GCSE MARKING SCHEME

SUMMER 2022

PHYSICAL EDUCATION - UNIT 1
(SHORT COURSE)
3555U10-1

INTRODUCTION

This marking scheme was used by WJEC for the 2022 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.

GCSE PHYSICAL EDUCATION

UNIT 1 - SHORT COURSE

SUMMER 2022 MARK SCHEME

Question	Mark scheme	AO1	AO2	AO3	Total
1. (a) (i)	**Give a definition of CV Endurance.** Award 1 mark for: The ability of the heart and lungs to supply oxygen to the working muscles (body) over long periods of time (without fatigue). Any acceptable variations of the above can be marked	1			1
(ii)	**Name one recognised fitness test of CV Endurance.** Award 1 mark for any recognised test of Endurance. Possible Tests provided may include; Multi Stage Fitness Test, Cooper 12 Minute Run, 1.5 mile timed run or any accepted laboratory equivalent of the above	1			1
(iii)	**Explain how the test of CV endurance identified in 1. (a) (ii) above is carried out.** Explanation must relate to the test identified for Endurance in 1. (a) (ii) and NOT any fitness test! A wrong answer to (a) (ii) is not an acceptable description of test procedures in (a) (iii). Please look for the key test procedures whether listed with some amplification or described in more detail. 3 marks available so content of answers for maximum marks should be accurate, explained and key content included. 3x1		3		3

Question	Mark scheme	AO1	AO2	AO3	Total
(b)	**Discuss the possible reasons for the differences in the content of training schedule A and schedule B.** **Indicative content:** The question seeks analysis of the data relating to the two training schedules along with suggestions to explain the variations between the schedules. The simplest analysis will conclude that one is harder than the other and one of the runners is more experienced than the other. Other factors may include: • Differences in frequency of training • The number of rest days • The duration of each part of a session and the overall training times • The frequency of the work periods • The type of training schedule • The number of reps in each part of the training sessions • The intensity of the runs **See mark bands at back of mark scheme**	2		6	8
(c) (i)	**State what is meant by the definition; "the complete mental, social and physical well-being of an individual".** Award 1 mark for Health	1			1
(ii)	**Explain how taking part in sport and physical activity can help a person`s mental well-being.** The answer should <u>explain</u> rather than list the mental benefits of taking part in sports/physical activities. Read the answer in full before awarding marks. Mental benefits of exercise • Satisfaction with own performance • Promotes feel good factor • Can provide excitement, joy, elation • Give enjoyment • Can relieve stress, tension, aggression • Feeling of exhilaration • Develops feeling of being part of something • Leads to feeling of success • Helps to forget life related problems / worries • Provides new challenges in life Many opportunities for candidates to engage with the question. Not a list response required but read responses to look carefully as some may be a list with amplification. 3x 1 or 2x 1+1 for amplification. Accept any appropriate responses where coverage of key content has been seen to take place.		3		3
Total Q1		**5**	**6**	**6**	**17**

Question	Mark scheme	AO1	AO2	AO3	Total
2. (a) (i)	**Identify the muscle groups shown at A and B in the diagram.** Award 1 mark for Muscle group B = Biceps Muscle group A = Triceps	2			2
(ii)	**Study the image of a bicep curl to identify the order of lever shown.** Award 1 mark for third order lever	1			
(iii)	**Using the terms, load/resistance, force / effort and pivot / fulcrum, justify your answer to 2a(ii).** For full marks then Load, Force and Fulcrum should be included in the answer given. Terms may vary due to teaching therefore some tolerance will be required. In this order of lever The FULCRUM is at the opposite end to the RESISTANCE (1) with the EFFORT (force) in the middle (1). Resistance= weight lifted, Effort provided by arm muscles. (Diagram can be accepted if explained!)		3		3
(b) (i)	**Draw lines to match the type of muscular contraction to the correct definition.** See question for wording Award 1 mark for each of Isotonic-concentric = The ends of the muscle move further apart Isometric = There is no movement Isotonic-eccentric = The ends of the muscle move closer together	3			3
(ii)	**Name the fibrous tissue which joins bone to bone.** Award 1 mark for Ligament	1			1
(iii)	**Name the fibrous tissue which joins muscle to bone.** Award 1 mark for Tendon	1			1

Question	Mark scheme	AO1	AO2	AO3	Total
(c)	**Taking part in regular physical activity can lead to changes in a sportsperson's circulatory system such as;** • **The heart contracts more powerfully.** • **Heart rate increases.** • **Stroke volume increases** • **Blood is diverted more effectively to different areas of the body during activity.** **Analyse how these changes can be of help to a sportsperson when performing in a physical activity.** **Indicative content** Four adaptations to the circulatory system as a result of participation in sport/exercise/physical activities have been provided in the question. Answers should outline how the changes would help sportspersons! MORE POWERFUL CONTRACTION OF THE HEART= • Greater amount of blood pumped with each contraction of the heart (SV) • More oxygenated blood provided to body / working muscles • Cardiac Output (Q) increases. • (Blood diverted to different areas of the body blood circulation speeds up) • Blood supplied to areas of the body in most need. e.g. away from digestive system to working skeletal muscles. (Vascular stunt) Cardiac output increases Blood flow can increase by up to 30 times therefore working muscles receive a considerable increase in the amount of oxygenated blood therefore body can continue to work more effectively for longer. Accept other reasonable responses. Important to READ the answer first before awarding band and marks. **See mark bands at back of mark scheme**	2		6	8
Total Q2		**10**	**3**	**6**	**19**

Question	Mark scheme	AO1	AO2	AO3	Total
3. (a) (i)	**Name a recognised training method that rowers could use in order to improve power** Award 1 mark for any one of the following training methods: Interval, Circuit, Weight, Plyometrics. Continuous, fartlek and SAQ are not accepted	1			1
(ii)	**Identify one recognised fitness test that measures power.** Award 1 mark for a test of muscular power = Standing Broad Jump or Standing Vertical Jump. Accept any other recognised test of power if valid.	1			1
(iii)	**Identify one recognised fitness test that measures muscular endurance.** Award 1 mark for a recognised test from: Abdominal Curl Test, NCF Abdominal Curl Test or Press Ups (60 seconds) Test. Accept any other recognised test of Muscular Endurance if valid	1			1
(iv)	**Explain why fitness tests must be valid and reliable.** Award 1 mark for definitions Award 2 marks for explanation that includes Fitness Tests must measure what they claim to measure (1 for validity) We must be able to replicate protocols exactly every time. (1 for reliability) Accept any appropriate wording		2		2

Question	Mark scheme	AO1	AO2	AO3	Total
(b)	**Evaluate how improvements to power and muscular endurance could improve the performance of a rower.** **Indicative content** Improvements to power (speed x strength) could assist the rower to improve performances particularly at the start of the race and / or when raising the stroke rate at the conclusion of the race. Improvements to muscular endurance could assist the rower to work for longer with less fatigue particularly at the end of the race. It may also assist with recovery after heats before then competing again in subsequent races in the competition Accept any reasonable responses. **See mark bands at back of mark scheme**	2		3	5
(c)	**Explain why rowers should train using correct techniques.** Accept any appropriate answers given and award marks accordingly. Maximum=2. List only 1 mark Award 2x2 or 4x1 marks • Prevent injury • Ensure correct muscles, body parts are being used in the correct way • To refine skills and techniques • To ensure that correct “form” occurs when performing (weight lifting) • To use correct skills / techniques when competing • To develop “ muscle memory” to use when under pressure • To groove skills and techniques • To be able to perform more efficiently and effectively • To be able to repeat actions • To perform at their best when required Some candidates may refer to sportspersons who do not use correct technique or technical models but are still able to perform very effectively. Some specific examples may be provided in answers given; e.g. Jim Furyk in golf as opposed to the swing of Adam Scott		4		4
Total Q3		**5**	**6**	**3**	**14**

Assessment Grid

	AO1	AO2	AO3	Total
Q.1	5	6	6	17
Q.2	10	3	6	19
Q.3	5	6	3	14
Total	**20**	**15**	**15**	**50**

Performance bands for question 1. (b)

Band	AO1 2 marks	AO3 6 marks
3		**5-6 marks** Excellent discussion of possible reasons for the differences in the content of training schedules A and B. Answer is presented in a fluent, detailed and reasoned manner. The answer is balanced, measured and covers a variety of relevant and supportive examples
2	**2 marks** Good knowledge of training schedules	**3-4 marks** Good discussion of possible reasons for the differences in the content of training schedules A and B. Answers have some detail and are reasoned. The answer is balanced and covers some relevant and supportive examples
1	**1 mark** Limited knowledge of training schedules	**1-2 marks** Limited discussion of possible reasons for the differences in the content of training schedules A and B. The answer lacks balance and covers few relevant and supportive examples Answers tend to be descriptive
0	No knowledge of training schedules is evident	No discussion is evident

Performance bands for question 2. (c)

Band	AO1 2 marks	AO3 6 marks
3		**5-6 marks** Excellent analysis of how these changes can be of help to a sportsperson There are strong links to improvement in performance
2	**2 marks** Good knowledge shown	**3-4 marks** Good analysis of how these changes can be of help to a sportsperson There are some links to improvement in performance
1	**1 mark** Limited knowledge shown	**1-2 marks** Limited analysis of how these changes can be of help to a sportsperson There are few links to improvement in performance
0	No knowledge is evident	No analysis is evident

Performance bands for question 3. (b)

Band	AO1 2 marks	AO3 3 marks
3		**3 marks** Excellent evaluation of improvements to muscular power and muscular endurance. There are strong links to improvement in performance
2	**2 marks** Good knowledge of muscular power and muscular endurance relevant to the question	**2 marks** Good evaluation of improvements to muscular power and muscular endurance. There are some links to improvement in performance
1	**1 mark** Limited knowledge of muscular power and muscular endurance relevant to the question	**1 mark** Limited evluation of improvements to muscular power and muscular endurance. There are few links to improvement in performance
0	No knowledge of muscular power and muscular endurance is evident	No evaluation is evident