component of fitness in many sporting activities.*

1. (a) (i) Describe how reliability is achieved when testing for power. [3]

- a. Reliability - definition
- b. Repeat set protocol
- c. Example of test in description

(ii) Describe how intensity of training could be increased to develop power in appropriate method of training [3]

1 mark for appropriate method of training

- a. Plyometrics/S.A.Q.
- b. Weight training
- c. Any exercise with speed and a form of resistance

+1 mark for basic explanation of increasing intensity with some detail  
+2 marks detailed explanation with specific detail and figures e.g. weight, height, distance etc. (plyometrics)

(b) Explain how two physiological adaptations of power training could benefit sporting performance.

- a. Muscular hypertrophy
- b. Increased CP stores
- c. Increased glycogen stores
- d. Increased tolerance to lactic acid
- e. Improved synchronisation of motor unit activation
- f. Reduced autogenic inhibition
- g. Greater recruitment type IIb fibres

All of the above develop performance e.g.

- Increased speed of muscular contraction (speed)
- Increased force production
- Work anaerobically for longer
- Recover quicker
- Improve co-ordination

\*Must have an example from sport e.g. jump higher in netball

1 mark for adaptations

1-2 marks candidate identifies a physiological adaptation and demonstrates some knowledge and understanding of how performance is affected but basic terminology is used e.g. sprint faster

3-4 marks candidate identifies a physiological adaptation and demonstrates very good knowledge and understanding of how performance is affected with specific terminology being used e.g. increased force production allowing greater speed.

2. (a) (i) Classify the tennis serve on each continuum below. Justify your placements

Open skills

- a. Constantly changing environment/unpredictable/affected by environment
- b. Performer must adapt to changing environment/performer is reactive
- c. Skill is mainly perceptual/involves decision making

Closed skills

- d. Environment doesn't change
  - e. No outside influences
- Tennis serve - mainly closed but open aspects

Discrete skills

- a. Has a definite start and end e.g. tennis serve
- b. The skill can be repeated but the performer starts again

Continuous

- a. Have no obvious beginning or end
- b. Can be performed as long as the performer wishes or has the energy etc to do so

Self paced skills

- a. Performer in control of rate/timing of action/performer is proactive
- b. Skill generally more closed/habitual e.g. tennis serve

Externally paced skills

- c. Action controlled by environment or others/performer is reactive
- d. Generally an open skill e.g. intercepting a ball in an invasion game

**(3x1 marks) for explanation of where the skill was placed on the continuum**

- (ii) Describe a type of practice that could refine a tennis serve for a performer in the autonomous stage of learning. Explain your reasoning.

Whole and whole/part/whole;

Whole - when the skill is difficult to be broken down in sub routines

Part - Skills can be broken down into separate aspects

Fixed - variable

Fixed - linked to closed

Variable - linked to open

Massed/Distributed

Massed - Linked with continuous e.g. cycling (must be relevant example)

Distributed - can be associated to more complex or high intensity tasks where a break for rest/feedback/guidance is necessary

Max 2 marks for appropriate practice relevant to a tennis serve

Max 2 marks for amp and/or appropriate sporting example

- (b) Describe strategies a coach or teacher might use to improve the retention of information when learning new skills. Use specific sporting examples. [4]

- a. Demonstration
- b. Chunking
- c. Identify key aspects of the skill
- d. Reinforcement
- e. No information overload
- f. Build complexity of skill
- g. Association with other skills
- h. Whole and part
- i. Imagery
- j. Mental rehearsal

**2x2 if appropriate example or explanation is provided**

3. (a) Explain why knowledge of the anaerobic threshold and training zones are important to coaches and athletes when developing exercise programmes. [5]
- a. Anaerobic threshold is the point at which more energy is produced anaerobically than aerobic
  - b. Working close to it can improve aerobic endurance
  - c. Exercising below threshold helps retain glycogen stores during competition or training
  - d. Exercising below threshold helps retain CP stores during competition or training
  - e. Exercising below the threshold reduces build up of lactic acid
  - f. Coach/athlete must understand the energy demands of the sport
  - g. Allows for specificity of training

Max of 2 marks for explanation of anaerobic threshold and other training zones

Max of 4x1 marks or +1 amp/example of why the anaerobic threshold is important and how training is developed or if point is developed.

- (b) Explain how you have monitored different aspects of your sporting performances in the past twelve months. [5]

The full 5 marks can be gained from using only 1 method of monitoring performance e.g. see fitness testing below

- a. Fitness Testing

All marks can be obtained from this area if the candidate covers the following:-

- Identifies relevant tests applicable to their sport (clearly name tests)
- Explains the testing procedures and how they have ensured reliability and validity
- Resting of components after a period of time
- Compares results with previous scores, others in group etc

Marks can also be obtained by using examples of a number of monitoring systems.

Other monitoring methods include;

- Self assessment
- Coach feedback
- Diaries/journals/logs
- Match analysis/stats
- Psychological questionnaires/interview/observation

1-2 marks - Brief explanation of a method(s) of monitoring sporting performance with limited use of examples

3-4 marks - More detailed explanation of methods of monitoring sporting performances with examples to support answer

5 marks - Detailed explanation of methods of monitoring sporting performance with clear examples related to sport

(If examples are not used then max of 2 marks)

4. (a) Explain how a coach could minimise the effects of social loafing [4]

Possible causes of Social loafing (Max 3x1 marks)

- a. A performer perceives others as working less hard than themselves and therefore has an excuse not to do so themselves
- b. Belief that their own efforts will have little impact to the team
- c. Lack of intrinsic motivation
- d. An individual may think that their contribution will not be noticed within the team. Individuals feeling 'off form' believing others will cover for them
- e. Perceived standard of opposition - If the individual believes them to be inferior then there is a lack of effort

What a coach can do to minimise the effects of social loafing (Max 3x1 mark)

- f. Make every player realise the importance of their contributions of the team
- g. Give responsibilities to different players e.g. In charge of set pieces or defence at the back
- h. Vary the role of positions of the players within the team to give an understanding of the different roles within the team
- i. The coach needs to realise where loafing is more likely to occur e.g. After a long tournament where fatigue could be an issue.
- j. Use video and notational analysis to monitor the performance of all the players during training and matches
- k. Publicity acknowledge/praise both individual and team performances to help motivation
- l. Make the team aware that the coach understands loafing as a whole and will be scrutinising performances
- m. Speak to individuals in private regarding loss of form and lack of motivation when playing
- n. Make changes to the line up to keep the team to prevent fatigue and staleness.



4. (b) Discuss the impact of task and social cohesion on the success of a sports team [6]

- Task cohesion - the ability of the group to achieve a common goal (or similar)
  - Poor task cohesion can breakdown in team processes e.g. not following game plan or individuals playing for themselves
  - Helps in the understanding of their own role and others
  - Give a sense of shared purpose
  - Good task cohesion can help social cohesion
  - Task cohesion is more important than social cohesion
  - Task-oriented teams have a higher potential for success than social oriented teams.
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- Social cohesion - the ability of the group to relate well to get along socially
  - Often results do not necessarily matter
  - Enjoyment is key to the teams survival
  - Players need to be able to interact effectively e.g. effective communication with the group
  - Social cohesion is not vital for achieving a common goal
  - Having both task and social cohesion is positive

1-2 the candidates has a basic understanding of task and social cohesion, although does tend to focus on one area. There are little use of examples.

3-4 The candidate demonstrates a good knowledge and understanding of both task and social cohesion and begins to understand how you do not necessarily need both to be a successful team although it is beneficial. More examples are provided to support answers.

5-6 The candidate demonstrates very good knowledge and understanding of both task and social cohesion and understands the roles both types of cohesion play in a successful team.

The further develop the point that you do not necessarily need both to be a successful team although it helps. Relevant examples are provided throughout to support answers.

5. Individual lifestyle choices could have a positive or negative impact on long-term health. Discuss this statement [10]

#### Exercise

- Exercise can help burn off many of the calories that have been consumed in a meal.
- Exercise can increase the ratio of High Density Lipoproteins to that of Low Density Lipoproteins
- Reducing cholesterol
- This can help achieve a negative energy balance if an individual is attempting to lose weight.
- Maintain the elasticity of arteries and arterioles therefore reducing the risk of hypertension of heart attack/stroke
- Raise the basal metabolic rate
- Increasing the efficiency of the respiratory system
- Counteracts the deterioration of bones and joints
  
- Other adaptations of heart, lungs, muscles etc

#### Balanced Diet

- Controlling calorie intake
- Energy balance, constituents, linked to vitamins/minerals health etc
- Understanding the importance of reducing fats and the problems associated with a high fat diet.
- Problem of saturated fats and trans fats linked to cholesterol and very high in calories
- Can increase the ratio of High Density Lipoproteins to that of Low Density Lipoproteins which reduces the overall effect of cholesterol
- Reducing cholesterol

Other area - The essay should predominantly focus of nutrition and exercise although if smoking, alcohol, drugs, or stress (over eating/anorexia) and explicitly linked to obesity or other diseases then max 2 marks can be awarded.

Level 1 1-4	The candidate demonstrates some knowledge and understanding of the positive and negative effects of diet and exercise on obesity and associated diseases on long term health. Some relevant examples are provided but are made in isolation. A few relevant points are listed and there is a possible tendency to focus heavily on one discipline or treat them in a superficial way. Ideas are expressed in a simplistic but clear manner. Errors in grammar, punctuation and spelling are noticeable and intrusive.
Level 2 5-7	The candidate demonstrates good knowledge and understanding of the positive or negative effect of diet and exercise on obesity and associated diseases etc. They regularly use specialist vocabulary and are able to link factors together that prevent obesity/associated diseases. E.G. Lower calorie intake through nutrition as well as increased exercise will help achieve a negative energy balance. Ideas are expressed in a clear, logical manner. Error in grammar, punctuation and spelling occur but do not suggest weakness in these areas.
Level 3 8-10	The candidate demonstrates very good knowledge and critical understanding of the link between exercise and nutrition and the impact on health. They explain in detail, using specialist terms and examples of how both diet and exercise enhance health, reduce the impact of obesity and other associated diseases. Complex ideas are expressed with clarity. There are few, if any errors in SPG.