

CONFERENCE VERSION



GCSE MARKING SCHEME

AUTUMN 2020

**PHYSICAL EDUCATION - COMPONENT 1
FULL COURSE
C550U10-1**

INTRODUCTION

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

GCSE PHYSICAL EDUCATION FULL COURSE

AUTUMN 2020 MARK SCHEME

Question	Mark scheme	AO1	AO2	AO3	Total
1. (a) (i)	<p>Using the images above, classify the skills of a gymnastic vault and a football pass. Tick one box only for each of the classifications.</p> <p>Vault/ Pass Pass /Vault</p> <p>Vault is self paced and also closed Football pass is externally paced and open</p>	4			4
(ii)	<p>Justify your answers given in 1. (a) (i).</p> <p>Justification 4 x 1</p> <p>Vault – *The performer decides on the timing and pacing of the skill therefore self-paced *Vault is not affected by the environment. It is predictable / the performer repeats the action over and over again without outside influences therefore is closed.</p> <p>Pass – *The timing and pacing of the skill are controlled by external factors such as the opponent therefore externally paced *Performers must adapt to a changing or unpredictable environment e.g. opponents / weather etc therefore open</p>		4		4
(iii)	<p>Identify the most appropriate fitness tests for the gymnastic vaulter and football player. Justify the reasons for your choices.</p> <p>Vaulter - except any relevant test (1) 2 x1 for an explanation about the reasons why the test matches Relationship to the sporting activity intensity and duration may be used. E.g. Vaulter may use Vertical jump test (1) They would use this because it develops power to jump (1), and acceleration on the runway (1)</p> <p>Football - except any relevant test (1) E.g. Football player may use MSFT (1) They would use this as they need to have a good level of aerobic fitness to be able to last the whole game of football at the same intensity (2)</p>	2		4	6

Question	Mark scheme	AO1	AO2	AO3	Total
(iv)	<p>The quadriceps of a football player are contracting concentrically when kicking the ball. Identify and explain one other type of muscle contraction.</p> <p>1 mark for naming the contraction 1 for the explanation</p> <p>Isometric (1) muscle remains the same length under tension (1) Eccentric (1) muscle lengthen under tension (1)</p> <p>Do no award mark for isotonic.</p>		2		2
(b)	<p>Both the gymnast and the football player would have set goals for their training. Describe how setting targets can improve performance.</p> <p>focusing attention, improving effort, improving concentration, help develop strategies for success. 2x1</p>	2			2
(c)	<p>Explain how the use of modern technology in coaching has a positive effect on performance in sport.</p> <p>To make judgements more objective, using data to inform team selection To identify strengths and areas for improvements. Develop training programmes Analysis of tactics and strategies Match preparation Analysis of techniques Prevent injury through development of correct techniques.</p> <p>3x1</p>		2		2
(d) (i)	<p>Identify the first stage of a typical warm-up.</p> <p>Pulse raiser (1) Light activity (1)</p>	1			1
(ii)	<p>Identify two types of stretching that could be used in a warm-up</p> <p>Active Passive Dynamic PNF</p>	2			2

Question	Mark scheme	AO1	AO2	AO3	Total
2.	Analyse the graph above which shows an aerobic interval training session for two 16-yr. old athletes (labelled A and B).				
(a) (i)	<p>Identify which athlete is the fitter. Justify the reasons for your decision.</p> <p>Athlete B fittest. (1)</p> <p>Justification. Lower resting HR Able to withstand a higher heart rate Recover quicker Back at resting HR quicker</p>	1	3		4
(ii)	<p>Calculate maximum heart for a 16 year old athlete.</p> <p>220 – age 220-16=204</p>	1			1
(iii)	<p>Identify the normal resting stroke volume for a healthy individual. Tick one box below.</p> <p>70ml</p>	1			1
(iv)	<p>Using examples, assess the physical benefits of aerobic exercise on sporting performance.</p> <p>Indicative content</p> <p>Long term effects of aerobic exercise include bone density, increased elasticity of muscles, hypertrophy, improved energy systems, increased stroke volume, decreased resting heart rate, blood pressure, decreased breathing frequency, increased vital capacity. Plus, other acceptable effects of aerobic exercise.</p> <p><i>Relation to well-being and sport may look like</i></p> <p>e.g. increased bone density would decrease the likelihood of bone disease <i>in later life</i> and in sport may reduce the chance of fractures in sports <u>such as rugby</u>.</p>	2		6	8

Band	AO1 3 marks	AO3 5 marks
3	No marks awarded	5 marks Excellent, well reasoned evaluation of the impact upon the performance of a sport. Accurate relationship to aerobic exercise and its benefits.
2	2 long term effects identified	3-4 marks Good evaluation of the impact of aerobic exercise on the performance of a sportsperson.
1	1 long term effect identified	1-2 marks Limited evaluation of the impact of aerobic exercise on performance of a sportsperson.
0	0	0

Question	Mark scheme	AO1	AO2	AO3	Total
(b) (i)	Identify the main energy system used in each sporting example below. Aerobic Anaerobic	2			2
(ii)	Explain the terms aerobic and anaerobic threshold. Aerobic threshold – the point at which training becomes predominantly aerobic (60% MHR) Anaerobic threshold – the point at which training becomes predominantly anaerobic (80% MHR)		2		2
(c) (i)	Identify which term below describes Oxygen Debt. restoring oxygen by heavy breathing after exercise has finished	1			1
(ii)	Using examples, explain how the principle of Overload could be used to progress training. 1 mark for the explanation and 1 for application to sport. Increase the frequency e.g. Increase the amount of times per week Increase the intensity e.g. increase how fast you run, increase the hr. Increase the duration e.g. increase how long you swim for. Etc.		4		4

Question	Mark scheme	AO1	AO2	AO3	Total
(d) (i)	<p>Name one function of the respiratory system.</p> <p>Gaseous exchange Oxygenation of blood</p>	1			1
(ii)	<p>Identify the component of fitness that is being described below.</p> <p>Body composition</p>	1			1

Question	Mark scheme	AO1	AO2	AO3	Total												
3. (a) (i)	<p>Analyse the image above to select the correct plane and axis from the list below.</p> <p>Transverse plane Vertical axes</p>			2	2												
(b) (i)	<p>Identify the type of joint in the neck shown at A.</p> <p>Pivot</p>	1			1												
(ii)	<p>Name the predominant energy system used during the spin in the image above.</p> <p>1 mark for name</p> <p>ATP -PC Anaerobic</p>	1			1												
(iii)	<table border="1"> <thead> <tr> <th>Joint site</th> <th>Joint type</th> <th>Movement at the joint.</th> <th>Explain how this joint can be used in a sport of your choice</th> </tr> </thead> <tbody> <tr> <td>shoulder</td> <td>Ball and Socket</td> <td>Any movement</td> <td>Any relevant accepted</td> </tr> <tr> <td>Knee</td> <td>Hinge</td> <td>flexion or extension</td> <td>Any relevant accepted</td> </tr> </tbody> </table>	Joint site	Joint type	Movement at the joint.	Explain how this joint can be used in a sport of your choice	shoulder	Ball and Socket	Any movement	Any relevant accepted	Knee	Hinge	flexion or extension	Any relevant accepted	4	2		6
Joint site	Joint type	Movement at the joint.	Explain how this joint can be used in a sport of your choice														
shoulder	Ball and Socket	Any movement	Any relevant accepted														
Knee	Hinge	flexion or extension	Any relevant accepted														
(c)	<p>Name two bones found in the leg</p> <p>Femur Tibia Fibula Patella will be named too</p>	2			2												
(d)	<p>Whole, part, fixed and varied are all types of practice. Explain, using examples, when each may be used in sport.</p> <p>PART - Tennis serve / Triple jump / Long Jump To isolate part of the skill to perfect WHOLE - golf swing etc To practice as a complete skill as cannot be easily broken down. FIXED - Gym vault/ Use for closed skills VARIED - 2 v1 etc (team sports) accept shooting/ passing with amplification Used for open skills</p> <p>More needed.</p>		3		3												

Question	Mark scheme	AO1	AO2	AO3	Total
(e)	<p>Discuss how ethical issues such as gamesmanship, sportsmanship and deviance affect participation and performance in sport.</p> <p>Candidates need to consider the four concepts of</p> <p>Gamesmanship Sportsmanship Deviance Participation and Performance (maybe used interchangeably)</p> <p>Violence is usedeg P.E. Drugs are usedeg Match fixing is used....eg Bribery is used ... eg Accept any relevant examples of deviance</p>	2		5	7

Band	AO1 2 marks	AO3 5 marks
3	No marks awarded	4-5 marks Effective and detailed discussion of how deviance, gamesmanship and sportsmanship effect sport. Candidates should include examples of how this is achieved. Advantages and disadvantages of the ethical issues.
2	2 marks For identifying functions of 2 types of either ethical issue.	2-3 marks Good discussion of how deviance, gamesmanship and sportsmanship are used in sport. Advantages and disadvantages of the ethical issues used at the top end of the band. One side may be discussed at the bottom end of the band.
1	1 mark For identifying functions of 1 type of either ethical issue.	1-2 marks Limited discussion of how the ethical issues are present and used.
0	0 marks No knowledge of deviance shown	0 marks No discussion is evident

Question	Mark scheme	AO1	AO2	AO3	Total
4. (a)	<p>Analyse the image above to select the muscles used in the legs during the drive phase.</p> <p>A Quadriceps (1) B Hamstrings (1) C Gastrocnemius (1)</p>			3	3
(b) (i)	<p>Identify two types of muscles.</p> <p>Skeletal Smooth</p>	2			2
(ii)	<p>Explain the importance of speed and of reaction time for the sprinter shown in the image above.</p> <p>May define speed and reaction time (AO1) x2</p> <p>Speed Needed for acceleration phase Needed for middle phase of sprint</p> <p>Reaction time needed for start</p>	2	2		4
(iii)	<p>Explain one training method that can be used to develop speed.</p> <p>1 mark for naming appropriate method Interval Circuit Plyometrics</p> <p>Explanation x2 To focus on the intensity and duration of the activity.</p>	1	2		3
(c) (i)	<p>Identify the structures from the description below.</p> <p>Tendon Ligament</p>	2			2
(ii)	<p>Match the lever component with the correct statement.</p> <p>Load (resistance) the weight that needs to be moved. B Fulcrum (pivot) the joint where the lever rotates around. C Effort (force) generated by the muscles A</p>	3			3

Question	Mark scheme	AO1	AO2	AO3	Total
(iii)	<p>Identify the outcome in the lever action when the effort arm is longer than the resistance arm.</p> <p>A – mechanical advantage</p>	1			1
(d)	<p>Analyse how diet is essential for an athlete to ensure optimum performance.</p> <p>Proteins – for tissue growth and repair of muscles– from meat, fish and milk. These will aid contraction strength, reduce chance of injury....</p> <p>Carbohydrates - for energy – from sugar (simple carbohydrates), bread, pasta, potatoes (complex carbohydrates) <i>Carbo-loading – Glycogen particularly important in the last stages of endurance events. In the week before a race, marathon runners usually eat lots of starchy foods (complex carbohydrates), such as pasta.</i> Carbs delay fatigue and allow an athlete to compete at higher levels for longer. ...</p> <p>Fats – source of energy – from olive oil (monounsaturated fats), oily fish (polyunsaturated), red meats, dairy (saturated fats), cakes, biscuits (trans fats). Generally, trans fats should be avoided as they have few benefits and can have negative health effects. Fats are important for endurance events.</p> <p>Minerals – essential for health of many processes on the body – milk and fish (calcium), red meat, brown rice (iron), bananas, white meat (potassium). Vitamins and water should also be consumed as part of a healthy diet Vits and minerals help with muscle recovery from exercise. Water needed for hydration.</p>	2		6	8

Band	AO1 2 marks	AO3 5 marks
3	No marks awarded	<p>4-5 marks</p> <p>Effective and detailed analysis of how nutrients aid sport. Candidates may include examples of how performance will be improved</p>
2	<p>2 marks</p> <p>For identifying functions of 2 food groups</p>	<p>2-3 marks</p> <p>Good analysis of how nutrients aid sport. Candidates may include examples of how 1 nutrient would aid performance.</p>
1	<p>1 mark</p> <p>For identifying functions of 1 food group</p>	<p>1-2 marks</p> <p>Limited analysis of how nutrients aid sport.</p>

Question	Mark scheme	AO1	AO2	AO3	Total
5. (a)	<p>Justify how physical education and school sport might contribute to the well-being of young people.</p> <p>Indicative content</p> <p>Better at physical activity (physical literacy) Knowledge and skills to continue to engage in activities Motivated and enthused about participation Physical, mental and social health benefits Encourage lifelong participation Cross school benefits – increased self-confidence and improvements in academic attainment</p> <p>Examples. Stress relief Health increases e.g. reduction in body fat Team work improved Leadership improved Discovery of a talent increases the elite etc</p>	2	4		6

Band	AO1 2 marks	AO2 4 marks
3	No marks awarded	<p>4 marks</p> <p>Effective and well reasoned explanation of how PE and school sport effect well being of young people. Excellent examples used.</p>
2	<p>2 marks</p> <p>Accurate identification of 2 benefits</p>	<p>2-3 marks</p> <p>Good explanation of how PE and school sport effect well being of young people. Some examples used. At the bottom of this band a candidate may give a good assessment but no examples.</p>
1	<p>1 mark</p> <p>Accurate identification of 1 benefit</p>	<p>1-2 marks</p> <p>Limited explanation of how PE and school sport effect well being of young people. No examples given</p>
0	0	0

Question	Mark scheme	AO1	AO2	AO3	Total
(b) (i)	<p>Compare the characteristics of a cognitive and an autonomous learner.</p> <p>Cognitive makes mistakes Need demo and repetition Positive feedback needed Inconsistent performance</p> <p>Autonomous Consistent performance Effective performance Skilled performers Correct decisions. Can process complex information Detailed feedback to refine performance</p>		4		4
(ii)	<p>Identify three types of guidance that could help a performer improve their skill level</p> <p>3 x1</p> <p>Verbal Visual Manual Mechanical</p>	3			3
(c) (i)	<p>Analyse two possible barriers faced by a target group of your choice.</p> <p>Barriers, Lack of clubs for ... Stereotypes Discrimination Esteem Choose not to Religious barrier Etc</p> <p>1 mark for barrier then further 1 mark for the amplification. E.g. religious barrier that states females must be covered up in front of males will restrict participation due to not being able to swim with public.</p>			4	4
(ii)	<p>Identify one strategy to increase involvement by any target group.</p> <p>Strategy.....e.g. show racism the red card (1)</p>	1			1

Question	Mark scheme	AO1	AO2	AO3	Total
(d) (i)	<p>Explain the difference between health and fitness.</p> <p>Health - mental, physical and social well-being (1) - free from illness/injury (1) Health is more than being fit – it involves feelings of satisfaction, energy and mental well-being which often come through the social aspects of participating in sport and exercise.</p> <p>Fitness - meet the demands of the environment (1) - physical readiness for the activity (1)</p>		2		2
(ii)	<p>Explain, using examples, two benefits of taking part in physical activity.</p> <p>Physical benefits such as increased CV end Mental benefits such as improved confidence Social benefits such as new friends</p> <p>May use other examples. Can use more than one examples in each area. Accept relevant e.g.</p> <p>Mark for the benefit and one for the such as...</p>		4		4

	Q1	Q2	Q3	Q4	Q5	Total	OVERALL WEIGHTING
AO1	11	10	10	13	6	50	
AO2	8	9	5	4	14	40	
AO3	4	6	7	9	4	30	
Total	23	25	22	26	24	120	