GCE

Physical Education

Advanced Subsidiary GCE

Unit **G451:** An Introduction to Physical Education

Mark Scheme for January 2011

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Section A – Anatomy and Physiology		Additional Guidance	
		Accept	**Do not accept**
1 (a) (i) State the movement at the ankle joint of the striking foot at the point of contact and name the agonist muscle responsible for creating the movement. (2 marks)			
1 (Movement)	Plantar flexion	Incorrect spelling	Flexion
2 (Agonist)	Gastrocnemius/soleus		
1 (a) (ii) How would a warm up affect the contraction of a skeletal muscle? (3 marks)			
		Points in any order	
3. (temp)	**Increased muscle** or body temperature		Warms up muscle or body
4. (**muscle** viscosity)	**less** resistance within muscle / **reduced** muscle viscosity (which leads to …)		
5. (force/speed)	Increased force **or** speed **or** power of contraction	Increased contractility / Muscle more efficient = BOD / larger or bigger contractions= BOD	Increased contraction Increased speed on own
6. (nerve transmission)	**Increased** speed of nerve transmission **or** impulse **or** conduction	Increased nerve transmission	Increased speed on own
7. (enzymes)	**Increased** enzyme activity (within muscle cells)		
8. (antagonistic pairs)	**Improved** coordination **or** efficiency between antagonistic pairs		
9. (muscle stretch)	allows **greater** stretch **or** elasticity of (antagonistic) muscle (fibres)		Muscle more flexible
			5 marks in total for question 1 (a)

		Accept	Do Not Accept
1 (b) Explain how a footballer would apply force to a ball in order to create spin and name the type of motion which this would create. Using a practical example from PE or sport describe linear motion. (5 marks)			
Explain how a footballer would apply force to a ball in order to create spin and name the type of motion which this would create.			
1.	The footballer would apply an eccentric force **or** force outside the centre of gravity **or** outside the centre of mass (of the ball)	to the side or bottom or top of the ball = BOD off centre = BOD diagram showing above = BOD	Edge of ball / Hit ball at angle / When you don't kick the ball in the middle
2.	**...** which creates **angular motion**		Create spin or rotation
Using a practical example from PE or sport describe linear motion. (sub max 3) 2 max with no example.			
3. (**example**)	All body parts (and the skis/toboggan) of a (speed) skier or tobogganist move at the same speed in the same direction / ...move the same **distance** at the same **time** in the same direction / The head and torso of a skater/cyclist/skier/runner move at the same speed in the same direction / ... move the same **distance** in the same **time** / in the same direction / The flight path of a shot follows a **curved line** until it lands speed skier / toboggonist / skeleton bobsleigh / bobsleigh / luge / racing dive	Balls – if candidate refers to force applied through Centre (of Mass) or a direct force	'100 m sprint' on own 'Throwing or kicking a ball' on own
4. (along line)	Linear motion is motion in a (straight **or** curved) line / Linear motion is where force is applied through the CoM	Parabola	Motion in a loop
5. (direction)	All parts move the same **distance** at the same **time** in the same **direction** / all parts move at the same **speed** in the same **direction**	all parts move with same velocity direction on own = BOD	Speed, time, distance without ref to direction
			5 marks in total for question 1 (b)

		Accept	Do not accept
1 (c) Explain how intrinsic control mechanisms cause cardiac output to increase during exercise. (5 marks)			
Starling's Law:			
1. (venous return)	**Increased** venous return / **more** blood enters the atria or heart...	increased blood flow back to the heart	
2. (atrial stretch)	The right atrium stretches		
3. (SA node)	...SA node **increases** rate of firing / ...SA node **increases** heart rate		
4. (ventricular stretch)	**...**more blood enters ventricles causing them to stretch **further** / **increased** EDV or end diastolic volume		Heart stretches T = TV
5. (strength of contraction)	(this) increases the strength of contraction or recoil (of heart wall or ventricles) / ESV or end systolic volume		'Starling's Law' on own
6. (stroke volume)	...this **increases** stroke volume / forces **more** blood out per beat		
Temperature:			
7. (temperature)	(body) temperature increases which **increases** heart rate		
8. (nerve impulses)	(body temperature increases) which **increases** speed of nerve impulses (to SA node)		
Outcome:			
9. (cardiac output increases)	Q = SV x HR / cardiac output = SV x HR	'CO' in equation for cardiac output	
			5 marks in total for question 1 (c)

1 (d) Give <u>two</u> effects of carbon monoxide on the transport of oxygen in the blood. Compare the process of gaseous exchange of oxygen at the alveoli between rest and exercise. (5 marks)		Accept	Do not accept
Give <u>two</u> effects of carbon monoxide on the transport of oxygen in the blood. **(sub max 2)** **Mark first TWO responses only**			
1. (gaseous exchange)	Less efficient gas exchange **or** diffusion / decreased (oxygen) diffusion **or** concentration gradient		slower
2. (O_2 association with Hb)	Haemoglobin or Hb has a high**er** affinity for carbon monoxide (than O_2..) / ...less oxygen combines with haemoglobin / haemoglobin not fully saturated with oxygen /less oxyhaemoglobin		
3. (PPO_2)	The partial pressure of oxygen (PPO_2) in the blood decreases	Pressure of O_2	
4. (less O_2)	Less oxygen is carried or transported (in the blood) / less O_2 delivered to muscles		
Compare the process of gaseous exchange of oxygen at the alveoli between rest and exercise. **(sub max 3)** **Accept opposites**			
5. (alveoli)	Partial pressure (ppO_2) in the alveoli is the **same** (high) at rest **as** during exercise		
6. (pulmonary capillaries)	Partial pressure (ppO_2) in the (pulmonary) capillaries **or** (venous) blood is **lower** during exercise (than at rest) / **accept opposites eg** Partial pressure (ppO_2) in the (pulmonary) capillaries **or** (venous) blood is **higher** at rest (than at exercise)		
7. (diffusion **gradient**)	Diffusion **or** concentration gradient is **steeper** or **greater** or **higher** or **increased** during exercise (than at rest)		
8. (movement of oxygen)	**More** oxygen moves from the alveoli to the capillaries **or** to blood during exercise (than at rest) / **increased or greater or quicker** gaseous exchange **or** diffusion during exercise / Hb is fully saturated during exercise (but not at rest)		
			5 marks in total for question 1 (d)

1 (e) Discuss the effects of asthma on people performing endurance activities and describe the methods available to help them control these effects. How might regular involvement in endurance activities impact on the participant's respiratory system? (10 marks)		
Level 3 **8-10 marks**	**A comprehensive answer:** • **detailed** knowledge & understanding • **effective** analysis/critical evaluation and/or **discussion**/explanation/development • **clear** and **consistent** practical application of knowledge • **accurate** use of technical and specialist vocabulary • **high standard** of written communication	**Discriminators from L2 are likely to include:** • effective discussion of physiological effects of asthma • effective coverage of methods to control effects of asthma • good understanding of how regular involvement in endurance activities benefits respiratory system
Level 2 **5-7 marks**	**A competent answer:** • **satisfactory** knowledge & understanding • analysis/critical evaluation and/or **discussion**/explanation/development attempted **with some success** • **some success** in practical application of knowledge • technical and specialist vocabulary used with **some accuracy** • written communication **generally fluent** with **few errors**	**Discriminators from L1 are likely to include:** • attempt at coverage of physiological effects of asthma • coverage of methods to control effects of asthma • some understanding of how regular involvement in endurance activities benefits respiratory system
Level 1 **0-4 marks**	**A limited answer:** • **basic** knowledge & understanding • **little or no attempt** to analyse/critically evaluate and/or **discuss**/explain/develop • **little or no attempt** at practical application of knowledge • technical and specialist vocabulary used with **limited success** • written communication **lacks fluency** and **there will be errors,** some of which **may be intrusive**	**An answer at this level is likely to include:** • limited coverage of physiological effects of asthma • limited coverage of methods available to control effects of asthma • limited understanding of how regular involvement in endurance activities benefits respiratory system

Indicative content: candidate responses are likely to include: NB - relevant responses not listed should be acknowledged
Numbered points = knowledge/understanding **Bullet points** = likely to be development of knowledge

Context

1. **Asthma reduces the amount of oxygen getting (in)to the lungs**
2. **Asthma is a (reversible) narrowing or constricting of respiratory airways / asthma makes it hard to breathe / broncho-constriction**
   - (causing) coughing / breathlessness / wheezing / mucus production / chest tightness
3. **Asthma is most commonly caused by inflammation of the bronchus or bronchioles or airways**
4. **Asthma is (usually) brought on by triggers**
   - Allergens

   eg exhaust fumes / pollen / hair / dust
   - Exercise induced asthma (EIA)
   - hyperirritability
   - drying of airways increased by (more breathing) exercise
   - more likely with high intensity exercise
   - more likely when exercising on cold days

   eg Winter sports – (cooler air tends to be drier)

   eg Water sports/swimming – (due to chlorine)

Physiological effects of asthma on people performing endurance activities

5. Can cause **unconsciousness** / can be dangerous
6. Can **limit athletic performance** due to reduced function of respiratory system / asthma sufferers can be disadvantaged / reference to participation
7. Less oxygen is supplied to the muscles
   - Especially limits aerobic athletes (who are reliant on oxygen uptake)
   - Tidal volume reduced
   - Efficiency of gaseous exchange (at the alveoli and the muscle) reduced
   - (causing) increased levels of lactic acid to be produces / early onset of fatigue or OBLA / reduced VO_2max
   - recovery or OBLA takes longer

Methods available to help control effects of asthma

8. **(Medical) Inhalers**
   - short acting **or** Bronchodilators **or** blue inhalers
     eg '*Ventolin' etc*
   - used **during exercise** to relieve symptoms
   - used before exercise to relax airways (beta agonists) / dilate bronchi
   - long acting **or** brown / beige / white / red / orange **or** Corticosteroids (inhaled steroids)
     eg '*Becotide' / Symbicort etc*
   - used daily
   - to reduce inflammation in airways
   - inhaled before exercise as preventative measure to improve lung function
9. **Warm Up**
   - 10 – 30 mins moderate exercise can prepare respiratory system (reducing chances of an attack)
   - Warm up can give up to 2 hrs protection from EIA
10. **Inspiratory Muscle Training or IMT**
    - Use of respiratory equipment to develop strength of respiratory muscles
    - (Forced) inspiration and expiration exercises / inspiration and expiration against a resistance
    - Use of specialist products
      eg '*Powerbreathe'*
    - use twice a day
    - 30 breaths
    - maximal inspiration and maximal expiration
11. **Breathing control or breathing exercises**
12. **Diet**
    - Increased intake of antioxidants **or** vitamins **or** fresh fruit **or** vegetables
    - drink lots of water (to avoid dehydration)
    - Increased intake of fish oils
    - Reduced intake of salt
    - Caffeine acts as a bronchodilator / caffeine now off banned IOC list
13. **Avoid conditions or** allergens which trigger attacks
    eg Avoid exercise in cold or dry conditions
14. Do not smoke
15. Take regular exercise

<u>How might regular involvement in endurance activities impact on respiratory system?</u>

Overall – regular involvement in endurance activities means...

16. More efficient and healthy respiratory system
17. (In some cases) reduced frequency / severity of asthma attacks
    (In rare cases) a cure to the condition

Structural changes:

18. Increased size and efficiency of alveoli / increased number of (active) alveoli
    - Increased **surface area** (for diffusion)
19. increased capillary density around alveoli / increased capillary density around muscle tissue / capillarisaion
    - increased gaseous exchange / increased diffusion
    - greater saturation of Hb with oxygen
20. Increased elasticity of respiratory pathways **or** alveoli
    - Increased volumes of air entering the alveoli

Mechanical changes:

21. Increased strength and power of respiratory muscles
    eg diaphragm / intercostals / SCM / scalenes / abdominals
    - Increased lung volume **eg increased tidal volume / increased vital capacity etc**
22. Increased efficiency of the respiratory muscles
    - Less oxygen required for the respiratory muscles
    - less chance of respiratory fatigue

Frequency:

23. Performers have increased respiratory frequency or increased rate of breathing **during maximal exercise**

Maximal/Sub max Intensities

24. Increased minute ventilation **at maximal intensities**
25. Increased pulmonary diffusion **during maximal activities**
26. Aerobic performance (**during maximal intensities)** is increased **or** prolonged / can use the aerobic system for longer or at higher exercise Intensities / increased VO_2 max
27. Reduced effort at sub-maximal work loads

10 marks in total for question 1 (e)
Section A Total [30]

Section B: Acquiring Movement Skills		Accept	Do not accept
2 (a) The classification of skills can help us to understand and learn new movement skills. Using a practical example for each, describe what is meant by a simple skill and a complex skill. (4 marks)			
1. (simple skill)	One or few stimuli to process / limited information to process/one or few decisions to make / skill with few subroutines / limited cognitive demand / limited perceptual requirements / less feedback / limited decision making		They are simple or easy/ they are not difficult / no conscious thought/ no decision to make/ can easily be broken into SRs / ref high or low organisation
2. (**eg** simple)	Swimming / running / sprinting / sprint start / (closed skills eg) throwing / kicking / jumping (in a closed situation)	First eg only – if list / if explanation X	Naming **sports** rather than **skills**
3. (complex skill)	Many stimuli to process / lots of information to process / many decisions to make /increased perceptual requirements / more feedback / skill with more or many subroutines		They are complicated or difficult / needs conscious thought/ cannot easily be broken into SRs / ref high or low organisation
4. (**eg** complex)	Batting or bowling in cricket / basketball dribble / tennis serve / hitting a ball / gymnastics routine / somersault / high jump / triple jump / golf swing (open skills eg) receiving a ball / delivering a pass (in an open situation)	First eg only - if list / if explanation X	Naming **sports** not **skills**
			4 marks in total for question 2 (a)

2 (b) What is meant by response time when performing a movement skill? Explain the factors that affect response time in performing practical activities. (4 marks) one mark for definition		**Accept**	**Do not accept**
1. (explanation)	Reaction time or RT + Movement time or MT /Information processing time + movement time / Time from onset or **start** of stimulus to **end** of movement	If correct explanation within a practical eg	The time it takes to respond
Explain the factors that affect response time in performing practical activities. 3 marks max.			
2. (stimuli or choices)	Number of stimuli or choices / number of alternative responses / number of decisions to be made / If performing open or complex or externally-paced skills Intensity of stimulus / the more compatible or predictable of S-R bond / If warning given (eg 'on your marks') / anticipation		
3. (PRP)	If 'sold a dummy' **or** given 'fake pass' / if psychological refractory period (PRP) or single channel hypothesis active		
4. (distractions)	Distractions / ability to selectively attend / social inhibition makes decision making more difficult / noise	spectators	
5. (age)	RT slows down as we get older / if you are older your RT is slower / response time decreases to an optimum age then increases		age on own
6. (gender)	Females (generally) have slower RT than males		gender on own
7. (fitness/health/ competence)	Level of fitness / health / skill / tiredness	reference to disability if explained	Ref weight
8. (neural pathways)	Length of neural pathways / height / responses quicker with hands than with feet / muscle or body temperature		
9. (arousal)	Level of arousal or anxiety		
10. (experience)	Past experience / presence of motor programmes		
11. (environmental conditions)	Environmental conditions **with explanation** / (eg) windy conditions can impede perception or confuse		
12. (alcohol)	Alcohol or drugs		
			4 marks total for question 2 (b)

2 (c)	**For the three phases of learning, describe the use of different types of guidance to improve the performance of movement skills. (6 marks)** **Sub max 4 for any one phase.** **At least one mark from each phase needed for max.** **Accept accurate equivalent descriptions**	
Cognitive/first/beginner phase		**Do not accept**
1.	**Visual** – demonstration / video / poster (of a movement) / gives mental picture / gives idea of what skill should look like	Helps understanding/ helps you understand what you need to do
2.	**Verbal** – giving (basic) information of what needs to be done / positive feedback / positive reinforcement / to correct errors / keep verbal guidance simple / to focus on key points	
3.	**Manual** – (physically) supporting movements to increase safety or confidence or timing / to reduce risk / to learn basic body position / to get feel of movement / to develop kinaesthesis	
4.	**Mechanical** – using a mechanical aid / stabilisers on a bike / swimming float / to increase safety or confidence / to reduce risk / to learn basic body position / to get feel of movement / to develop kinaesthesis	
Associative/second/intermediate phase		
5.	**Visual** – demonstration of more difficult or new movements or skills	
6.	**Verbal** – feedback to refine or correct or develop skills / to introduce tactics or strategies	
7.	**Manual** –for more specific or more advanced body position or movement / for safety or confidence / should be gradually or completely removed	
8.	**Mechanical** – twisting belt in trampolining or bowling machine in cricket (or equivalent) to practise more complex actions or to groove skill	
Autonomous/third/advanced phase		
9.	**Visual** – demonstration of difficult moves /as reminder of basic moves / show video of a top class performer / video analysis / allows analysis	
10.	**Verbal** – (advanced) tactics or strategies / technical detail / discussing outcomes / negative feedback as well as positive / predominant or best method (at this stage)	
11.	**Manual** – for highly complex or difficult moves / limit manual at this stage to encourage kinaesthesia or kinaesthetic awareness / used less in this stage	
12.	**Mechanical** – a bowling machine set at a difficult setting (to stretch and challenge) /	
		6 marks in total for question 2 (c)

		Accept	Do not accept
2 (d) Discuss the effects of Thorndike's Laws on the S-R bond and the learning of movement skills. (6 marks) Law does not need to be named			
1. (laws)	Law of exercise, law of effect, law of readiness	All 3 for one mark	
Law of Exercise Submax 2			
2. (repetition **+**)	Repeating or rehearsing or practising the movement will strengthen (the S-R bond) or will help learning	**Reinforcing** the skill	
3. (lack of repetition **-)**	Tiredness or information overload or incorrect or lack of practise may hinder or weaken (the S-R bond) or will hinder learning		
Law of Effect Submax 2			
4. (satisfaction **+**)	Reinforcement or praise or satisfaction or pleasure or enjoyment or success or positive feedback will strengthen (the S-R bond) or will help learning		
5. (annoyance **-**)	Annoyance or lack of enjoyment or failure will weaken (the S-R bond) or you will avoid learning or learning will be hindered		
Law of readiness Submax 2			
6. (preparedness/ maturity **+)**	Must have physical **or** mental capability or maturity must be appropriate to strengthen (the S-R bond) or to help learning		
7. (immaturity **-)**	If too young or immature or perceptually inadequate this can weaken (the SR bond) or hinder learning		
			6 marks in total for question 2 (d)

		Additional Guidance
2 (e) Describe each of the practice methods shown in Fig and critically evaluate their use in the performance of movement skills. (10 marks)		
Level 3 **8 – 10 marks**	**A comprehensive answer:** • **detailed** knowledge & understanding • **effective** analysis/**critical evaluation** and/or discussion/explanation/development • **clear and consistent** practical application of knowledge • **accurate** use of technical and specialist vocabulary • **high standard** of written communication.	**Discriminators from L2 are likely to include:** • clear description of **most** practice method • both positive and negative aspects of practice methods explored well for **most** methods
Level 2 **5 – 7 marks**	**A competent answer:** • **satisfactory** knowledge & understanding • analysis/**critical evaluation** and/or discussion/explanation/development attempted **with some success** • **some success** in practical application of knowledge • technical and specialist vocabulary used **with some accuracy** • written communication **generally fluent with few errors**.	**Discriminators from L1 are likely to include:** • description of **most** practice methods • both positive and negative aspects of practice methods explored with some success for **some** methods
Level 1 **0 – 4 marks**	**A limited answer:** • **basic** knowledge & understanding • **little or no attempt** to analyse/**critically evaluate** and/or discuss/explain/develop • **little or no attempt at** practical application of knowledge • technical and specialist vocabulary used with limited success • written communication **lacks fluency** and **there will be errors**, some of which may be intrusive.	**An answer at this level are likely to include:** • description of **limited number** of practice methods • limited success at exploring positive **and** negative aspects of practice methods

Indicative content: candidate responses are likely to include: **NB - relevant responses not listed should be acknowledged**
Numbered points = knowledge/understanding **Bullet points** = likely to be development of knowledge

Massed

1. **Description –** no or very few rest intervals / continuous practice / long sessions **eg continuous netball shooting or other suitable eg**
2. **Good for** cognitive phase learners or beginners / used to groove or thoroughly learn a skill / good to make skill habitual
3. **Good for** simple or discrete or short duration skills
   eg sprint start or equiv.
   - Helps to develop motor programmes / helps strengthen S-R bond
     eg ... accept suitable example of motor programme
   - Overlearning a (positive) feature
4. **Good for:** autonomous / experienced / older / more motivated / fitter performers / requires fitness
5. (can be) good to develop fitness

6. **But** – can be tiring or too fatiguing or tedious or boring
   - Can lead to: mental tiredness / de-motivation / inhibition / drive reduction
   - Errors increased or compounded / not enough correct movements to stimulate or motivate
   - Can lead to (overuse) injuries

Distributed

7. **Description –** regular breaks / skill practised in short bursts **eg sprint starts with regular breaks or other suitable eg**
   - for rest / recovery / to maintain motivation
   - for mental rehearsal
   - reinforcement of actions / to take stock of outcomes / opportunities for feedback
   - (Usually) considered to be better than massed practice / (often) considered the most effective form of practice
8. **Good for:** cognitive learners / for less fit or less motivated learners /avoids boredom
9. **Good for:** associative / autonomous learners
   - To give better understanding of the skill
10. **Good for:** continuous / dangerous / complex skills
    eg accept suitable examples

11. **But** – can cause disruption in learning / disjointed activity impedes learning
    - Can de-motivate if breaks are too regular or too long

Fixed

12. **Description –** practice remains the same / the same or constant situation / same movement practised repeatedly in same (stable) environment **eg** a cricket bowler practising in indoor nets or other suitable eg

13. **Good to** develop motor programmes / for over learning / to perfect skill / good in cognitive stage

14. Good for closed skills (because replicates competition)
eg discus throw or any other suitable example

15. **But** – can be: tedious / boring / de-motivating
- Not suitable for open skills / does not prepare for game situation or open environment
- Can lead to (overuse) injuries

eg passing in hockey or any other suitable example

Varied

16. **Description –** practice changes regularly / different situations or environment / different activities performed in different ways
eg hockey players passing in different situation (isolation, passive defence, active defence, small sides games) or other suitable eg

17. **Good for** open skills
eg returning a serve in tennis or other suitable example

18. Good preparation for the 'real game' situation (if conditions realistic)

19. **Best when** skill has already been learned (in a fixed practice) / good for autonomous stage

20. Can stimulate interest or motivation / prevent boredom

21. Helps to develop schema

22. Can facilitate transfer of learning

23. **But** – can confuse
- especially for learners or for cognitive phase performers
- Too many stimuli can cause information overload
- May not be able to: groove a skill / develop effective motor programmes

Mental

24. **Description –** going over skill in your head / imagining yourself doing the skill / visualisation
eg a dancer running through their routine in their head before performance or other suitable eg
- Helps understanding of requirements / can create mental picture of movement requirements

25. **Good for** autonomous learners or advanced performers
26. **Works well with** distributed practice during rest intervals
27. Reinforces or helps: in learning movements / patterns / sub-routines
28. Faults visualise and correction
- Visual representation remembered better

29. Activates nervous impulses / reduces reaction time
30. Helps to eradicate irrelevant information
- maintains focus or selective attention

31. Can organise information for storage / increase storage capacity
32. Can improve confidence or optimism
- Helps to control arousal levels

33. **But** – some more able to use effectively than others
- Some personalities or certain dispositions cannot use this approach effectively

34. Mental practice is not easy to apply in competitive situation
35. Mental plus physical practice better than mental practice on its own.

10 marks in total for question 2 (e)
Section B Total [30]

Section C: Socio-cultural studies relating to participation in physical activity

3 (a) State <u>three</u> benefits that can be gained through participation in Outdoor Education and explain why regular, high quality Outdoor Education is only available in some schools.
(6 marks)

State <u>three</u> benefits that can be gained through participation in OEd: **3 marks max** **Mark <u>first three responses</u> only**		**Do not accept** learn new skills / weight loss feel-good factor = TV 'well being' on own
1. (physical)	Physical (benefits or skills) / eg gaining knowledge of or learning camp craft or first aid or map reading / learning survival techniques / improved health or fitness / **physical** well being / BAHL	example on own eg abseiling or camp craft / skills / basic skills /
2. (personal)	Personal (benefits or skills) / self awareness or development or confidence or esteem or respect or fulfilment or discipline / self realisation / self-actualisation / knowledge of strengths & weaknesses /learn about themselves / overcome fears / mental strength / emotional control / challenge /character building / sense of achievement / independence / sense of freedom	knowing what they are good at / courage / enjoyment / life skills / /sportsmanship /moral values / preparation for later life
3. (leadership)	Leadership / responsibility	
4. (cognitive)	Cognitive or thinking skills / decision making /problem solving / learn how to overcome challenges	
5. (commitment)	Commitment / determination	
6. (social/team)	Social (benefits or skills) / socialisation / teamwork / bonding / sharing / co-operation / communication / trust / loyalty	socialise / make friends / improve social life
7. (preparation)	**Preparation** for lifelong participation / preparation for career / gain awards or qualifications / can get (eg) D of E/BELA or Kayak 1 star / Other examples of qualifications	'preparation skills or benefits' on own
8. (aesthetic / adventure / risk)	Aesthetic appreciation or awareness / respect for or appreciation of outdoors or environment or nature or countryside / awareness of or learn about nature or natural environment or conservation etc / improved quality of life / a spiritual experience / 'buzz' or 'thrill' or 'rush' or '**sense of** or **feeling of** risk' / sense of adventure or excitement	'qualitative benefits' on own / experience' the great outdoors' = TV learn about surroundings = TV 'risk' on own /(feeling) danger / more exciting than 'normal PE'

		Accept	Do not accept
...explain why regular high quality Outdoor Education is only available in some schools: **(Sub max 3)**		Positives/opposites eg '*some schools have the specialist staff or are located close to natural environment*'	lack of opportunity or provision or esteem on own
1. (staff)	**Lack of**: staff expertise or qualified staff or qualified coaches / specialist training needed / staff ratios / no trained staff		'lack of staff' on own / not enough staff
2. (funding for / contributions/ transport)	**Lack of funding for**: using artificial facilities or **specialist** equipment of **specialist** facilities Lack of funding for: specialist staff training or transport or residential/ Need for voluntary contributions **Lack of**: transport / **specialist** facilities / **specialist** equipment (eg canoes)	Correct/suitable/ appropriate equipment or facilities	OEd too expensive / due to cost / can't afford it / 'lack of funding' on own / 'lack of funding for trips' on own / lack of facilities or equipment on own / no space / lack of resources / lack of provision
3. (risk / paperwork)	Staff reluctant to take on responsibility / staff uneasy with risk factors / staff put off by paperwork or risk assessment procedures / lack of parental consent / health and safety concerns		Not safe / dangerous
4. (time)	O Ed takes or can take a lot of time / lack of time /restrictions on time table / pressure on curriculum /pressures of exam work		
5. (distance)	**Distance** from **natural environment** or **artificial facilities** or **suitable** area or **specialist** facilities / schools (located) in cities		location of schools / no access to 'facilities' on own / no facilities nearby
6. (NC)	Not a compulsory part of NC / low status in (some) schools / not seen as important by some teachers or Head Teachers		not on NC/ 'attitudes of HTs' on own
			6 marks in total for question 3 (a)

		Accept	Do not accept
3 (b) Outline the origins of Australian Rules football and factors that have helped to develop the game in Australia. (5 marks) **Sub max 3 for either part of question**			
Origins of Australian Rules Football **Sub max 3**			
1 (when /where?)	(late) 1850s / '150' years ago / in Melbourne / in Victoria	date 1855 – 1860 / mid C19th	1900s
2 (Wills)	Set up or organised or invented by Tom Wills...	Tom Mills (BOD)	
3 (winter training)	...as winter training game for cricketers		by cricketers
4 (origins – argument 1)	(probably) the combination of aboriginal (leaping) game **and** Rugby (union)		from aboriginal (leaping) game on own / from rugby on own
5 (origins – argument 2)	(some argue) the combination of Gaelic football **and** Rugby (union)		from Gaelic football or rugby on own
...and factors that have helped to develop the game in Australia **Sub max 3**			
6 (media)	A (successful) media product / good for TV / media interest / media exposure		
7 (commercialism)	impact of commercialism or sponsorship / links with 'golden triangle'		
8 (management)	Increased or improved management or structure		
9 (schools)	Taught or played in schools / interschool games		
10 (pathway)	There are (effective) pathway programmes /structured route (from school) to elite level		
11 (appeal)	Game appeals to all / game can be played by men and women / game can be played by all body types		
12 (Australian game / national comps / exhibitions)	Australia keen to have 'own' game / (display of) bush culture or manliness / national competitions (at elite levels) have spread game (throughout country) / exhibition matches have spread interest / work of AFL		competitions on own
14 (conversion)	Some players have changed from other games or codes (eg from Rugby Union, Rugby League, Assoc FB to Aussie Rules)		
15 (opportunity)	Opportunities for players to gain financial rewards or celebrity status (are a big attraction)		due to role models
16 (general)	Availability of space / access to cricket pitches in winter / young population or nation / favourable climate / sporting obsession / government funding for sport		good transport links
			5 marks in total for question 3 (b)

3 (c) Modern technological products are a key feature of contemporary sport. Outline the advantages and disadvantages on performance in sport of using modern technology. Use examples of specific technology to support <u>each of</u> your points. (4 marks) **Sub max of 3 for either advantages or disadvantage** **A <u>different</u> example needed to support each point/gain each mark**		
Accept: Alternative examples to support points: • heart rate monitors / timing equipment • computers/video recorders weights/treadmills/weighted vests/parachutes/pulleys / hypoxic tents / nasal strips • **physiological** aids eg blood doping / human growth hormone • **nutritional** aids including sports drinks / shakes / supplements		**Do not accept**: • Massage / physiotherapy • hypnosis / imagery
Advantages: **Sub max 3** **Accept other relevant examples**		
1. (outcome / entertainment)	Fairer outcome / fewer disputes / clarification of goals or tries or whether ball in or out **eg** video playback / third or TV umpire / Hawk –Eye entertainment or interest for crowds **eg** waiting for result from TMO / Hawk –Eye	
2. (safety)	Safety **eg** gum shields / cricket head gear / landing mats	
3. (comfort)	Comfort **eg** clothing / equipment design such as footwear	
4. (skill / improved performance)	More skilful / improved or more efficient or more effective performance / **eg** body suits (athletics / swimming) / graphite or titanium equipment / modern footballs allow better swing or curve	
5. (understanding)	Better understanding of rules **eg** refs or umpires being 'miked up' for all to hear	
6. (analysis)	Analysis **eg** use of video or other playback equipment / rowing boats that measure or record forces or motion	
7. (training)	To enhance training **eg** tyre towing / elastic cord / diet / supplements	
8. (recovery)	To aid recovery / recover from injury **eg** medical products such as artificial ligament and/or joint replacement / use of 'illegal' **pharmacological** aids or drugs / compression wear / ice baths	
9. (inclusion)	Inclusion or participation **eg** carbon fibre blades/artificial legs/wheelchairs / surfaces that allow play throughout the year	
10. (purity)	Purity of sport enhanced **eg** use of drug testing equipment or methods	
Disadvantages: **Sub max 3**		
11. (cheating)	Cheating **eg** drugs in sport	
12. (disruption)	Disruption to 'game' **eg** time taken for video playback	
13. (injury)	Injury **eg** from bladed boots / due to use of rugby shoulder pads which may make some players feel invincible	
14. (unfair advantage / expensive)	Unfair advantage / expensive / dependent on sponsor **eg** F1 technology (not initially used by all teams) Technology not equally available / not everyone has the item **eg** high tech bikes to more wealthy v less wealthy countries	
15. (lost traditional ethic)	Loss of traditional ethic or nature of sport / win at all costs rather than participation for enjoyment **eg** use of high tech equipment at junior or local level	
		4 marks in total for question 3 (c)

3 (d) (i) Describe the <u>role of</u> either UK Sport <u>or</u> one of the National Institutes of Sport. (3 marks) Sub max 3 for <u>either</u> UK Sport <u>or</u> National Institute		
		Do not accept
The role of UK Sport		Provides coaching / facilities / sports science etc / develops talent
1. (elite)	Develops elite or high performance sport in the UK / works on a strategy to increase (sporting) excellence in UK / supports elitism	
2. (lottery)	Manages or distributes National Lottery or world class funding	Gives money to elite / **receives** lottery
3. (behaviour)	Promotes ethical behaviour / has anti-doping programme / encourages 'drugs free' sport	
4. (events)	Attract major events (eg Olympics 2012)	
5. (efficiency)	Increases efficiency of organisation or administration of sport (in UK)	
6. (relationships)	Manages the UK's sporting relationships with other countries	
7. (PLA)	Helps elite performers develop a sporting lifestyle / gives Performance Lifestyle Advice (PLA)	
8. (support / co-operation)	Supports or works with NGBs or Home Country Councils (eg Sport England) or National Institutes or elite coaches	Supports coaches
9. (TASS)	(Manages the) Talented Athlete Scholarship System (TASS – govt funded programme linking sport and higher education)	
<u>or</u> The role of National Institute/s of Sport Institutes provide:		Provides coaching / facilities/ sports science etc / develops talent
10. (practical)	Practical support (to elite performers) / world class or high level facilities / tries to produce medal winners or elite performers	Gives support / provides facilities
11. (analysis)	Performance analysis	
12. (medicine)	Sports medicine / medical consultation or screening	
13. (science)	To give sports science support / nutrition/podiatry/psychology/physiotherapy/biomechanics/strength & conditioning/sports massage/sports vision or other suitable example of practical sport science support	
14. (PLA)	Career or education or lifestyle advice / performance lifestyle advice	

3 (d) (ii) Explain the relatively recent move from a traditional amateur to a more professional approach to the organisation of sport in the UK. **(2 marks)**		
		Do not accept
1. (description of approaches/ background)	**Traditional amateur approach –** taking part for love or enjoyment / taking part more important than winning ... **(and)** **More professional approach –** taking part for a job / winning all important / more competitive / Professionalism means sport is more competitive and less about taking part / Professionalism means sport is higher standard now	Unless amateurism and professionalism addressed
2. (complicated)	Old system was (too) complicated or disorganised / lack of communication between organisations	
3. (ineffective)	Old system was not working or was ineffective / old system gave too much autonomy or independence to individual organisations	
4. (modern sport)	Modern or contemporary or commercial sport needs modern or 'results driven' system	
5. (mass participation)	Desire or (social) need to increase mass participation or healthy lifestyles	
6. (NGB funding)	NGBs forced to change or modernise to keep funding	
7. (raise standard)	Desire or need to improve standards / to keep up with other nations / to compete on world stage	
		5 marks in total for question 3 (d)

3 (e) Critically evaluate the possible impact of hosting the Olympic Games in the UK in 2012. Your answer should include benefits and drawbacks to both sport and society. **(10 marks)**		
Level 3 **8 – 10 marks**	**A comprehensive answer:** • **detailed** knowledge & understanding • **effective** analysis/**critical evaluation** and/or discussion/explanation/development • **clear and consistent** practical application of knowledge • **accurate** use of technical and specialist vocabulary • **high standard** of written communication.	**Discriminators from L2 are likely to include:** • most parts of question addressed (ie benefits to sport and society **and** drawbacks to sport and society) • effective structure to answer • a thorough evaluation of the impact of hosting Olympic Games in UK the in 2012 showing... • comprehensive understanding of the issue
Level 2 **5 – 7 marks**	**A competent answer:** • **satisfactory** knowledge & understanding • analysis/**critical evaluation** and/or discussion/explanation/development attempted **with some success** • **some success** in practical application of knowledge • technical and specialist vocabulary used **with some accuracy** • written communication **generally fluent** with **few errors**.	**Discriminators from L1 are likely to include:** • some parts of question addressed (ie benefits to sport and society / drawbacks to sport and society) • attempt at structuring answer • a competent evaluation of the impact of hosting Olympic Games in the UK in 2012 showing... • competent understanding of the issue
Level 1 **0 – 4 marks**	**A limited answer:** • **basic** knowledge & understanding • **little or no** attempt to analyse/**critically evaluate** and/or discuss/explain/develop • **little or no attempt** at practical application of knowledge • technical and specialist vocabulary used **with limited success** • written communication **lacks fluency** and there **will be errors**, some of which **may be intrusive**.	**An answer at this level is likely to include:** • a limited number of question parts addressed • limited structure • simplistic evaluation of the impact of hosting Olympics in UK in 2012 showing... • limited understanding of the issue

Indicative content: candidate responses are likely to include: NB - relevant responses not listed should be acknowledged **Numbered points** = knowledge/understanding **Bullet points** = likely to be development of knowledge NB: no requirement to link points with side headings / credit points wherever they are given	
Possible benefits to <u>society</u>:	
1. (legacy)	Legacy / upgraded amenities for area / urban renewal / regeneration or rejuvenation of (deprived) area • Stratford (in East End of London) **eg** housing from 'Olympic village' (for new residential community) / offices
2. (transport)	Improved infrastructure or communications or transport system • upgraded road or rail network **eg** 'Olympic Javelin' railway
3. (tourism / economy)	Tourism increased • new business attracted • boost to economy / commercial or financial or business profit
4. (jobs)	Employment opportunities / job creation **eg** building and construction in years leading up to Games / part time or summer jobs for students
5. (volunteering)	Volunteering opportunities / chance to be a 'Games Maker' • Roles include: warehouse work / giving directions / collection and delivery
6. (education / skills/crime)	Increased educational attainment (due to Olympic focus) / skill development for local people / reduced crime rates
7. (integration / co-op / overcoming discrimination)	Increased social integration or co-operation or understanding or tolerance / brings people together / sense of belonging • ...through working together on local projects • reduced discrimination (due to high profile of Paralympics)
8. (participation / campaigns / role models / BAHLs)	Increased participation (in sport and physical activity)... • ...due to campaigns / due to campaigns competitions (in schools) / focus on TV **eg** .... accept named media campaign) • impact of role models inspire **eg** .... accept named role model • more balanced, active and healthy lifestyles / improved health or fitness... • improved NHS provision
9. (shop window / N Building)	Shop window effect or nation building or showcasing for UK / puts UK or London 'on the map' • 'feel good' factor / increased sense of well being / increased national pride

Possible drawbacks/disadvantages to <u>society</u>:	
10. (debt/recession)	overspending / debt • costs have risen considerably since bid • especially in times of austerity or economic crisis or Government cuts
11. (council tax)	high council tax bills • locals suffer financially
12. (house prices)	higher house or rent prices • harder for local or young people to buy in area / possible discrimination against local people • media or entrepreneurs buying into area
13. (no jobs)	limited long term job opportunities / employment only leading up to and during Games
14. (London only)	only London really benefits / limited benefit for regional or outlying areas / possible N v S divide or resentment **eg** Cornwall / Lake District
15. (nationalism)	possible emphasis on nationalism which could lead to discrimination
16. (disruption /evictions)	Disruption for locals / travelling community (possibly) evicted from area / pollution
17. (terrorism / scandal)	increased terrorist threat • cost of protecting against potential terrorism • UK judged harshly if things go wrong / loss of (national) pride / bad image for UK

Possible benefits to <u>sport</u>:	
18. (investment)	increased funding for or investment in sport (leading up to Games)
19. (profile)	high(er) profile for sport (due to media attention) / greater interest in sport
20. (world class facilities)	legacy of facilities / (world class) facilities for London / world class facilities for other areas **eg** swimming or diving facilities **eg** Weymouth for sailing • Upgraded training facilities elsewhere **eg** Aldershot's athletics training camp
21. (institutes)	National Institutes focus on or improve their provision **eg** EIS or other **eg** at Bisham Abbey or other • improved or world class sport science support • improved or world class sports medicine back up
22. (success)	success / improved elite performance in UK • host countries often win more medals than 'usual'
23. (org / admin)	organisation or administration of British sport (likely to be) improved **eg** efficiency of NGBs **eg** co-operation between different organisations
24. (other events)	UK becomes more attractive for other international sporting events **eg** World Cup/s
Possible drawbacks/disadvantages to <u>sport</u>:	
25. (elitism)	emphasis on elitism or excellence / rather than participation and BAHLs
26. (minority sports)	only Olympic sports get publicity / lack of publicity for minority sports **eg** netball or other suitable example
27. (withdrawal of funding)	funding to certain sports or aspects of sport likely to be withdrawn after 2010
28. (wasted facilities)	danger of 'white elephant' or wasted facilities / left with facilities that are expensive to maintain or are underused • possible removal of athletics track (if certain football clubs take over stadium) • ref Millennium Dome
29. (scandal/drugs)	sport will suffer if there are scandals **eg** drug scandals
	10 marks in total for question 3 (e) **Section C Total [30]**

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