

Physical Education

Advanced GCE **A2 7875**

Advanced Subsidiary GCE **AS 3875**

Combined Mark Schemes And Report on the Units

January 2006

3875/7875/MS/R/06J

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**Mark Scheme 2562
January 2006**

Section A

1 (a) Figure 1 shows a tennis player completing a service (execution phase). [6]

(i) Use the diagram to help you complete the following joint analysis.

1 mark for each of:

Shoulder Joint

- 1 (Type of joint) – ball and socket
- 2 (Articulating bones) – humerus and scapula
- 3 (Agonist) – latissimus dorsi/deltoid/teres major/pectoralis major
- 4 (Type of contraction) – concentric

Wrist joint

- 5 (Agonist) – wrist flexor
- 6 (Antagonist) – wrist extensor

(ii) Tennis players need to develop strength in their leg muscles. Identify one exercise which would develop strength in each of the following muscles. [2]

1 for each of:

- 1 Calf raises/heel raises
- 2 Leg extensions/squats/leg press/step ups

(b) A cool down has a number of effects on the vascular system which aid the performer. One effect is the prevention of blood pooling. Identify two other effects. [2]

Mark first 2 only

1 for each of:

- 1 Maintain stroke volume/cardiac output
- 2 Gradual decrease in temperature
- 3 Maintain blood pressure
- 4 Removal of waste (bi)products/carbon dioxide/lactic acid
- 5 Keeps capillaries dilated/maintains blood flow/oxygen to muscles/reduces O₂ debt
- 6 Maintains skeletal muscle pump/respiratory pump
- 7 Maintains venous return

- (c) During sub-maximal (aerobic) exercise the predominant muscle fibre type would be slow oxidative (type 1). Give one structural and one functional characteristic of this fibre type. [2]

1 mark for structure:

Structural characteristic	Slow oxidative – type 1
1 Size	Small
2 Colour	Red
3 Capillaries/blood supply	Many
4 Mitochondria	Many
5 Oxidative enzymes	High
6 Myoglobin content	High
7 Triglyceride supply	High
8 Motor neurone size	Small
9 Myelin sheath	Thin
10 Myosin ATPase activity	Slow
11 Sarcoplasmic reticulum development	Little
12 Phosphocreatine store	Low
13 Fibres per motor neurone	Few
14 Glycogen stores	Low

1 mark for function:

- 15 Slow to fatigue
- 16 Slow contraction speed
- 17 Low force output
- 18 Slow relaxation speed
- 19 High aerobic capacity

- (d) Figure 2 shows a spirometer trace of lung volumes of a performer at rest. [2]

(i) Name and define the lung volume labelled A

- 1 Identify – tidal volume
- 2 Definition – the volume of air inspired or expired per breath

(ii) What change would you expect in lung volume A as the performer starts to exercise? [1]

- 1 Increase

[Total: 15]

- 2 (a) **Large amounts of blood need to be circulated around the body during prolonged aerobic exercise.** [3]
- (i) **Identify the mechanisms of venous return that ensure a sufficient supply of blood is returned to the heart during exercise.**
- 1 Valves
 - 2 Skeletal muscular pump
 - 3 Respiratory pump
 - 4 Venoconstriction/venomotor control/smooth muscle
 - 5 Gravity for blood from above heart
- (ii) **An increase in venous return leads to an increase in heart rate. Explain how this is achieved by intrinsic control.** [2]
- 1 Greater end diastolic volume/increased amount of blood into right atrium
 - 2 Stretches wall of right atrium
 - 3 Increases firing rate of SA node
 - 4 Increase in temperature
 - 5 Changes in electrolyte balance/sodium/potassium
- (iii) **Describe how the blood travels through the heart in the following stages of the cardiac cycle.** [3]
(sub max of 1 for each stage)
- Diastole
- 1 The atria/ventricles/heart are relaxed
 - 2 Semi lunar valves closed
 - 3 Blood flows into right and left atrium
 - 4 Via pulmonary vein and vena cava
 - 5 Pressure rises and forces blood into ventricles
- Atrial systole
- 6 The atria contract forcing the blood into ventricles
 - 7 Through AV valves/bicuspid and tricuspid valves
- Ventricular systole
- 8 The ventricles contract
 - 9 Bicuspid and Tricuspid valves/AV valves shut to prevent backflow of blood
 - 10 Blood forced through Pulmonary artery and Aorta
 - 11 Semi lunar valves forced open
- (iv) **Whilst exercising a greater volume of blood is ejected during ventricular systole. Why is this beneficial to performance?** [1]
- 1 More oxygen/blood supplied to muscles
 - 2 Greater amounts of carbon dioxide/waste products removed/delay OBLA
 - 3 Delays fatigue/maintains/prolongs aerobic performance

(b) Figure 3 shows oxygen diffusing into the blood stream and being transported in the blood to the working muscles. [4]

(i) Explain how gas exchange is increased at the lungs to ensure that a greater amount of oxygen is diffused in to the blood during exercise.

- 1 There is high partial pressure/concentration of oxygen (PO_2) in the lungs/alveoli
- 2 There is a low partial pressure/concentration of oxygen (PO_2) in the blood
- 3 During exercise there is an increased pressure/concentration/diffusion gradient
- 4 Faster diffusion will occur
- 5 Increased blood supply/temperature
- 6 Increased surface area of lungs/respiration rate
- 7 Reduced resistance to diffusion

(ii) How is oxygen transported in the blood to the working muscles? [2]

- 1 Dissolved in plasma
- 2 Attaches to haemoglobin
- 3 Forms oxyhaemoglobin/ $Hb + O_2 \rightarrow HbO_2$

[Total: 15]

3 (a) (i) **Identify two characteristics of ability.** [2]

- 1 Innate/born with/genetic/natural/inherited
- 2 Stable/enduring
- 3 Underlying/basis of motor skill learning

(ii) **Give a practical example of a psychomotor ability.** [1]

- 1 e.g. cricket fielder throwing a ball in to the wickets/receiving a pass in basketball

Memory plays a significant role in the performance of movement skills.

(b) **What strategies can be used to retain information in the long-term memory?** [3]

- 1 Rehearse/practice/over learn the skill
- 2 Relate to past experiences/link to stored information/utilise positive transfer.
- 3 Make learning experiences enjoyable/interesting/novel
- 4 Learning experience is relevant/meaningful
- 5 Use of mental rehearsal/imagery/visualisation
- 6 Reward/reinforce correct responses/positive feedback
- 7 Chunk information together/keep information simple
- 8 Intensify the stimulus/cueing in the stimulus

(c) **The pacing continuum contains both self-paced and externally paced skills.**

Use practical examples to explain each of these two aspects of the pacing classification continuum. [4]

Must have practical example.

Sub max 2 for each section

Sub max 2 for no examples

(Self paced)

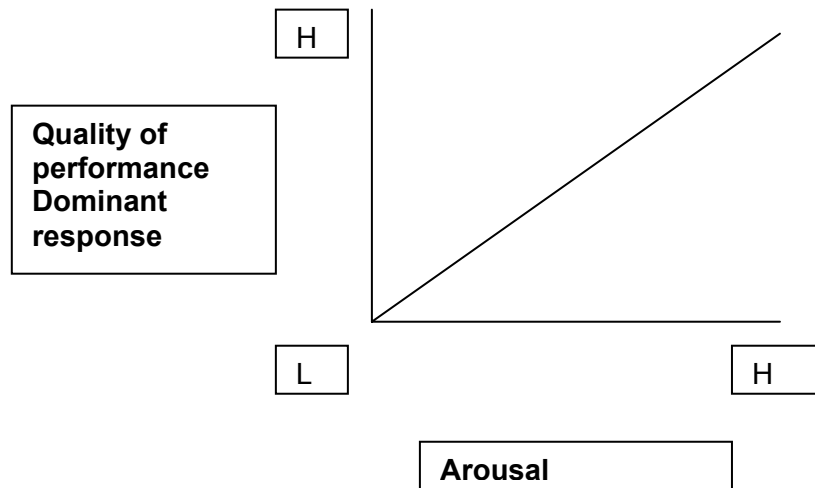
- 1 Performer in control of rate/timing of action/performer is pro-active
- 2 Skill generally more closed/habitual
- 3 e.g. a golf shot/tennis serve/conversion in rugby

(Externally paced)

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

(d) Drive Theory can be used to explain how arousal affects performance in sport.

(i) Sketch and label a graph to illustrate the effect of arousal on performance. [3]



- 1 Axes correctly labelled
- 2 Measure of quality indicated (low - high)
- 3 Correct line of graph

(ii) Use Drive Theory to explain how an increase in arousal would affect the performance of both a novice and an experienced performer. [2]

- 1 (Novice) dominant habit incorrect therefore performance deteriorates
- 2 (Experienced) dominant habit correct therefore performance improves

[Total: 15]

4 (a) It has been suggested that we pass through three phases of learning movement skills.

(i) Give three characteristics of the autonomous phase of learning. [3]

Mark first three only

- 1 Movement is fluent/flowing
- 2 Little conscious control/movement is habitual/automatic
- 3 Information processing time is shorter
- 4 Strategies and tactics can be focused on
- 5 Performer is able to analyse their own actions
- 6 Some regression to previous (associative) phase may occur

(ii) Use practical examples to describe two types of guidance that can be used at the cognitive phase of learning. [2]

Mark first two only

No example = no mark

- 1 (Manual) physical manipulation of body by coach/physically taken through movement pattern e.g. supporting a gymnastics handstand
- 2 (Mechanical) use of equipment to assist movement e.g. armbands in swimming
- 3 (Visual) demonstration of a skill/use of charts/videos to show correct technique e.g. demonstrating a pass in hockey/watching a coaching video on sprint starts
- 4 (Verbal) giving instructions on how to perform action e.g. stating teaching points of a volleyball shot

(b) Use practical examples to identify three characteristics of skilful movement. [3]

Mark first three only

Must use practical example – sub max 1 with no practical example

- 1 Fluent/flowing/smooth/well timed movement
- 2 Aesthetically pleasing/looks good
- 3 Efficient/movement is economic/doesn't waste energy or time/effortless
- 4 Follows technical model/movement is correct
- 5 Learned/movement has been practised/results from experience/permanent change in behaviour/builds an innate ability/consistent
- 6 Goal directed/performer knows what technique is required to perform the skill

(c) (i) For which movement skill classification continuum is the progressive part method of teaching appropriate? [1]

- 1 Low organisation skills

- (ii) **Use a practical example to describe the progressive part method of teaching a movement skill.** [3]

Must use practical example – sub max 1 with no practical example

- 1 Teach first sub-routine e.g. run up in triple jump
- 2 Teach second (third, fourth etc.) sub-routine and add to first e.g. run up and hop
- 3 Teach final skill as whole/A-B-AB-C-ABC
- 4 Sub-routines are chained/gradual metamorphosis occurs

- (iii) **What are the advantages of teaching a movement skill using the whole method?** [3]

- 1 Insight of whole skill gained/overview
- 2 Kinaesthetic feel for skill
- 3 Skill more fluent/can't be broken down
- 4 Takes less time
- 5 Transfer to full/game situation easier

[Total: 15]

**Mark Scheme 2563
January 2006**

1 (a) (i) What are the characteristics of play? [4]

4 marks for four of:

- | | |
|------------------|--|
| 1 (time) | time decided by participants / no set time/ no time limits. |
| 2 (spontaneity) | spur of moment/ spontaneous / unplanned |
| 3 (who) | played by children / childlike / adults also play |
| 4 (organisation) | simple organisation / basic equipment / no set numbers |
| 5 (space) | space boundaries decided by participants /
no set space / no space limits |
| 6 (option) | optional/ choice / voluntary/ freedom |
| 7 (enjoyment) | fun/enjoyment / self-fulfilment/ intrinsic value |
| 8 (rules) | flexible rules / rules by agreement/ no set rules
NB No rules = no marks |
| 9 (outcome) | non serious / non-productive /no outcome |

(ii) What can children learn from play? [4]

4 marks for four of:

- | | |
|-----------------|---|
| 1 (leadership) | leadership / opportunities to be in charge |
| 2 (cognitive) | cognitive skills / creativity / make up games /
problem solving / decision making |
| 3 (pretend) | to pretend / imagination / opportunity for fantasy /
opportunity to adopt roles used in later life / master
reality |
| 4 (social) | social skills / making friends/ communication /
co- operation / team work / respect of others. |
| 5 (emotional) | emotional skills/ moral skills / coping with difficulty /
right and wrong / accept defeat / fair play /
not cheating. |
| 6 (physical) | physical skills / motor skills / body management |
| 7 (self) | self-confidence / learning about self / self realisation |
| 8 (environment) | environment / safety |

(iii) What is the difference between adults and children at play? [1]

Must make any one point about children **and** any one point about adults to get one mark.

Children	Adults
Master reality	Escape reality
Learn	Escape
Develop skills	Stress release
Role rehearsal	Return to childhood

(b) (i) What is meant by physical prowess and physical endeavour? [2]

2 marks :1 mark for each explanation

- | | |
|-------------------------------|---|
| 1. (Physical Prowess) | skill / skilfulness / expertise / competence / proficiency |
| 2.(Physical Endeavour) | effort / commitment / trying hard / doing your best / determination |

(ii) What are the positive effects of fair play on sport or a sporting situation? [3]

3 marks for 3 of:

- 1 Helps officials
- 2 Helps flow of event or game / improves 'spirit' of game
- 3 Increase goodwill / enjoyment / good humour among players.
- 4 Increases goodwill/ enjoyment/ good humour among crowd/ prevents hooliganism
- 5 Raises status of sport / gives sport a good name / positive image / increases participation / sport gets positive media coverage
- 6 Produces positive role models / reinforces positive behaviour

(iii) Why do some performers take performance enhancing drugs? [4]

4 marks for 4 of:

- | | | |
|---|--------------------|---|
| 1 | (physiological 1) | physiological reasons/ to : build muscles/ lose or gain weight / increase energy/ reduce tiredness or other physiological reasons. |
| 2 | (physiological 2) | to mask or recover from injury/ reduce pain/ enable harder training/ maintain standard. |
| 3 | (psychological) | psychological reasons to: steady nerves/ control arousal/ increase aggression or motivation or confidence or concentration or other relevant psychological reason |
| 4 | (pressure) | pressure to win/ pressure from coaches or peers or media or other suitable example / to get into a team or event |
| 5 | (appearance) | to look good/ aesthetic reasons/ physical appearance |
| 6 | (rewards) | reward/ money/ fame/ win at all costs ethic/ fear of losing |
| 7 | (education) | lack of education/ unaware of dangers |
| 8 | (belief) | belief that every one else is doing it/ level playing field. |
| 9 | (escape) | poor deterrents/ ineffective testing/ belief they will get away with it. |

(iv) What are some of the possible causes of crowd violence at sporting events?
[3]

3 marks for 3 of:

- | | |
|--------------------|---|
| 1 (alcohol) | alcohol/ drugs |
| 2 (frustration) | frustration or displeasure with match officials or score or results. |
| 3 (tradition) | traditional rivalry/team loyalty/'local derbys'/ religion. |
| 4 (abuse) | verbal abuse/ provocation/ racism/ racial discrimination |
| 5 (emotional) | emotional intensity/ importance of the event/
over excitement/ pre-match hype. |
| 6 (numbers) | large numbers of fans / overcrowding / poor provision
for spectators/ poor policing or stewarding |
| 7 (hooligans) | hooligans at football/ some 'fans' more concerned with
causing trouble than watching football |
| 8 (mass culture) | Mass culture situation/ tribal nature of event/ individuals
lose identity within the crowd/ peer group pressure/
diminished responsibility within crowd |
| 9 (pitch violence) | violence or behaviour on the pitch copied by or
transmitted to spectators |
| 10 (punishment) | lack of suitable punishment or deterrent. |

[Total: 21]

- 2 (a) **How might a school Physical Education department give children experience of education, physical recreation and sport?** [3]

3 mark for 3 of – 1 from each section:

Education

- 1 PE lessons/ teaching or learning skills or values or behaviour e.g. fair play / examination work/ theory/ NC / rules/ safety.

Physical Recreation

- 2 PE run clubs or activities/ extra curricular activities/ free time in lessons/ school trips.

Sport

- 3 Inter-house fixtures / inter-school fixtures / leagues / playing to rules / opportunities to represent county or region / competitive part of PE lesson / organised trip to sporting event.

- (b) (i) **Why is it that girls tend to drop out of physical activity in greater numbers than boys?** [3]

3 marks for 3 of:

- | | | |
|---|------------------------|--|
| 1 | (school experience) | due to bad PE experience at school/ unpleasant showers/ kit/ changing facilities/ inadequate choice at school. |
| 2 | (community experience) | inadequate choice or provision or opportunity / eg lack of clubs/ lack of female sports leaders. |
| 3 | (peers) | peer pressure/friends don't participate |
| 4 | (distractions) | other distractions |
| 5 | (role models) | lack of role models in family or nationally/ less media coverage of women's sport. |
| 6 | (Attitudes) | fear among heterosexuals that they may be perceived as homosexual/ participation in some sports seen as unfeminine/ discouragement due to negative attitudes or prejudice/ attitude that sport is for males/ stereotyping. |
| 7 | (low esteem) | low esteem/ lack of confidence/ they don't think they are good enough/ fear of failure/ embarrassment/ body consciousness. |
| 8 | (religion) | some ethnic groups don't encourage sport for women. |
| 9 | (criticism) | adverse comments from coaches or teachers or family |

(ii) What does the Women's Sports Foundation do? [3]

3 marks for 3 of:

- | | | |
|---|---------------|--|
| 1 | (equality) | promotes equality |
| 2 | (campaigns) | campaigns / to: increase participation or increase opportunity or increase access or decrease drop out / promotes female sport |
| 3 | (Profile) | raises the profile of British sportswomen or teams. |
| 4 | (information) | gives advice or information on women's sporting issues/ shares examples of good practice. |
| 5 | (influence) | tries to influence national or regional government or sports councils/ change policies. |
| 6 | (leaders) | encourage women into positions of responsibilities/ eg coaching. |

(iii) What can be done by local recreation or leisure centres to encourage more elderly people to take part in regular physical activity? [3]

3 marks for 3 of:

- | | | |
|---|------------------|--|
| 1 | (inform) | inform / run campaigns / advertise / promote view that sport is not just for young people/ educate on the benefits of participation. |
| 2 | (coaches) | ensure that coaches know the needs or abilities of the age group |
| 3 | (3 A's) | age or ability or attitude or groups or sessions or activities appropriate. |
| 4 | (consult) | consult with or ask the age group what they would like to do |
| 5 | (taster session) | offer taster sessions. |
| 6 | (social) | provide a social area |
| 7 | (access) | ensure that transport is available/ suitable access / eg lifts. |
| 8 | (Cost) | subsidise the fee/be aware that some elderly people have low disposable income |

- (c) (i) **Identify and explain three different characteristics of sport in tribal cultures such as Samoa.** [6]

6 marks for 6 of:

Must have the identification mark to gain the explanation mark

Identification	Explanation
1 Functional	2 Serve a useful purpose / practising useful skills / fighting / hunting / fishing
3 Survival	4 Help a society continue to exist or live / fighting/fishing/ hunting
5 Natural	6 Activities that are simple / cheap / home made implements / equipment locally available / part of natural environment / low technology
7 Community /social	8 Group cohesion/bring community or tribes together / bonding /a chance for social integration
9 Ritual	10 Activities often associated with religion or worship or the supernatural / celebrations / festivals / dances or singing
11 Ceremonial	12 Activities often have symbols / ritual / are associated with special occasions / celebrations / births or deaths or marriages/initiation rights / dances or singing
13 Traditional	14 Activities passed down through generations/part of culture

- (ii) **Explain the adoption of rugby football by Samoa.** [3]

- | | |
|---------------------|--|
| 1 (colonialism) | Rugby introduced by British/introduced by colonialists |
| 2 (trads. replaced) | Rugby replaced traditional tribal activities / rugby more acceptable (to colonialists/missionaries) or more civilised than some traditional activities |
| 3 (exclusivity) | Initially rugby exclusive to high-ranking Samoans / initially elitist |
| 4 (spread) | Gradually the lower orders allowed to participate |
| 5 (suitability) | Suited physique/strength/aggression/culture/lifestyle |
| 6 (integration) | Integrated villages/tribes/islands |
| 7 (7s) | Rugby 7s particularly suited limited population/7s suited flair of Samoans |

[Total: 21]

Quality of Language

Three marks are available for the quality of Written Communication.

- High:** A well reasoned, well ordered developmental explanation.
In clear, concise, continuous prose.
Sentences and paragraphs follow on from one another smoothly and logically.
There will be **few, if any, errors** of grammar, punctuation and spelling. **3 marks**
- Middle:** Reasoned statements employing **sound** use of language.
Candidates express straightforward ideas clearly.
Sentences and paragraphs may not always be connected.
There may be **some errors** of grammar, punctuation and spelling, but not such as to suggest a weakness in these areas. **2 marks**
- Low:** An attempt at explanation with limited quality of language.
The candidate expresses simple ideas clearly but may be imprecise and awkward in dealing with complex or subtle concepts.
Errors in grammar, punctuation and spelling may be **noticeable** and **intrusive** suggesting weaknesses in these areas. **1 mark**

**Mark Scheme 2565
January 2006**

Section A

Historical Studies in Physical Education

- 1 (a) (i) Describe the game of cricket as it existed in Pre-Industrial Britain. [4]

4 marks for 4 of:

- | | | |
|----|--------------------------|--|
| 1 | (Limited technical devt) | Club shaped bat/under-arm bowling/two stumps not three |
| 2 | (Limited organisation) | No distinct boundaries/no special kit |
| 3 | (Scoring) | Score would be kept by 'notching' on wood/cutting in to wood |
| 4 | (Class) | Both classes playing together/both sexes |
| 5 | (Rural) | Rural |
| 6 | (Pitch) | Uneven/unrolled pitch |
| 7 | (Rules) | It did have some written rules |
| 8 | (Wagering) | Wagering on result |
| 9 | (Non-violent) | Non-violent |
| 10 | (Time) | Summer evening game/seasonal/festivals/holy days |
| 11 | (Local) | Local |

- (ii) Compare the pre-industrial sporting activities of the gentry with those of the agricultural worker. [3]

3 marks for 3 of: from either or both sections

Differences:

	A. Gentry	B. Agricultural worker
1	Courtly/sophisticated/expensive activities	Popular/simple/natural/cheap activities
2	Rule based/dress code/etiquette	Limited rules/uncivilised/violent
3	Time available	Limited time
4	E.g. real tennis/hunting	E.g. mob football
5	Patronised some sports/acted as 'agents' e.g. pedestrianism/prize fighting	Took part in sports for money e.g. pedestrianism/prize fighting

Comparison must be made for mark to be awarded

Similarities:

- | | | |
|---|------------|---|
| 6 | (Class) | Both classes played cricket together
Both shares a passion for pedestrianism/prize fighting/cock fighting/horse racing |
| 7 | (Wagering) | Both classes wagered on the outcome of events. |

- (b) Late nineteenth century public schools are associated with a passion for all sport and team games in particular. Explain how these schools and their ex-pupils influenced the emergence of rational sport. [5]

5 marks: Levels mark scheme.

Level 3: 5 marks

- A developed answer that shows very good knowledge and understanding of the huge impact of these schools and their ex-pupils on the emergence of rational sport.
- Or they will have made **at least 3 ex-pupils points**, which have been discussed/expanded.

Level 2: 3-4 marks

- An answer in this level will show good knowledge and understanding of the public schools and their ex-pupils on the emergence of rational sport.
- Or they will have made **at least 2 ex-pupils points**, which have been discussed/expanded at the top of this level.

Level 1: 1-2 marks

- To score in this level candidate will show some knowledge and understanding of the impact of public schools and their ex-pupils on the emergence of rational sport.
- Here, candidate will have made a limited number of basic points with little or no discussion/expansion.
- ... or have produced a simple list.

Answers are likely to include some of the following points:

Schools:

Stage 1-3 Development

1	(Rules)	Melting pot/development of rules
2	(Structure)	Oganisational development/fixtures/kit/areas to play
3	(Time/Compulsion)	Regularity of games afternoons/house sport/compulsory games
4	(Respectability)	Curtailment of violence/cruelty/responsibility
5	(Values)	Importance/values attached to team games
6	(Other schools)	Influenced other schools e.g. Malvern/Cheltenham/Clifton founded as middle class copies of the gentry/Clarendon schools.

Ex-pupils:

7	(Teaching)	Teaching back in original school next generation influenced
8	(Army/colonial service)	Army/colonial service/taking passion for games abroad
9	(Church)	As parsons/social Christians/needs of parishioners met
10	(Industry)	As industrial leaders/keen to give sport to their workers
11	(Family)	Family/upbringing of own children
12	(Community)	As community leaders/provision of facilities/knowledge
13	(Clubs)	Formation of sports clubs/National Governing Bodies
14	(Melting pot)	Ex-public school boys from various schools took their games to university/Oxbridge which became a 'melting pot' for the standardisation of rules

- (c) Identify four characteristics of rationalised sport. What were the underlying cultural factors that influenced each of the characteristics you have identified? [4]

4 marks of 4 of:

only mark first four responses

must have characteristics **AND** cultural factor for 1 mark

	Characteristics of Rational Recreation	Underlying cultural factor
1	Rules/condition/Governing bodies	Literacy/business/administrative skills/ex-public school boy influence
2	Regular	Increased free time/improved transport
3	Respectable/refined/non-violent	Influence of middle class/law changes
4	Regional/national /international	Improved transport and communications
5	Urban/suburban/in towns	Industrial/urban revolution/s
6	Fair play/sportsmanship	Public school influence
7	Purpose built facilities/improved	Industrial progress/technological
8	Gambling reduced/controlled	Increased law and order/police force
9	Amateurs and professionals	Class structure/increase in spectatorism

- (d) In the 1950s Physical Education in State Elementary schools changed, following the publication of *Moving and Growing* (1952) and *Planning the Programme* (1954).

Identify the objectives of the 1950s approach. Describe how a lesson based on this 1950s syllabus would have been taught. [5]

5 marks – 3 max from either section

Objectives

1	(Physical)	Learn physical skills/body management/gymnastic/dance/games/swimming skills
2	(Social)	Learn social skills/co-operation/working together
3	(Cognitive)	Learn cognitive skills
4	(Enjoyment)	Enjoyment/satisfaction/feeling of achievement
5	(Involvement)	To get everyone involved/taking part
6	(Variety)	To give a varied programme/varied lessons

Teaching methods:

7	(Child centred)	Child centred approach/emphasis on what children could do rather than what they could not do/starting from their own experience
8	(Problem solving)	Problem solving/discovery/exploration/creating sequences/individual interpretation of tasks
9	(Apparatus)	Apparatus used/gymnastic equipment/ropes, bars, boxes etc.
10	(Decentralised)	Decentralised/teacher as educator rather than instructor/not everyone doing the same thing at the same time

2 (a) The production of elite sports performers is a priority in France as success is associated with Nationalism.

(i) Outline the structure and function of the French institute of sport known as INSEP [4]

3 marks sub – max for structure

1	(Location)	Central location/Paris
2	(Multi-sports)	A multi-sport centre of excellence
3	(Specialist Institutes)	Specialist institutes exist away from Paris
4	(Regional provision)	Regional sports centres/CREPS/devolvement into regions
5	(Funding)	Government funded
6	(Guidance)	Ministry for Youth and Sport
7	(Autonomy)	An amount of self government/self control/freedom to make decisions given to the institute

3 marks sub – max for function

8	(Excellence)	Selects elite performers
9	(Education)	The major sports education centre in France/delivers academic and professional training
10	(Sports science/research)	A centre for sports research/collaboration with laboratories throughout France for sports science/research
11	(Sports medicine)	Injured athletes receive specialist treatment
12	(Decisions)	Decides funding allocations for performers
13	(Decisions)	Decides which sports qualify for elite status

(ii) How does sport promote French nationalism? [2]

2 marks from 2 of:

1	(Patriotism)	Sport used to develop pride/love of the country
2	(Morale)	Sport raises morale of the nation
3	(Supremacy)	Sport used to emphasise French excellence/display national excellence/achieve success
4	(Unity)	Sport unifies cosmopolitan society/ethnic groups/helps integration
5	(Political)	Sport promoted/endorsed/supported/encouraged by the government
6	(Political)	Sport is used for future national development

(b) The culture of the USA influences professional sport and this influence extends to young children who engage in community sport.

(i) Identify one community recreation sports initiative involving children in the USA and describe the benefits that can be gained by the child who participates in community sports initiatives. [4]

1 mark from 1 identification

1	(Little League Sports)	Little League Sports/Pop Warner/Grid Iron Little League/Biddy Basketball/Little League Basket Ball/Pee Wee Baseball/Little League Baseball.
2	(Time Out for Better Sports for Kids)	
3	(Hook a Kid on Golf)	

3 marks for benefits of community sports initiatives. From:

4	(Grass root development)	Childhood opportunity/development of fundamental motor skills
5	(Structure)	Organised competition/fixtures/organised leagues/mini Super Bowls
6	(Coaching)	Coach involvement/high standard of coaching
7	(Social development)	Opportunities to mix/initiation into culture
8	(Preparation)	Prepares youngsters for sports progression/professional sport
9	(Preparation)	Preparation for competitive USA lifestyle
10	(Professionalism)	Format reflects professional sport
11	(Media)	Chance to gain media attention

- (ii) Explain how cultural factors have influenced the development of professional sport in America. [5]

5 marks from:

1	(American Dream)	The winner achieves the Dream/Rags to Riches
2	(Media)	Strong influence/major source of revenue
3	(Capitalism)	Enables players to accumulate great wealth/a system which rewards the best
4	(Commercialism)	Sport is business/strong/traditional links with business
5	(Lombardianism)	Professional sport is highly competitive/win at all cost ethic/Lombardian
6	(Equality)	Increasing opportunity/achievements of women/ethnic minorities/availability of scholarships
7	(Hire and Fire)	Dismissal after failure
8	(Colonialism/ Frontierism)	Sports mirror the spirit of frontierism/ reflection of toughness/ ruggedness/ endeavour/ individuality/ sport is the last frontier
9	(Violence)	Sports reflect aggressive/violent society
10	(Sensationalism)	Sports are required to be sensational/action intensive/high scoring/spectacle/hype

- (c) **Australia is a country with a tradition of sporting excellence which began during the colonial period.**

Explain the political and cultural factors that extend the tradition of sporting excellence into the 21st century. [6]

6 marks: Levels mark scheme.

Level 3: 5-6 marks

- Responses will fully explain at least three factors. Alternatively, candidate will give five factors which may lack detail.

Level 2: 3-4 marks

- Responses will give at least three factors. These will not be fully developed. Answers rely on description rather than explanation. At the top of this level some explanation is expected.

Level 1: 1-2 marks

- Answers rely on description rather than explanation. Responses offer fewer than three reasons.

1	(Funding)	Government Funding/Funding through ASC
2	(Policy)	Establish Institutes of Sport/provide Institutes in each State
3	(Political)	Sport reflects well on government
4	(Voting)	Active sports policies increases vote/chances of re-election
5	(Ideology)	Sport used to express ambition/Sport creates favourable 21st century image
6	(Equality)	Sport used to address equality/opportunities for women/opportunities from ethnic minorities/commitment to multi-culturalism/egalitarian image of society/ 'land of the fair go'
7	(Unity)	Sport unites the country/pride
8	(Appeasement)	Excellence in sport helps to create contentment in society.
9	(Patriotism)	Sport used to promote love of country/pride
10	(International image)	Sports success is good for global prestige/shop window
11	(Geography)	Favourable climate/climate suits outdoor sports/Urban nature of settlement favours interest in urban sports/good internal communication stimulates competition/news interest
12	(Social)	Fashionable to participate in sport/obsession
13	(Economic)	Affluent nation spends on sport/disposable income spent on sport
14	(Colonialism)	Influence of British settlement/adoption of British sports
15	(History)	History/expectation of sports success/beating Motherland was a measure of national progress
16	(Tradition)	Reflection/legacy of frontierism/Bush culture.

Section B

Biochemical Analysis of Human Movement

- 3 (a) A runner completes two laps of a 400m athletics track. Define the terms 'distance' and 'displacement' and estimate values for both once the athlete has completed the laps. [4]

4 marks from:

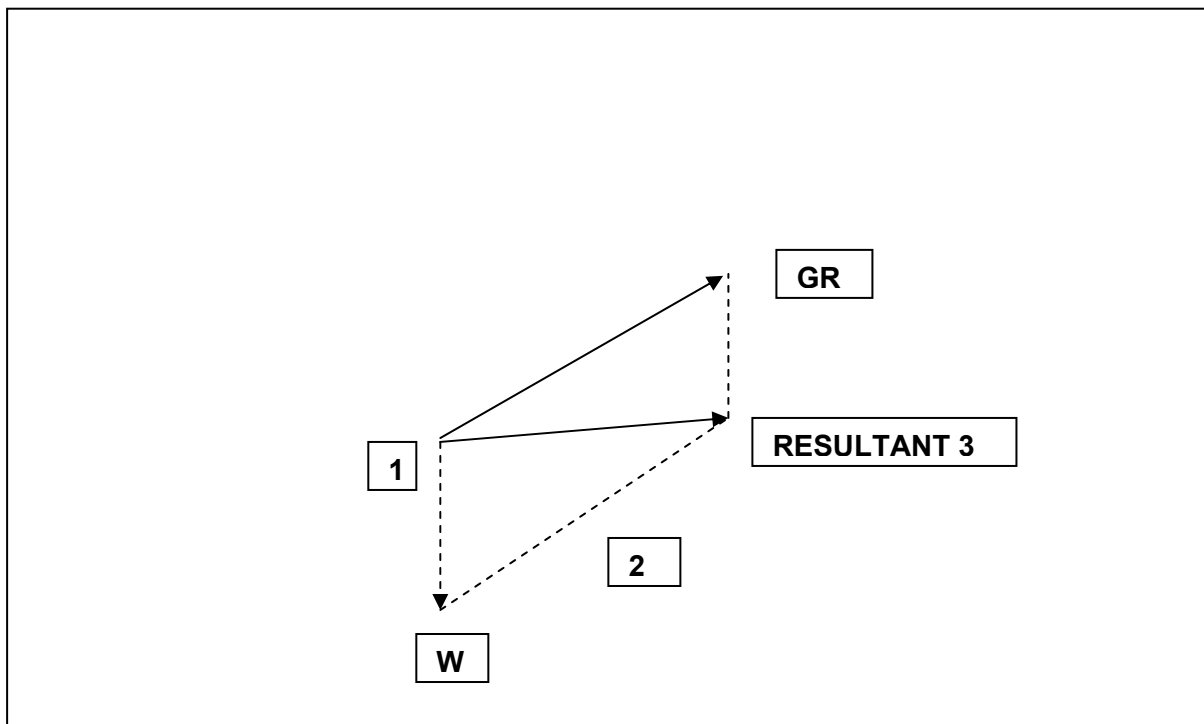
- 1 Distance is the length of the path taken by a body in moving from one position to another
- 2 Displacement is the shortest straight-line route between two positions (in a stated direction)
- 3 Distance = 800m
- 4 Displacement = 0m

- (b) Fig 1 is a free body diagram representing forces acting on the runner at the start of a 400m race.

- (i) Use a vector diagram to show how you could work out the resultant force. [3]

3 marks from:

- 1 Ground Reaction and Weight from same point
- 2 Parallelogram
- 3 Direction and position of resultant force



- (ii) **How does the runner generate the ground reaction force?** [2]

2 marks from:

(Ground Reaction)

- 1 (Newton 3) For every action there is an equal and opposite reaction
- 2 Runner applies a force DOWNWARDS and BACKWARDS to the ground and
- 3 the ground applies an equal force UPWARDS and FORWARDS on the runner

- (iii) **Describe the effect of the resultant force.** [2]

2 marks from:

(Resultant force)

- 1 (Newton 2) The acceleration of an object is directly proportional to the size of the net force acting upon it/and takes place in the same direction as the force
- 2 Resultant force causes the runner to accelerate
- 3 in the direction of the force/forwards

- (c) **During the race the runner reaches a constant speed.**

- (i) **Use Newton's First Law of Motion to explain how this constant speed is achieved.** [2]

2 marks from:

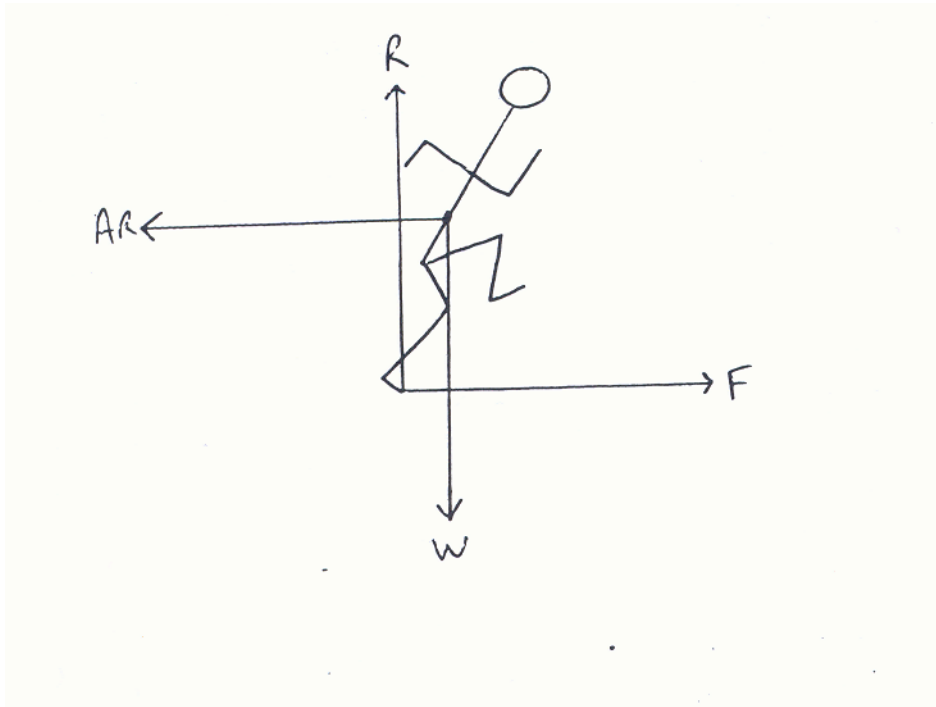
- 1 (Newton 1) An object will remain at rest or **move with constant velocity/speed** unless acted upon by an unbalanced/external force
- 2 Air resistance and friction are equal and opposite/cancel each other out.
- 3 Resultant/net force acting on runner = 0

- (ii) Draw a free body diagram to show all the forces acting on the runner.
[2]

2 marks from:

(Free body diagram)

- 1 (Vertical forces) Weight and Reaction from correct points and equal in length but opposite in direction
- 2 (Horizontal forces) Air resistance and Friction from correct points and equal in length but opposite in direction



- (iii) Identify and explain the factors that affect the horizontal forces acting on the runner during the race. [6]

6 marks from: Levels mark scheme.

Level 3: 5-6 marks

- Responses will cover the effects of both friction and air resistance/fluid friction.
- There will be a fully developed explanation of at least 4 factors affecting the horizontal forces acting on the runner.
- Candidates are likely to use some practical examples to illustrate their explanations.

Level 2: 3-4 marks

- Responses will cover the effects of both friction and air resistance/fluid friction.
- There will be several fully developed explanations of the factors affecting the horizontal forces acting on the runner.

Level 1: 1-2 marks

- Candidates will have identified a limited number of factors affecting the horizontal forces acting on the runner without the appropriate explanations.

(Friction)

<u>Identification</u>		<u>Explanation</u>
1	Roughness of footwear	Rougher/user of spikes =>friction
2	Roughness of surface	Rougher/tarmacadam =>friction
3	Normal reaction	Larger/pressing into ground =>friction

(Air resistance/Fluid friction)

4	Speed of runner	Faster => AR
5	<u>Frontal/forward</u> X – sectional area	Greater =>AR/smaller runners =<AR
6	Kit worn/surface of runner	Rougher =>AR/catsuits =<AR
7	Streamlining	Less =>AR
8	Density of air/altitude	Greater density/lower altitude =>AR

[Total: 21 marks]

Psychology of Sport Performance

4 (a) **The personality of a performer has often been related to sports performance although research is contradictory.**

(i) **Outline the trait and interactionist approaches to personality and sport.** [3]

One mark for 3 from:

(Trait) (sub max of 2)

- 1 Born with/innate/genetically determined
- 2 Traits are behaviours that are pre-determined rather than learned
- 3 Enduring/stable/predictable

(Interactionist) (sub max of 2)

- 4 Traits are triggered by environmental/situational factors
- 5 $B = f(PE)$ /behaviour is the result of personality traits and the environment interacting/combination of trait and social learning

(ii) **Giving examples from sport, explain the view that we develop our personalities by imitating others.** [4]

4 marks from:

**(Social learning) (Must use examples from sport)
Sub max 2 if no examples given**

- 1 Social learning theory
- 2 Reactions from others reinforce behaviour
- 3 Others must be significant to us/we must value them/role models whose behaviour is deemed to be acceptable
- 4 Others behaviour may be copied because the reinforcement comes from a third party who is significant e.g. a player's behaviour is copied because a highly valued coach praises the behaviour
- 5 Bandura's experiment showed aggressive behaviour is imitated if model is significant
- 6 Socialisation/adopting norms and values of your culture is learned by observing others
- 7 Importance of parental behaviour/personalities in shaping the personalities of the young
- 8 If model more appropriate according to social norms they are more likely to be copied
- 9 If the model is deemed to be relevant – more likely to be copied e.g. boys more likely to copy male models
- 10 If the model is similar to the observer then behaviour more likely to be copied
- 11 Friendly models more likely to be copied
- 12 Powerful/authoritative more likely to be copied
- 13 If model's behaviour is consistent then more likely to be copied.

(b) **Good leadership has been recognised as important for effective team play in sport.**

(i) **Identify three characteristics of an effective leader in sport. [3]**

3 marks from (mark first 3)

- 1 Good communication skills
- 2 Highly motivated/enthusiastic/ambitious
- 3 Clear goal/vision/good decision making skills/good perceptual skills
- 4 Empathy/gets on well with team mates/can see others' points of view
- 5 Good at sport themselves
- 6 Good knowledge of the sport/self-confident
- 7 Charismatic/has presence/commands respect/influential/motivator
- 8 Flexible to situational needs/adaptable

(ii) **Using Fiedler's Contingency model of leadership, explain when you might use the task style and person orientated style of leadership in sport. [5]**

5 marks for 5 of:

- 1 Model identifies leadership characteristics/styles interact with the situation/interactionist/situational approach
- 2 The effectiveness of these styles depends upon the favourableness of the situation
- 3 Favourableness depends on the relationship between the leader and group members
- 4 Favourableness depends on the structure of the task/task difficulty e.g. home or away game
- 5 Favourableness depends on the leader's perceived power/authority/how important the leader is seen to be
- 6 Task leaders more effective in most favourable and least favourable situations
- 7 Person leaders more effective in moderately favourable situations
- 8 Favourable is when relationships are good
- 9 Favourable is when the task is clear
- 10 Favourable is when the leader has authority
- 11 Unfavourable is when relationships are poor
- 12 Unfavourable is when the task is unclear
- 13 Unfavourable is when the leader has a weak position

(c) The reasons, or attributions, that we give for our performances in sport can affect our future motivations.

Locus of Causality		Internal	External
Stable:			
1	Lost because we have low ability as players	2	Lost because the opposition were too good for us
Unstable:			
3	Lost because we did not try hard enough	4	Lost because the referee's decisions were poor

Table 1

The model above, in Table 1, based on Weiner's model, shows the reasons that team members gave for losing. Explain how you would use attribution retraining to promote mastery orientation and avoid learned helplessness. [6]

Levels Marked Question:

- 1 Model also identifies internal and external extremes

For mastery orientation

- 2 Learned helplessness is the belief that failure is inevitable/failure has been reinforced
- 3 Mastery orientation is having high self confidence/positive outlook/need to achieve
- 4 Attributional retraining is changing/helping to change the reasons to maximise motivation
- 5 Attribute success to internal factors/increases confidence
- 6 Attribute success to stable factors/increases belief of future success
- 7 Attribute success to controllable factors/increases motivation

For Learned Helplessness

- 8 Attribute failure to external factors/maintains confidence
- 9 Attribute failure to unstable factors/increases belief of future success
- 10 Attribute failure to controllable factors/maintains motivation
- 11 Set realistic targets/process/performance goals (not product goals)

Level 3: 5-6 marks

Explanation may link practical examples with model headings fully developed
 Explanation will include (at least one) from points 5-7 and 8-10
 Explanation will include points (at least one) from points 1-3

Level 2: 3-4 marks

Explanation will concentrate on recall – fully developed and not on explanation – under-developed.

Level 1: 1-2 marks

Explanation will be mostly recall that is underdeveloped.

(Total:21 Marks)

**Mark Scheme 2566
January 2006**

- 1 (a) Define aerobic capacity and list the factors that affect a performer's VO_2 max.

[3]

3 marks

Definition (1 mark)

The maximum amount of oxygen that can be (taken in and) used by the body in one minute/per unit time.

Factors that affect VO_2 max (2 marks)

- 1 age
- 2 gender
- 3 physiological make up/genetic factors/muscle fibre type.
- 4 training
- 5 respiratory factors/size of lungs/asthma/or eq.
- 6 cardiac factors/size of heart/stroke volume/or eq.
- 7 vascular/circulatory factors/number of red blood cells/number of capillaries or eq.
- 8 cellular factors/number of mitochondria/amount of myoglobin or eq.

- (b) To improve aerobic capacity most performers will undergo a period of aerobic training while others may cheat by using illegal means.

- (i) Outline a training programme designed to improve the aerobic capacity of a performer.

[4]

4 marks

- | | |
|---------------|---|
| 1 (Frequency) | 3+ times a week |
| 2 (Intensity) | 55% - 85% maximum heart rate/ VO_2 max |
| 3 (Time) | more than 20 minutes |
| 4 (Type) | continuous/Fartlek/interval/circuit/cross/altitude/aerobics |

- (ii) Identify one illegal aid that might be used to enhance VO_2 max and describe the associated risks to a performer's health.

[3]

3 marks**Identification (1 mark)**

Blood doping/RhEPO/recombinant erythropoietin

Associated risks (2 marks)

(Both)

- 1 Increases blood viscosity/increased risk of blood clotting/blood pressure
- 2 heart failure/problems/strain
- 3 Decreased heart rate that leads to reduce stroke volume/cardiac output/less oxygen reaching the tissues

(Blood doping)

- 4 Risk of blood contamination/hepatitis/AIDS/allergic reactions/infection/ nausea or eq.

(RhEPO)

5 Decreased natural production of EPO that can lead to the body producing less red blood cells in the long term

(c) **Figure 1 shows the relationship between exercise intensity and oxygen uptake in trained and untrained performers.**

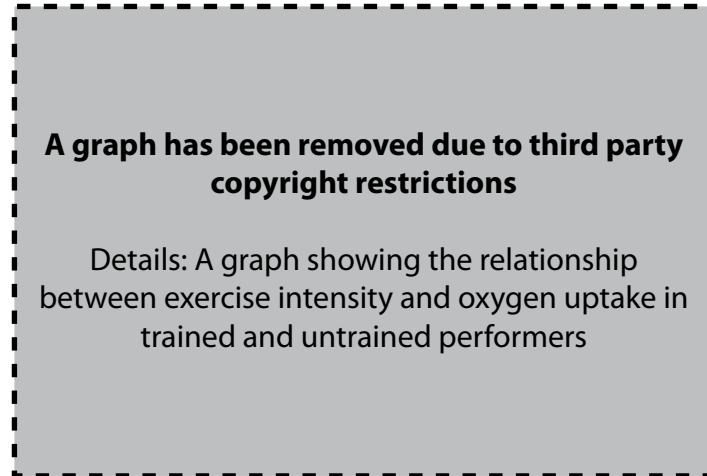


Figure 1

(Adapted from Wilmore and Costill, *Physiological of Sport and Exercise*)

Making reference to the physiological adaptations that occur in the cardiovascular and respiratory systems, explain why a trained performer can work at a higher intensity before reaching their VO_2 max.

[5]

5 marks (NB Answers MUST be explained, if adaptations/explanations only are given max 2)

(cardiovascular system – sub max 4)

trained performer has ...

- 1 **a bigger/stronger heart/myocardial hypertrophy** therefore they have a higher stroke volume/maximal cardiac output
- 2 **a lower resting heart rate/bradycardia** needs fewer beats for the same cardiac output
- 3 **increased elasticity of the arterial walls/strength of smooth muscle** therefore arteries withstand greater fluctuations in blood pressure
- 4 **increased capillarisation in skeletal muscle/lungs** therefore increased rate of gaseous exchange/increased efficiency of internal respiration/more oxygen diffused into blood/muscles
- 5 **increased blood volume** therefore increased stroke volume/decreased blood viscosity allowing for greater blood flow
- 6 **more red blood cells/haemoglobin** therefore increased oxygen carrying capacity/more O_2 to working muscles
- 7 **improved buffering system in the blood** therefore greater tolerance to lactic acid

(respiratory system – sub max 3)

trained performer ...

- 8 **increased maximal pulmonary/minute ventilation/tidal volume/lung size** therefore more oxygen can be inhaled per breath
- 9 **stronger respiratory muscles** therefore increased efficiency of external respiration

- 10 **more alveoli available/larger surface area** therefore increased gaseous exchange due to greater surface area of alveoli

[Total: 15 marks]

2 (Scientific Focus)

Part One

(a) (Application of Anatomical and Physiological Knowledge to Improve Performance)

A hinge joint is one type of joint found in the body.

Identify the two hinge joints found in a lower limb.

Using one of the joints you have named, describe a movement analysis of kicking a football splitting it into 2 phases: preparation and execution.

(Sub max 8)

Hinge joints of the lower limb (2 marks)

- 1 knee
- 2 ankle

Movement analysis (sub max 5 marks)

- 3 (bones that articulate knee = femur, tibia
ankle = tibia, fibula, talus/tarsals)

Marking guide:

Preparation		Execution	
4	joint action	9	joint action
5	agonist / prime mover muscle(s)	10	agonist / prime mover muscle(s)
6	antagonist muscle(s)	11	antagonist muscle(s)
7	synergist / fixator muscle(s)	12	synergist / fixator muscle(s)
8	type of muscular cont'n	13	type of muscular cont'n

Example 1

Knee Joint when kicking a football

Preparation		Execution	
4	flexion	9	extension
5	semitendinosus/ semimembranosus/ biceps femoris	10	rectus femoris/ vastus lateralis/ vastus medialis/ vastus intermedius
6	rectus femoris/ vastus lateralis/ vastus medialis/ vastus intermedius	11	semitendinosus/ semimembranosus/ biceps femoris
7	iliopsoas (major) / iliacus	12	gluteus maximus
8	concentric (of agonist)	13	concentric (of agonist)

- 14 identification of fixator working isometrically

Example 2

Ankle Joint when kicking a football
(alternatives allowed due to variations in kicking action)

Preparation		Execution	
4	plantarflexion	9	dorsi flexion
5	gastrocnemius/soleus	10	tibialis anterior
6	tibialis anterior	11	gastrocnemius/soleus
7	semitendinosus/ semimembranosus/ biceps femoris	12	rectus femoris/ vastus lateralis/ vastus medialis/ vastus intermedius
8	concentric (of agonist)	13	concentric (of agonist)

14 identification of fixator working isometrically

During exercise the body has to respond to an increased demand for oxygen by the working muscles. Figure 2 shows the distribution of cardiac output during exercise.

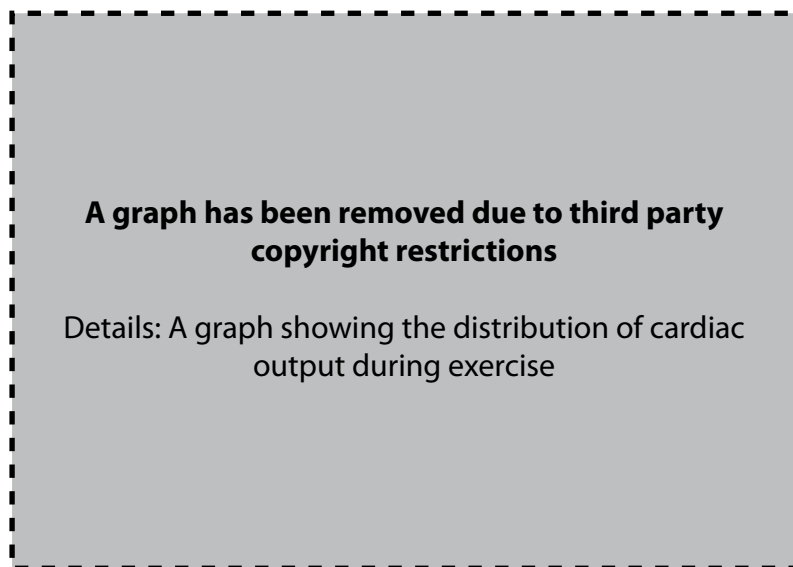


Figure 2
(Taken from Carnell et al, *Advanced PE for OCR AS*)

Describe the mechanism that allows for the redistribution of blood flow during exercise and explain how it is controlled.

Distribution of blood flow during exercise (sub max 8 marks)

(mechanism) (subsub max 4)

- 15 vascular shunt mechanism
- 16 (redistributes blood during exercise so that) areas with the greatest need receive more blood/areas with low demand receive less blood
- 17 through vasodilation of arterioles/blood vessels feeding working muscles
- 18 and vasodilation/opening of precapillary sphincters feeding working muscles
- 19 through vasoconstriction of arterioles feeding others organs (e.g. liver/kidney/intestines)
- 20 and vasoconstriction/closing of precapillary sphincters feeding these organs

(control) (subsubmax 4)

- 21 (vascular shunt mechanism) controlled by the vasomotor control centre/VCC
- 22 located in the medulla (oblongata) of the brain
- 23 VCC responds to changes in blood pressure/muscle/blood chemistry
- 24 chemoreceptors detect changes in lactic acid/carbon dioxide/oxygen/pH/ content of blood
- 25 chemoreceptors located in muscles/aorta/carotid arteries
- 26 baroreceptors detect changes in blood pressure
- 27 baroreceptors located in aorta/carotid arteries
- 28 VCC uses sympathetic nervous system
- 29 which acts on the middle layer of smooth muscle in an arteriole/the ring of smooth muscle at the opening of a capillary (precapillary sphincter)/control diameter of arterioles/precapillary sphincters

TOTAL KNOWLEDGE MARKS = 13

APPENDIX: Possible links within (not intended to be exhaustive)**A&P****T1**

- relevant strengthening exercises
- muscle fibre type used
- type and range of movement at different types of joint
- Newton's law of motion
- Types of motion
- Effect of size, direction and point of application of force
- Heart rate response to exercise
- Control of blood supply at rest
- Respiratory respond to exercise

T2

- Muscle fibre types linked to relevant energy system
- Muscle fibre types linked to relevant type of training
- Types of strength training
- Effects of warm up and cool down on vascular system
- Training adaptations to muscles/cardiovascular system

2 (b) (Acquiring and Performing Movement Skills)

The level of arousal of a performer affects the acquiring and performing movement skills.

What is meant by term arousal?

Using **both** Drive theory and Inverted U theory show how the level of arousal can affect performance.

Using examples from sport identify and justify motivational strategies for a beginner learning a new skill.

Total of 13 knowledge marks available:

What is meant by term arousal?

(Definition of arousal)
(sub max of 1 mark)

- 1 Intensity aspect of motivation/level of motivation/drive to achieve a goal/energised state/readiness for action/cognitive and somatic activation/level of stimulation/emotional state/or eq.

Using **both** Drive theory and Inverted U theory show how the level of arousal can affect performance.

(Drive Theory)
(sub max of 5)

- 2 graph of theory both axes labelled with title = 1 mark (must have explanation/commentary for additional marks)
- 3 relationship between arousal and performance is linear/the greater the arousal the better the performance
- 4 the dominant (learned) response is intensified/more likely to occur with high arousal
- 5 (cause of high arousal could be) as intensity of competition increased learned behaviour more likely to occur
- 6 $P = f(H \times D)$ /Performance is a result of habit times drive
- 7 if learned response is correct then performance is enhanced
- 8 if learned response is incorrect or not fully learned then performance is hindered
- 9 drive theory does not explain why good performers can experience a drop in performance when arousal is high

(Inverted U Theory)
(sub max of 5)

- 10 graph of theory both axes labelled with title = 1 mark (must have explanation/commentary for additional marks)
- 11 as arousal increases so does performance but only up to a point/optimum level/moderate arousal
- 12 if arousal is too high then performance will decrease
- 13 theory is modified depending on personality of performer (more detail gets T2)
- 14 theory is modified depending on the ability/skill level of the performer

- 15 theory modified depending on the nature of the task
16 Inverted U does not explain sudden decreases in performance (as in catastrophe theory – not on spec)
(When arousal is at optimum level peak flow/zone of optimal functioning/ZOF may be experienced – give T2)

Using examples from sport identify and justify motivational strategies for beginner learning a new skill.

(Motivational strategies for beginner – using practical e.g.'s)
(sub max of 5)

- 17 effective motivational strategies will give players the drive to succeed/they will want to win/play well (or equivalent)
18 positive reinforcement/praise/reward/positive feedback/encouragement/verbal persuasion
19 to strengthen the S-R bond/to strengthen the bond between stimulus and response
20 this raises confidence for beginner
21 negative reinforcement/withdrawing the stimulus/praise/withdrawing negative feedback
22 give goals that are achievable/give success/give them tasks that they can achieve
23 punishment for poor performance/lack of motivation/tell them off for not trying hard
24 peer pressure may motivate/team support
25 influence of significant others/role models/watching others achieve/vicarious experiences
26 concentration/selective attention/narrow attentional field/block out distractions
27 attribute to team/discourage personal blame

(c) (Exercise and Sport Physiology)

The type of training used during a training programme will depend on the individual performer. For example a goal keeper in association football will have different training requirements from a midfield player.

Define interval training and identify the advantages of this type of training.

Identify two different types of performer. Describe how an interval training session can be manipulated to suit the requirements of each. Outline one interval training session that is specific to one of your performers.

IMPORTANT NOTE: ALL AREAS OF THE QUESTION MUST BE VISITED TO SCORE | THE TOP BAND OF THE SYNOPTIC MARKS]

Interval training (sub max 8 marks)

Definition - sub max 1

- 1 a form of training in which periods of work are interspersed with periods of recovery

Advantages - sub max 2

- 2 very versatile/can be used for practically any sport/performer/flexible training methods
- 3 can improve both aerobic and anaerobic capacity
- 4 specificity/performer can train relevant energy system
- 5 allows performer to train at higher intensities without undue fatigue
- 6 allows for quicker gains in aerobic capacity

sub max 6

Identification of two different types of performer

Manipulation (assuming candidate has chosen one aerobic performer and one anaerobic performer)

- 7 duration of work interval needs to be longer the more aerobic the performer/or vice versa
- 8 intensity of work interval needs to decrease the more aerobic the performer/or vice versa
- 9 duration of the recovery period needs to decrease the more aerobic the performer/or vice versa
- 10 the number of work/recovery intervals needs to decrease the more aerobic the performer/or vice versa

Interval training session

For aerobic performer:

- | | |
|---|---|
| 11 (duration of interval) | 3+ minutes |
| 12 (intensity of interval) | low – medium/
55%-85% VO ₂ max/HR max |
| 13 (work : relief ration/duration of recovery period) | 1:1.1:½ |
| 14 (number of work/relief intervals) | 1 set of 3/4 reps |

For anaerobic performer:

- | | |
|---------------------------|--------------|
| 15 (duration of interval) | 1-90 seconds |
|---------------------------|--------------|

- | | |
|---|--------------------------|
| 16 (intensity of interval)
max/HR max | high/70%+VO ₂ |
| 1 (work : relief ratio/duration of recovery period) | 1:2+ |
| 18 (number of work/relief intervals)
reps | 2-5 sets / 1-10 |

Injury and muscle soreness are a risk to any performer.

Explain the physiological implications of warming up and cooling down.

Physiological implications **NB EXPLANATIONS NEEDED** (sub max 5)

(a warm up ...) (subsubmax 4)

- 19 increase in body temperature reduces the chance of injury/DOMS due to increasing flexibility of muscles and connective tissues
- 20 develops a greater speed and strength of contraction due to increased elasticity of muscles/co-ordination between antagonistic pairs
- 21 increases enzyme activity
- 22 increases energy available due to increased body temperature
- 23 increases cardiac output due to greater venous return from the working muscles/Starling's law of the heart
- 24 increases oxygen supply to the working muscles due to the vascular shunt mechanism/increase in heart rate
- 25 helps delay OBLA due to enhanced aerobic respiration
- 26 helps reduce oxygen deficit due to increases oxygen delivery to the working muscles via vasomotor control
- 27 enables muscles to take up more oxygen due to increased oxygen dissociation from haemoglobin due to increased muscle temperature

(a cool down) (subsubmax 4)

- 28 speeds up the removal of lactic acid/carbon dioxide due to capillaries in working muscles remaining dilated and being flushed with oxygenated blood
- 29 avoids blood pooling due to increased venous return
- 30 through continued use of muscle and respiratory pumps
- 31 reduces muscle soreness/DOMS due to allowing the muscle temperature to drop slowly
- 32 reduces the changes of feeling light-headed after exercise due keeping stroke volume high
- 33 can be used for flexibility training as muscles are still warm after exercise and therefore more pliable

(Implications) submax 2 for

(warm up_

- 34 reduce chance of injury
- 35 delay OBLA / increase O₂ to working muscles
- 36 increase in speed / force of muscle contraction

(cool down)

- 37 remove Lactic Acid
- 38 prevent blood pooling
- 39 prevent DOMS

TOTAL KNOWLEDGE MARKS = 13

APPENDIX: Possible links within (not intended to be exhaustive)**Ex Phys****T1**

- energy systems/ATP production
- recovery process
- components of fitness
- other types of training, especially continuous/fartlek
- other principles of training
- aerobic energy system/ATP production
- physiological adaptations to aerobic training

T2

- Effects of warm up and cool down on vascular system
- Effects of training of cardiovascular system

(d) (Biochemical Analysis of human movement)

Using Newton's Laws of Motion, explain the effects of force acting on a projectile just prior to flight.

Other than the size of the applied force, identify and explain additional factors that can affect the horizontal distance achieved by a projectile. [13]

(Newton's Laws)

Sub max of 3 marks from

- 1 (Newton 1) An object will remain at rest (or move with constant velocity) unless acted upon by an unbalanced force.
- 2 (Newton 2) The acceleration/rate of change of momentum of an object is directly proportional to the force applied to it and
- 3 takes place in the same direction as the force.
- 4 (Newton 3) For every action there is an equal and opposite reaction.

(Factors affecting distance travelled)

Sub max of 10 marks for

- 5 (Identification) Speed the ball leaves the club/speed of release.
- 6 (Explanation) The greater the speed of release the greater the distance travelled.
- 7 (Identification) Angle of release.
- 8 (Explanation) Optimum angle for greatest distance = 45° (if landing area is same height as release height).
- 9 (Explanation) Above or below 45° reduces distances.
- 10 (Identification) Height of release.
- 11 (Explanation) If landing area is lower then angle of release needs to be lower to maximise distance.
- 12 (Explanation) If landing area is higher then angle of release needs to be higher to maximise distance.
- 13 (Identification) Follow through/time club is the contact with ball.
- 14 (Explanation) The longer the force is applied the greater the impulse/(change in) momentum.
- 15 (Explanation) Therefore the greater the outgoing velocity/speed of the ball.
- 16 (Identification) Amount/type of spin applied to the ball/Magnus effect.
- 17 (Explanation) Backspin will lengthen flight path/increase distance travelled.
- 18 (Explanation) Topspin/side spin will shorten flight path/decrease distance travelled.
- 19 (Explanation) Sidespin will reduce displacement.
- 20 (Identification) Shape of the object.
- 21 (Explanation) Aerofoil shape can create lift.
- 22 (Explanation) Bernoulli/lift force can increase distance travelled.
- 23 (Identification) Wind/air resistance.
- 24 (Explanation) Greater air resistance can reduce distance travelled
- 25 (Explanation) although some objects can be thrown further into a slight headwind. (e.g. javelin)

[TOTAL MARKS: 13]

Theoretical links (T1)**1st part:**

- Free body diagrams.
- Levers and their effect on force applied.

2nd part:

- Parabolic and non-parabolic flight paths.
- Vectors in terms of distance and displacement.
- Free body diagrams of objects during flight.

Theoretical links (T2) with A@P

- Movement analysis of any sporting examples they use.

(e) (Psychology of Sport Performance)

Anxiety in sport is often regarded as a negative emotion that hinders sports' performance.

Describe the different types and sources of anxiety in sport.

Using examples from sport, explain how anxiety can be managed to improve performance.

(Different types/sources of anxiety)

(Sub max of 6)

- 1 Often due to fear of failing/importance of event (or equivalent)
- 2 Fear of being threatened/or actually threatened/fear of injury/harm/hostile crowd/players/proximity of crowd
- 3 Fear of being embarrassed/self esteem being harmed/fear of pride being hurt
- 4 When arousal is high more likely to get anxious/vice versa
- 5 Anxiety can be somatic/body response/heart rate raised/blood pressure raised (other somatic stress responses acceptable)
- 6 Anxiety can be cognitive/of the mind/worry/apprehension/feeling of helplessness
- 7 Competitive (trait) anxiety/anxiety caused by competition/pressure of trying to win
- 8 Trait anxiety – anxiety that is in-guilt/genetically determined/natural anxiety
- 9 State anxiety – anxiety arising from a specific situation/incident/person/ environment/past experience/previous failure
- 10 Multi-dimensional anxiety/theory/interaction of both cognitive and somatic/one triggers the other/e.g. raising heart rate causes worry or worry causes raising heart rate
- 11 (Perceived) judgement from others/evaluation apprehension

Using examples from sport, explain how anxiety can be managed to improve performance.

(Sub max of 9)

- 12 mental rehearsal/going through the actions in mind
- 13 imagery/imagining success/doing the activity correctly/well/imagine not being anxious/a calm place/
- 14 meditation/mantra
- 15 positive self-talk/convincing yourself that you will succeed/reasoning with yourself/rationalising the situation/educating/reasoning
- 16 positive reinforcement by someone else/influence of others who are significant (give operant conditioning T2)/behaviour modification
- 17 negative thought stopping/stop doubt/block out negative thoughts
- 18 block out distractions
- 19 (progressive) muscular relaxation/gradually relaxing all the major muscle groups/tense muscles and then relax them/deep breathing
- 20 biofeedback/being aware of how your body feels and then dealing with the tension
- 21 removal from the situation/stimulus that is causing worry

- 22 flooding/over stimulated by stress stimulus so that you able to deal with real stressful/anxious situations/more experience with anxious situations/giving more real match situations/more competition
- 23 emulating/duplicating the real game/competition in training to get used to the stressful stimuli/recorded crowd noise/fans in to watch training (or equivalent)
- 24 raising confidence (detail of this/self efficacy give T1)
- 25 give success/make task easier/goals that are achievable (details re goal setting give T1)

Total 26 Knowledge marks

19 synoptic marks

[Total: 45 marks]

Appendix

Examples of possible links A/S and A2.

A/S > A/S	A2>A2
Arousal – personality types	Anxiety – arousal/inverted U/drive
Arousal – social facilitation/audience	Anxiety – S-R bond/operant Conditioning
Arousal – achievement motivation	Anxiety – Observational learning
Inverted U – Anxiety/Peak flow/ZOF	Management of anxiety – Reinforcement/operant Conditioning
Motivational strategies – confidence/self efficacy	Management of anxiety – observational learning
Motivational strategies – group norms/social learning/cohesion	
Motivational strategies – goal setting	

3 (Socio-cultural Focus)**Part One****(a) (Contemporary Studies in Physical Education)**

Participation in Physical Education and sport can be of great benefit to young people.

Discuss the values or benefits to be gained from Physical Education in schools.

13 marks: 1 mark for each response up to a maximum of 13.

Sub max 8: NB: marks should be given for possible negative outcomes of PE

Values to be gained from Physical Education in schools**Physical/cognitive**

- 1 development of physical/mental skills/but some children may get nothing out of it
- 2 health benefits/healthy lifestyle
- 3 physical development/physical fitness
- 4 knowledge of game/rules/tactics/some children may have no interest and therefore learn nothing/very little
- 5 knowledge of the body

Preparation

- 6 preparation for leisure/sport after school (clubs extra-curricular)/a negative experience may convince some that they do not want to participate again
- 7 career preparation/qualifications (e.g. teacher, professional, coach, armed forces)

Personal/social

- 8 leadership/decision making opportunities
- 9 teamwork/sharing encouraged
- 10 positive moral developed e.g. sportsmanship, fair play
- 11 self-confidence/self esteem/self realisation/independence/individuality/but under some circumstances could lose/reduce self esteem
- 12 positive attitudes e.g. commitment/responsibility/competitiveness/motivation/loyalty/but could develop negative attitudes
- 13 development of social/communication skills/making friends

Quality of life

- 14 aesthetic appreciation of performance/environment/enjoyment
- 15 challenging/dangerous situation encountered/overcome
- 16 opportunities for creativity e.g. creative dance

Define sport ...

Sub max 3

- 17 organisation/national governing body/structure/rules
- 18 physical prowess/skill/fitness

- 19 physical endeavour/commitment/determination/hard work/competitiveness
- 20 fair play/sportsmanship

... and identify various ways that young people can experience sport both in and out of schools.

Sub max 6

In school

- 21 competitive aspect of PE lessons e.g. distance jumped, shuttle runs completed, game at end of lesson
- 22 playing for school team/s
- 23 inter-house and inter-form competitions/where outcome is important

Out of school

- 24 being entered for county/area trials/country/national
- 25 (recreational) playing at local clubs/private clubs/voluntary clubs/e.g. of private club: Holmes Place/e.g. of voluntary club: village/town tennis club
- 26 (competitive) representing club in league/cup matches/other competitions
- 27 entering leagues at local sports centre
- 28 hiring facilities at local centre/getting group of friends together

Alternative valid points/equivalents should be accepted.

Part Two

(b) (Historical Studies in Physical Education)

Describe the physical activity of the state elementary school children in 1902 and of public school boys during stage three, when athleticism was fully developed. Your answer should include information on both content and methodology.

Discuss the objectives of both of the approaches that you have described.

Sub max 8

Sub max 5

State Schools in 1902**Content**

- 1 military drill
- 2 exercise/e.g. lunges
- 3 use of staves/pretend weapons
- 4 deep breathing/breathing exercises

Methodology

- 5 command response/e.g. 'attention'
- 6 group response/no individuality
- 7 in ranks military style
- 8 taught by army NCOs
- 9 girls and boys together
- 10 large numbers in small space

Subsubmax 5

Public School boys during stage three (athleticism)**Content:**

- 11 team games/e.g. cricket/rugby
- 12 racquet games/e.g. racquets/squash/also fives
- 13 individual activities/e.g. athletics/e.g. steeple chase/hare and hounds/school sports day/rowing/swimming
- 14 inter-house/inter-school matches
- 15 Office Training Corps (OTC)/shooting/army/preparation/military drill

Methodology

- 16 organised primarily by boys themselves
- 17 master involvement/support/OB's
- 18 small numbers in large space
- 19 using purpose built facilities
- 20 some specialist/professional coaches employed/e.g. for cricket/racquets/squash

Discuss the objectives of both of the approaches that you have described.

Submax 7

Objectives of state school approach:

- 21 preparation for war
- 22 discipline/obedience
- 23 fitness
- 24 weapons training

Objectives of public school approach

- 25 character development

Development of:

- 26 honour/respect for others
- 27 leadership/captaining a team
- 28 loyalty to: team/house/school/country
- 29 teamwork/working together/'all for one and one for all'
- 30 trust/being reliable/dependable/independence
- 31 sportsmanship/fair play/not cheating/being honest/integrity/Christian
- 32 manliness/courage/pluck/coolness under pressure
- 33 trying hard/never giving up/commitment/not flinching
- 34 to exhaust boys so they were less likely to cause trouble/let off steam.

T1 – links within AS Contemporary Studies

- sport can be part of PE lesson
- most of the same benefits of PE are available through outdoor education
- school sport 'feeds' performance pyramid
- importance of school/community links

Influence of:

- sports development officers
- youth sport trust
- sports colleges

T1 - links within A2 Historical Studies

State schools	Public schools
Large numbers	Small numbers
Small space	Large space
'Junior' aged boys and girls	'secondary' aged boys
The approach in state schools changed greatly in 590 years from 1902	
Unlike public schools, no games for many reasons: no space, time specialist facility or teachers	

T2 – links between AS (contemporary) and A2 (historical)

- Values of PE today have some similarities with values in 1902 state schools e.g. physical fitness
- In some ways they are different e.g. today preparation for leisure and in '02 preparation for war
- Similarities of values of today's PE with public school games ... e.g. sportsmanship, leadership, social skills
- Opportunities for participation in sport today much greater than for state school children in 1902
- Some similarity between definition of sport (including organisation, fair play prowess and endeavour) with definition of athleticism in public school (endeavour and integrity)
- Relative importance of 'house' teams then and now.
- Comparison of teaching methods then and now
- Comparison of specialist PE teachers then and now
- Comparison of facilities etc

(c) (Comparative studies in Physical Education)**School sport is different in all countries**

Describe how the Union Nationale du Sport Scolaire (UNSS) improves the quality of sports performance in French schools.

Sub max 8

- 1 (Participation) Mission to include all pupils/broaden participation base
- 2 (Participation) Develop interests of non-sporting pupils
- 3 (Excellence) Promote competitive sport/becoming excellent/recognising talent
- 4 (Coaching) Specialist coaches develop excellence
- 5 (Coaching) Specialist coaches help/work along with teachers
- 6 (Fixtures) Regular/Wednesday competitive sports fixtures
- 7 (Progression/structure) UNSS representation goes up to schools international standards
- 8 (Facilities) Joint provision/use/community facilities are used/equipment
- 9 (Sports Club) Promotion of sport through school sports club/affiliated of school sports club to the UNSS/Association Sportive is a school sports club affiliated to UNSS
- 10 (Sports Club) Sports club is managed by teachers and pupils
- 11 (Sports Club) Pupils learn administration and organisation skills are learned

Compare UK Specialist Sports Colleges with USA High Schools. Your answer should include information on attitude and provision in relation to competitive school sports.

Sub max 10 (submax 4 for USA only)

	UK Specialist Sports Colleges	USA High Schools
12 (Status)	Leading Edge/Training Schools to develop sport for all	Centres of sports excellence
13 (Opportunity)	Increase opportunities for talented performers	Provide opportunities for elite performers
14 (Social)	Centres for school and community sport	Centres for school sport only/community involved as spectators
15 (Target groups)	All students	Selected students
16 (Progression)	Prepares talented performers for progression to County/International schools representation/UKSI involvement/clubs	Prepares talented performers for progression to Colleges/for scholarship
17 (Delivery)	Specialist coaches/sports co-ordinators work with cluster/partner schools to develop competitive sport	Athletic director/specialist coaches work with their own students in competitive sport
18 (Competitions)	Organise events/inter-school fixtures	High schools engage in fixture list prepared by school's governing bod

19 (Ethos)	Winning not a major priority	Winning is major priority/Lombardianism ethic prevails
20 (Achievement)	Sports Co-ordinators/teachers not judge on sports results	Coach judges on sports results
21 (Employment terms of Teachers/Coaches)	Permanent contract	Hire and Fire agreement
22 (Equality)	Access for all minority/disadvantaged groups	Elite/selected performers only
23 (Humanistic)	Improve self esteem/confidence/quality of life	Improve player performance/sports prowess
24 (Image)	School image/teacher in control/value system reflects educational values	Professional sport image/replication/copy
25 (Ideology)	Reflects UK ideology	Reflects USA ideology
26 (Political)	Deliver government plan for sports development in school	No political motive/agenda
27 (Facilities)	Enhanced/improved facilities	Facilities are of a standard to provide excellence
28 (Sports Fixtures)	Provide local competitors	Provides highly competitive/intra state fixtures
29 (Spectator facilities)	No provision	Larger schools play in stadiums
30 (Club Links)	Work to provide links with clubs	No direct link with clubs/colleges
31 (Commercialism)	No reliance on commercial provision	Commercialism/sponsorship is strongly evident
32 (Alumni)	Operation does not involve alumni donation	Tradition of financial donation from former students
33 (Qualifications)	Gives access to sports specific qualifications	Provides no academic qualifications
34 (Professional development)	Co-ordinators provide courses for teachers	Athletic directors/Coaches do not provide professional development opportunities

[TOTAL MARKS: 45]

T1 – Links (Links within Comparative Studies)**USA**

- sport has higher priority over PE
- often coach and teacher are separate appoints
- daily PE programme is disappearing
- commitment to Title XI
- counter-culture ethic exist in some schools
- cheerleading is part of the USA High School sports scene
- Little League/children's sport/community recreation programmes are preparation for sport

Australia

- sport in Australian High Schools has high status
- SEPEP initiative
- participation is a priority/link with More Active Australia
- teachers are in charge
- coaches are used
- strong sports linkage initiative
- fair play is instilled
- intra and inter-school sport competition
- exemplary schools share good practice
- state awards/Blues for sporting achievement and other non playing contributions

France

- operation of the UNSS
- UNSS has participation ethic
- UNSS has school and representative teams up to national standard
- joint provision of facilities
- government funded
- Study Sections focus on developing excellence
- Study Sections are selective
- Primary Sports Schools specialise in sport provision
- non-selective
- employ specialist coaches

T2 – links across to UK Contemporary Studies

- Specialist Sports Colleges
- Youth Sport Trust
- PE initiatives e.g. Sports Mark and Active Schools
- TOP programmes
- work of School Sport Co-ordinators, Sports Development Officers and Primary Link teachers
- cluster schools
- Governing Bodies initiatives e.g. competitions and awards

Banded criteria for synoptic assessment

16 – 19	<p>A comprehensive response:</p> <ul style="list-style-type: none"> • Comprehensive knowledge has been consistently and clearly linked to practical performance. • Relevant links and connections between and within study areas have been made successfully. • Responses at the top of this level will demonstrate sound analytical and evaluative skills. • There is evidence of well-argued, independent opinion and judgements supported by sound examples. • Technical and specialist vocabulary is used accurately. • The Quality of Written Communication is generally fluent with few errors.
11 – 15	<p>A competent answer:</p> <ul style="list-style-type: none"> • Substantial knowledge has been linked to practical performance and the majority of examples will be well considered. • Relevant links between and within subject areas have been made with some success. • Evidence of sound analysis is apparent. • Independent opinions and judgements will be present but towards the bottom of this level, not always supported by sound examples. • Technical and specialist vocabulary is used with some accuracy. • The Quality of Written Communication is generally fluent with few errors.
6 – 10	<p>A straightforward answer:</p> <ul style="list-style-type: none"> • There will be evidence that some knowledge has been linked to practical performance. Connections are made between and within study areas but at the bottom of this level, links will be tenuous. • Analysis will be limited and restricted to the obvious. • Opinion and judgement will be unsupported. • Technical and specialist vocabulary is used with limited success. • The Quality of Written Communication lacks fluency and there will be errors.
0 – 5	<p>A limited answer:</p> <ul style="list-style-type: none"> • There will be limited knowledge with few links to practical performance. • Connections within and between study areas rarely made. • Opinion and judgement almost entirely absent. • Little or no attempt to use technical and specialist vocabulary at the bottom of this level. • Errors in Quality of Written Communication will be intrusive.

Report on the Units January 2006

Chief Examiner's Report

There were approximately 4500 candidates entered for the 2562 unit and 6000 for the 2563 unit. Entries for the A2 units were significantly lower at 1400 for the 2565 and 1000 for the 2566. Most of the AS candidates were re-sitting these units although there was evidence that some Centres were bulk-entering all candidates for the first time, with limited success at this stage in their courses.

As in the summer, AS candidate responses showed consistency across the Physiological and Psychological questions. Often in the past candidates have tended to perform better in the Psychological area. This equality is indicative of teachers giving better direction to candidates. The Contemporary Studies paper (2563) did not contain a question that was marked with a levels of response mark scheme yet still differentiated between candidates particularly in the latter parts of question 2.

At A2 it is not surprising that the number of candidates is relatively much smaller than the AS cohort in this session. It is a great credit to some candidates that they perform so well at this relatively early stage of their A2 course.

At both AS and A2 it was apparent that examination technique was lacking in a significant number of cases with candidates failing to comply with the demands of questions or to plan and structure their answers effectively. It was on occasion apparent that this problem applied generally to particular Centres, suggesting that insufficient time had been spent on coaching this important aspect.

2562: The Application of Physiological and Psychological Knowledge to Improve Performance

General Comments

Available evidence suggests that the majority of the cohort were re-sit candidates, mostly scoring towards the lower end of the mark range. Whilst there were still a few candidates whose total score amounted to only single figures, a considerable number of the candidates gained scores in the 20 – 35 range, supporting the view that it is primarily a re-sit opportunity. There was however some evidence to suggest that a number of Centres had elected to enter all of their AS candidates for this sitting. Whilst this course of action is obviously permissible, it was noticeable that only a limited number accessed marks at the upper end of the mark range. This suggests that Centres and candidates had insufficient time to cover the specification adequately and calls into question the effectiveness of the strategy. Such Centres may want to reconsider whether it is the best course of action.

The distribution of marks across both sections and all questions was relatively consistent, although this was not the case for all Centres.

As general guidance to Centres, the following points will hopefully serve as useful feedback in preparing candidates for future sittings of Unit 2562.

- Marks were lost in some cases through the omission of the practical examples specified in the question.
- Graph work should always contain the clear and specific labelling of each axis, an indicator of a scale on each axis and, obviously, the correct plotting of the curve.
- Failure to extract the relevant and correct information from questions led to some candidates offering totally unrelated or irrelevant detail in their responses.
- Where the number of responses demanded by a question is clearly specified, only that number of responses will be marked by the examining team, irrespective of the quality and accuracy of any remaining responses.
- There was evidence to suggest that, in some cases, Centres had not covered all areas of the specification.

Comments on Individual Questions

- 1(a)** (i) A generally well answered question with, in the majority of cases, marks being gained through points 1, 2 and 4. However, in some cases, there was a misconception that the articulating bones at the shoulder (point 2) are the humerus, scapula and clavicle, as opposed to just the humerus and scapula.
- (ii) There was a wide range of responses, with many maximum scores. However, where a question asks for an exercise, the example must be named and not described or drawn. The specification clearly states that candidates should be aware of named exercises.
- (b)** Many candidates scored maximum marks, primarily through points 4 and 5. It is worth adding, however, that several candidates did not score well as they failed to focus on the process of cool down by omitting the importance of ***maintaining*** stroke volume, blood pressure, the skeletal pump and venous return.

- (c) As might have been expected, given the nature of the cohort, the bulk of the correct responses came through the more simplistic points of 1, 2, 3, 4 for the structural characteristic. The most common mistake for candidates who did not gain the functional characteristic mark was the inclusion of a practical example instead of a characteristic (e.g. endurance running for point 19), or simply not being sufficiently descriptive (e.g. slow as opposed to slow contractile speed, or uses oxygen instead of high aerobic capacity)
- (d)
- (i) The majority of candidates identified the correct lung volume as being tidal volume, but many then incorrectly defined tidal volume as being the volume of air inspired and expired, rather than correctly as inspired **or** expired per breath.
 - (ii) Most candidates gained this mark.
- 2(a)
- (i) A generally well answered question.
 - (ii) The failure to identify **intrinsic control** as the key feature of the question resulted in a description of neural control of heart rate by numerous candidates. This serves as a clear example of how candidates occasionally lack focus in extracting the relevant detail from a question.
 - (iii) The pattern was either that candidates answered this question well and scored maximum marks or simply wrote very generally about the passage of blood through one side of the heart. Once again, as was the case in question 1(b), some candidates failed to score through lack of detail e.g. the atria contract as a response for point 6 as opposed to the more specific answer of **the atria contract, forcing blood into the ventricles**.
 - (iv) The majority of candidates gained this mark.
- (b)
- (i) The more able candidates successfully identified that the question related to exercise and responses needed to reflect the adaptations occurring during gaseous exchange when exercising. The common error for the weaker candidates was to simply describe the structure of the lungs, thereby not focusing on the quantitative measures of each of the points on the mark scheme.
 - (ii) Well answered by the majority of the candidates, with most understanding the role of haemoglobin in the transportation of oxygen.
- 3 (a)
- (i) Most candidates were able to identify that ability is innate, but, for some, that was the extent of their knowledge. Unfortunately this very straightforward question illustrated the fact that many candidates still repeat themselves, albeit with different terminology, thereby failing to gain, in this case, the second mark on offer. e.g. 'ability is innate, it is something that we inherit from our parents'.
 - (ii) A poorly answered question, with many candidates confusing a psychomotor ability with a straightforward physical skill.

- (b) For many candidates this was a high scoring question, with all points on the mark scheme being visited.
- (c) Pacing as a concept had clearly been well taught by many Centres, with numerous candidates gaining maximum marks. A common mistake for those not in this category was a lack of specific detail in the examples e.g. football being offered as the illustration of point 6 rather than including the detail identified on the mark scheme. Repetition of the term pacing in the response meant that some candidates had simply re-worded a term from the question e.g. 'self pacing is when a person paces himself'.
- (d)
- (i) For many candidates the sketch graph of Drive Theory resulted in maximum marks. However, the usual common errors with regards to graph work were made by the weaker candidates, insofar as axes did not always contain a scale or they were the wrong way around.
- (ii) Very few candidates identified the role of the dominant habit/response in influencing performance as a result of increased arousal. The most common response was simply an interpretation of the graph, whereby increased arousal led to increased performance.
- 4 (a) (i) A reasonably well answered question with the automatic/habitual nature of performance being the most frequently occurring response.
- (ii) Where candidates remembered to include a practical example, maximum marks were generally gained. However, despite being referred to on every post examination report for this unit and no doubt being reminded of this fact by Centre staff, there were still many candidates who failed to identify any practical examples and thereby failed to gain any marks.
- (b) Once again the issue of practical examples was often the determining factor in how many marks were gained on this question.
- (c) (i) An understanding of the organisation classification continuum was not always apparent.
- (ii) It was clear from the consistency with which candidates failed to describe accurately the progressive part method of teaching, that many candidates did not fully understand this concept. Unfortunately, in some cases, a whole Centre's candidates would offer an incorrect response, thereby indicating that perhaps this aspect of the specification had not been dealt with fully. There were however some excellent answers with clear and specific examples from some candidates (particularly those who had used the most obvious illustration of triple jump).
- (iii) The average score on this question was two marks, with points 1-4 being the most frequently used.

2563: Contemporary Studies in Physical Education

General Comments

This paper examined a wide range of the topics in specification and proved to be relatively accessible to most candidates, all of whom completed the paper in the time available. This paper did not include an extended 'levels of response' marked question, with command words being comparatively straightforward (several recall ('what') questions and a limited number of 'why' questions requiring longer explanations or discussions). Once again, there was clear evidence that many candidates were well prepared in terms of knowledge and understanding and examination technique. Such candidates knew exactly which part of the specification was being targeted and presented their answers in a well worded but efficient and effective style. However, a pattern emerged that when specific questions were answered badly, this often applied to a whole Centre's candidates. Candidates should be made aware that, if their answers are predominantly bullet pointed, they can only score a maximum of one mark out of three for quality of written communication and, with grade boundaries perhaps just three marks apart, this is an important consideration.

Comments on Individual Questions

- 1 This tended to be the higher scoring of the two questions and it examined aspects of the specification based around the continuum from play to sport. Nine marks were linked to the concept of play, two to understanding key terms (prowess and endeavour) and ten to issues relating to both functional and dysfunctional behaviour in sport - from the effects of fair play to the illegal use of drugs and causes of crowd violence.
- (a) (i) A high scoring question requiring identification of the characteristics of play. Many candidates scored a max. of four here. The most common answers were points 2 (spontaneity), 3 (childlike) and 7 (enjoyment). Marks relating to time, space and rules were also frequently awarded. Marks were not given for comments such as 'no rules' 'any time' 'anywhere' 'wherever' or 'no organisation.'
- (ii) Another well answered question requiring knowledge of what children can learn from play. Points 1 (leadership), 4 (social) 5 (emotional) and 6 (physical) were the most commonly seen by examiners.
- (iii) The difference between adults and children at play required a set response, or adaptation of it for one mark.
- (b) (i) Contemporary Studies papers usually have some words to define. Explanations of physical prowess and physical endeavour were needed and responses were of mixed quality with a surprising number of candidates scoring badly here.

- (ii) This question concerned the effects of fair play and required application of knowledge. It was pleasing that the majority of candidates tackled it well. However a disappointing number merely explained the meaning of fair play thus gaining no marks. All points on the mark scheme were equally used.
- (iii) This first question on deviance required knowledge of why some performers take performance enhancing drugs. Although a straightforward question, it differentiated well, with a surprising number of weaker candidates repeating the question in their answer e.g. 'to enhance performance,' while others were vague in their responses e.g. 'to get an unfair advantage over others'.
- (iv) The second deviance question was on the causes of crowd violence. Whenever this theme is examined candidates do very well – even those who show weaknesses elsewhere on the paper. The most common answers were points 1 (alcohol), 2 (frustration with official etc), 3 (traditional rivalry), 4 (chanting or abuse) and 9 (pitch violence).

2 In general, candidates scored less well in question two which focused on dimensions of PE in schools and participation by minority groups (notably girls and older people). In addition, knowledge of the work of the Women's Sports Foundation in promoting equality and campaigning to increase participation by females was needed. Finally, 'sport and culture' was examined with candidates needing to identify and explain different characteristics of sport in tribal cultures. This six mark question proved to be the main differentiator of the whole paper – firstly because it required very specific knowledge and secondly because it needed precise and efficient examination technique.

- (a) Candidates explained how school PE departments give children experience of education and sport better than they explained provision for physical recreation, which was often vague. The key is that the provision needed oversight by the PE department – not simply a 'kick around at break time.'
- (b) (i) A well answered question on reasons for drop out by girls. The following points were most commonly seen: 2 (inadequate local choice or provision), 3 (peer pressure), 5 (lack of role models), 6 (negative attitudes, discrimination and stereotyping).
- (ii) A poorly answered question with very little specific knowledge on the work of the Women's Sports Foundation. Most managed the second part (campaigns to increase participation), but otherwise there were many incorrect guesses such as provision of funding, facilities or coaches.
- (iii) A well answered question on what local recreation centres can do to encourage more older people to take part in regular physical recreation. Common answers were points 8 (reduced cost), 7 (improved access e.g. transport), 3 (provision of suitable sessions). A minority of candidates wrote about disabled people here.

- (c) (i) This question tended to be a good predictor of a candidate's overall performance on the paper. Candidates' marks ranged, almost equally from six to zero – depending on their recall of knowledge and their efficiency of presentation. The specification states that candidates should know about 'Tribal societies: including natural, functional, ritual, ceremonial, survival and community characteristics'. Those with knowledge and sharp technique easily picked up their six marks. Candidates could not get a mark for explaining without having first identified a characteristic.

In terms of examination technique it is essential that candidates know that when a specific number of responses is demanded in the question (in this case three) then examiners can only consider and mark that many – even if subsequent attempts are correct. Weaker candidates typically gave three incorrect identification points e.g. 'local,' 'rowdy' and 'festival' from the ethnic sports part of the specification and then went on to correctly identify 'traditional' or 'natural' as characteristics, but with three incorrect attempts already having been made, no marks were gained.

Other candidates who went wrong here wrote about pre-colonial, colonial and post colonial phases of development.

The following is an example of a high scoring answer.

'One characteristics of sport in tribal cultures in that it is functional (one mark for a correct identification) which means that the activity served a useful purpose (a second mark for explaining the previous key word). Secondly, sports and pastimes were ritualistic (a third mark for the second correct identification) often with singing and dancing. (a fourth mark for explanation of 'ritual'). Finally sports in tribal cultures were natural (a third and final correct identification) which means that they were simple and cheap and were part of the natural surrounding environment. (a final sixth mark for the third explanation).

- (ii) This final question differentiated well. Some candidates scored maximum marks, but many wrote at great length about the 'Haka,' gaining no marks, as the question was investigating the 'adoption' of rugby football by Samoa, rather than its contemporary status or form.

2565: Physical Education: Historical, Comparative, Biomechanical and Sport Psychology options

General Comments

Candidates are expected to cover at least two of the optional areas of study, one being from Section A, either the Historical or Comparative topic. 3 marks are available for quality of written communication in Section A, where answers require a piece of extended writing.

The History and Psychology questions, once again, proved most popular with a growing number of candidates offering Comparative but very few covering the Biomechanics option.

Examination technique is an important factor determining success on this paper. This continues to improve. A key point is that candidates must comply with the demands of the question. Where a specific number of responses are required, for example in question 1(c), 'identify **four** characteristics of rationalised sport', candidates must ensure that they only offer four as examiners will only mark the first four offered. Similarly in 4(a)(ii), 'Giving examples from sport, explain the view that we develop our personalities by imitating others', candidates were expected to exemplify their responses and full marks could not be achieved unless this occurred.

Candidates are preparing their responses to answers in Section A more thoroughly and the Quality of Language mark also continues to show an improvement. The use of paragraphs and the fluency of these planned responses certainly help the candidates' ability to score well. As in previous sessions, levels mark schemes were used to assess questions where higher order skills such as analysis, application, comparison or argument were being assessed. This type of scheme helps to ensure that candidates are appropriately rewarded. In the Historical Studies in Physical Education Question 1 (b), a levels mark scheme was applied and used particularly successfully to differentiate between weaker candidates who only identified the roles that ex-pupils undertook, and good candidates who were able to explain their influence in society.

Comments on Individual Questions

1 Historical Studies in Physical Education

(a)

- (i)** Candidates showed a good grasp of popular recreational characteristics as they existed in Cricket. Weaker candidates listed these characteristics without linking them to Cricket.
- (ii)** Where candidates were able to show a comparison between the activities of the gentry and agricultural worker, they scored well, usually achieving full marks. Weaker candidates simply described the activities and often failed to secure marks as comparisons were not made.

(b) Candidates were often able to fully describe the role schools played in the emergence of rational recreation as well as identify some of the influential roles that ex-pupils took on after leaving the public schools. Careers in Teaching, the Armed Forces, the Ministry or as factory owners were

acknowledged with stronger candidates able to explain how the influence of these leaders was felt in society.

- (c) The rational recreational characteristics and the cultural factors which led to their development were well understood with the 'Regulated, Respectable, Regularised' and 'Regionalised' nature of sport being the most common responses.
- (d) The focus on the 1950s programmes proved popular as candidates scored well on both the objectives of the programmes as well as a description of how a lesson based on the syllabus would have been taught. A minority of students confused these syllabuses with the 1902 Model Course and failed to score marks as their answers focussed on the militaristic nature of the 1902 Model Course.

2 Comparative Studies in Physical Education

- (a)
 - (i) INSEP was well known and candidates scored well, particularly in identifying the structure of INSEP.
 - (ii) The patriotism, unity and supremacy answers were often offered in answers which generally secured maximum marks.
- (b)
 - (i) Knowledge of the 'Little League' programme and other community recreation initiatives was widespread and candidates often supported this knowledge with appropriate benefits derived from their implementation. Some candidates, however, appeared to use answers from June 2005 mark scheme and wrote exhaustively about 'Midnight Leagues' or 'Summer Camps'.
 - (ii) This was very well answered and candidates' responses reflected a very good understanding of how factors have influenced the development of professional sport. All ten points from the mark scheme were regularly offered.
- (c) The final question, which was marked using a levels mark scheme, provided an ideal differentiator. Less well prepared or weaker candidates often only described sporting excellence in Australia. Stronger candidates were able to identify the factors which have extended the tradition of sporting excellence and fully develop these points reflecting a secure knowledge of the influences.

3 Biomechanical Factors Involved in Human Movement

- (a) Candidates accurately defined the terms, 'Distance' and 'Displacement' and accurately calculated their values. Most candidates secured maximum marks.
- (b)
 - (i) Candidates were able to construct a parallelogram using ground reaction and weight forces, and correctly identify the pathway of the resultant force.
 - (ii) The application of Newton's 3rd Law was well understood.
 - (iii) Few candidates were able to apply Newton's 2nd Law and marks were difficult to find.

- c) (i) Candidates were able to define correctly Newton's 1st law but were often unable to explain that air resistance and friction forces were equal and that the net resultant force was therefore zero.
- (ii) The importance in ensuring that force lengths were equal to each other was often not acknowledged.
- (iii) This was marked using a levels mark scheme and many candidates secured the maximum mark, demonstrating an excellent understanding of the factors that affect the horizontal forces on the runner. Both friction and air resistance factors were discussed and the better candidates offered a full explanation.

4 Psychology of Sport Performance

- a) (i) The majority of candidates secured at least one mark for each approach to personality with many candidates securing a maximum mark.
- (ii) Whilst many candidates gave a good example of a role model and his / her influence on someone watching their performance, apart from an appreciation that the view was developed from the 'Social Learning Theory', most failed to develop their response and few scored more than one mark for the question.
- (b) (i) Many candidates scored a maximum for a recall question which proved very accessible.
- (ii) This question required an understanding of Fiedler's Contingency model and integral to this was an appreciation that 'situation favourableness' lies at the heart of an answer. Most candidates scored point one on the mark scheme for showing that they would use the two styles in different situations but it was only the best candidates who understood when the two styles were best employed and knew what conditions made a situation 'favourable' or 'unfavourable'.
- (c) Many candidates did not know what the terms 'learned helplessness, mastery orientation' or attribution retraining' meant and therefore failed to score. Few candidates appreciated the 'Internal – External' dichotomy and most only commented vaguely on 'unstable' and 'stable' reasons for failure. The better candidates discussed both successful and failed performances and linked the locus of causality to practical examples.

2566: Exercise and Sport Physiology and the integration of knowledge of principles and concepts across the area of Physical Education

General Comments

Although some candidates were well prepared for this examination, too many had insufficient knowledge or understanding in the topic areas examined, especially for the synoptic part of the paper. The better candidates often showed effective planning, but those at the lower end of the ability range simply wrote all they knew about the topic rather than answer the questions set. In the compulsory sport and exercise physiology question, the best candidates showed good awareness of aerobic capacity and the factors affecting performers' VO₂ max. Many candidates showed too little knowledge of the physiological adaptations that occur when training at high intensity. The better candidates used these adaptations to explain why a performer can work at a higher intensity than their VO₂ max. The weaker candidates simply listed the adaptations and did not answer the question set.

In the synoptic questions, the best candidates identified and explained effectively with practical performance and other aspects within and between topic areas. The weaker candidates not only showed a poor level of knowledge and understanding of their chosen topic areas but also had little idea of the requirements to link their responses to other relevant material both within and between relevant topic areas. The best candidates gave relevant and fully explained practical examples to relate theory with practice. The weaker ones offered poorly explained examples and/or made little or no reference to sports performance.

As in previous examinations, the most effective candidates made short plans and made their links throughout their answers. Candidates are generally using appropriate technical and specialist vocabulary and write clearly and legibly, which is necessary to score top marks. A few candidates offended the rubric and answered questions from both the scientific focus and the socio-cultural focus. It is important that candidates are familiar with the format of the question paper and its requirements before sitting the examination.

Comments on Individual Questions

Section A

Sport and Exercise Physiology

- 1 (a)** In this part of the compulsory question candidates scored very well in identifying the factors affecting performers' VO₂ max but many candidates could not define aerobic capacity with sufficient accuracy.
- (b)**
- (i)** The majority of candidates showed a good understanding of the training requirements to improve aerobic capacity and outlined a suitable training programme emphasising the relevant values for frequency, intensity, time and type of training. Although some candidates were able to draw an appropriately labelled graph to show how the predominant energy system depends on the duration of exercise, many were not.
 - (ii)** Most candidates identified either blood doping or the use of recombinant erythropoietin as illegal enhancements of VO₂ max and could give the associated risks of using such aids. The weaker candidates identified irrelevant illegal aids such as anabolic steroids.

- (c) Candidates who scored well in this part, clearly stated the benefits of using periodisation in designing a training programme.
- (d) There were some excellent points made by the strongest candidates who identified relevant cardiovascular and respiratory adaptations that are likely to be experienced by a trained performer and then linked these to why the performer could then work at a higher intensity. Many merely listed the adaptations and did not use them as reference points for further explanations; consequently they scored few marks in this part of the question. Centres should ensure that candidates practise answering questions that link adaptations to subsequent performance.

Section B (Scientific focus)

Part 1

(a) Application of anatomical and physiological knowledge to improve performance

This question was the most popular choice for candidates. Many candidates could identify appropriate hinge joints found in the lower limb. Unfortunately, some candidates misread the question and named two hinge joints that were not associated with the lower limb. Most candidates were unable to describe in sufficient detail a movement analysis around one of the hinge joints when kicking a football. Too many candidates failed to use the correct technical terms for the muscles involved. The very best identified the joint action, the agonist, and antagonist and fixator muscles, along with the concentric contraction of the agonist.

The last part of this question related to the vascular shunt mechanism which was generally well described but few effectively explained the control of this mechanism. The strongest candidates identified the importance of the vasomotor control centre and the roles of the chemoreceptors and baroreceptors. The better candidates made relevant links to practical performance to score synoptic credit; wrote clearly, coherently and effectively and used the correct technical terminology throughout their answer.

(b) Acquiring and Performing Movement Skills

This question was also popular with candidates who generally scored well. Most gave a relevant definition of arousal. Many candidates used sketch graphs to show drive theory and the inverted U theory. The weaker candidates did not label each graph fully and therefore failed to gain marks. Others did not then go on to explain fully how both can help to explain how arousal can affect performance. The strongest candidates explained drive theory fully by recognising that the dominant response is intensified and that, if this response is correct, then performance will improve.

The best candidates explained that drive theory fails to explain why good performers can experience a decrease in performance when arousal is high. Most explained well that the inverted U theory shows that performance increases only up to an optimum point and then decreases. The better candidates showed that this relationship is modified depending on the skill level of the performer and the nature of the task undertaken. The best candidates made good synoptic links between personality, arousal and performance identifying that extroverts generally need higher levels of arousal to achieve improved performance.

The better candidates also explained that the inverted U theory fails to explain the sudden decrease in performance often experienced under situations of high arousal. Most candidates identified positive reinforcement in the form of praise or reward as an important motivator for a beginner learning a new skill. Many also identified effective goal setting, often scoring synoptic marks and the use of role models. The best candidates also identified the need to strengthen the S-R bond of successful responses to motivate and to use the support of others. There were relevant synoptic links also to selective attention and the narrowing of the attentional field.

Part 2

(c) Exercise and Sport Physiology

The most effective synoptic answers for this section followed the section on anatomy and physiology because links are more available to be made. Many candidates defined clearly the meaning of interval training and its advantages. The better candidates identified factors related to the versatility of this type of training, including the benefits to both aerobic and anaerobic training. The best identified that this type of training allows the performer to train at higher levels of intensity without undue fatigue, linking well with material already identified in the anatomy and physiology answer. Weaker candidates either did not give advantages or were too superficial in their response, merely describing this type of training as being more flexible. The better candidates then identified two different types of performer who used predominantly two different energy systems. They were then able to describe how an interval training session can be manipulated to suit the requirements of each type of performer. These candidates recognised the need for longer duration of intervals of work and lower intensity for aerobic performers. The best also identified that recovery periods need to decrease along with the number of recovery intervals for aerobic performers. The weaker candidates either ignored this part of the question or failed to identify what needed to be manipulated.

The interval training session, which had to be outlined, was described fully by the better candidates, but many were not specific enough about duration of intervals, the intensity of the training and the work-relief ratio. Others did not fulfil the requirements of the question by choosing one of their performers and so were unable to show full understanding of the requirements of a training session to develop either of the energy systems.

The explanations of the physiological implications of warming up and cooling down were generally poor. The weaker candidates identified one or two outcomes of a warm up or cool down, for example that it reduces the chance of injury but did not go on to explain why. If candidates are asked to explain then this should be a cue for them to give reasons for effects, rather than just listing them. The better candidates linked reduced chance of injury with the increased flexibility of the muscles during the warm up. They then went on to explain the implications of greater venous return from the working muscles and the increases of enzyme activity in the warm up. The best answers also explained fully the physiological implications of the cool down and linked increase in venous return to the avoidance of blood pooling, as well as the reduction of DOMS due to the muscles cooling down slowly. Effective synoptic links were made by the better candidates who explained in more detail the effects of the warm up and cool down on the vascular system and gave good practical examples throughout their answers.

(d) Biomechanical Analysis of Human Movement

Very few candidates answered this question. Those that did attempt it either scored extremely well or very poorly, with little in between. Most candidates explained well the effects of force acting on a projectile just prior to flight, referring throughout to Newton's Laws of Motion. The weaker candidates did not use all three laws and missed out on valuable marks. The identification and explanation of additional factors that can affect the horizontal distance achieved by a projectile was generally not well done by candidates. Some of the weaker candidates failed to explain the factors or identified irrelevant factors. The best identified factors such as the angle of release and linked this with the optimum angle being 45 degrees if the landing area is the same height as the release height. They also identified the importance of the follow through and the amount of spin applied to the ball. The best candidates also identified factors such as the shape of the object linked with the lift force and air resistance. Most answers gave good practical examples but very few linked the material with the movement analysis in part one.

(e) Psychology of Sport Performance

The majority of candidates who answered this question had answered the acquisition of skill question in part one and many scored synoptic credit for linking psychological material with acquisition of skill material. The best candidates gave relevant practical examples. The poor weaker candidates did not make their links relevant to the requirements of the question and gained little synoptic credit.

Anxiety in sport was generally well understood by most candidates but the weaker candidates were too superficial in their responses and consequently scored low marks. For example, some only gave one or two sources of anxiety or did not identify any types of anxiety. The better candidates identified somatic and cognitive sources with good practical examples. The best identified fear of failing or being judged, making effective links with achievement motivation and social facilitation. The opportunities to link with arousal and motivation in part one were only taken up by a few. There were good responses to the last part of the question related to the management of anxiety.

Many candidates explained well the use of mental rehearsal, imagery and positive reinforcement using well-explained practical examples, often with candidates drawing on their own personal experiences. The very best candidates made effective links between A2 material and A/S material, for example linking imagery to lowering arousal and finding the optimum level as illustrated by the Inverted U Theory. Such candidates linked other sports psychology material to their answer such as goal setting.

3. (Socio-cultural focus)

Part 1

(a) Contemporary Studies in Physical Education

The majority of candidates who chose the socio-cultural route completed the contemporary issues and history questions. Very few candidates answered the comparative studies question. There were a few candidates who offended the rubric and completed this section as well as the scientific route and consequently scored low marks. Most candidates could identify the values and benefits of physical education but the weaker candidates merely listed these and did not discuss them with sound practical examples. The stronger candidates discussed the physical benefits, the preparation for leisure time and the more personal and social benefits. For example, the health and fitness benefits, the preparation for sport outside school and the development of morals linked to fair play.

There were opportunities to link material from this part of the question with values promoted by 19th Century public schools or contrasting with the win at all costs ethos in USA high schools, but few took them. Most could identify the characteristics of sport and could give at least one example from experiences of sport that young people may have both in school and out of school. The better candidates explored sport in and out of schools in detail and identified that sport within school is evident in competitive elements of the PE lesson, in representing school teams and inter-house-form competitions. Out of school experiences included playing for local clubs and entering leagues at local sports centres.

A significant number of candidates were unable to write fluently and promote their ideas in a well-developed answer. Too many simply write without prior thought or planning or simply give a list of ideas with no explanation, links or practical application. Centres should ensure that candidates have enough practise in writing extended answers and present their written work in a planned and coherent manner at the A level standard required.

Part 2

(b) Historical Studies in Physical Education

The best candidates answering this question planned their answer well and clearly wrote in paragraphs. Each point made was then backed up with evidence and practical examples. The model course is well known and most candidates could describe relevant activities associated with 1902 state elementary schooling. For example, many candidates identified the military drill type of activity and the use of staves as pretend weapons. The weaker candidates gave little information about the teaching methodology in 1902.

Candidates' responses about the content and methodology of public school physical activities during stage three were less impressive. Many did not limit their answer to stage three and included irrelevant material related to mob games. Once again the methodology was the weakest knowledge area, with many only giving superficial explanations. The best candidates described in detail both content and methodology involved in the public schools and included information on the boys' and the masters' involvement in organising these activities. Most candidates could discuss some of the objectives of both approaches, although the weakest wrote little other than preparation for war for 1902 and becoming a gentleman for the public schools. Some candidates wrote at the required level and discussed fully the development of honour, leadership and teamwork associated with public school athleticism at that time.

(c) Comparative Studies in Physical Education

As in previous examination sessions, very few candidates attempted this question. Those that did had little knowledge of how the Union Nationale du Sport Scolaire (UNSS) improves the quality of sports' performance in French schools. Consequently many left out this part of the question. The better candidates described well the improvement in participation and the promotion of excellence through specialist coaching and the joint use of community facilities. All candidates answering this question attempted to compare the UK specialist sports colleges with USA high schools. The weakest candidates made few comparisons and merely listed the characteristics of USA sport. The better candidates made comparisons in each sentence, for example that the USA high schools largely select for sport, whereas in UK schools all pupils are targeted.

There are many marks available for this part of the question and it was expected that candidates would give a detailed account on both attitudes and provision for each country, many however gave pre-learned textbook responses that showed little understanding of competitive sports in UK and USA schools. The best candidates wrote fluently about both countries and made relevant synoptic links with practical examples.

**Advanced GCE Physical Education 3875/7875
January 2006 Assessment Session**

Unit Threshold Marks

Unit		Maximum Mark	a	b	c	d	e	u
2562	Raw	60	44	39	34	30	26	0
	UMS	120	96	84	72	60	48	0
2563	Raw	45	36	32	29	26	23	0
	UMS	90	72	63	54	45	36	0
2565	Raw	45	32	28	24	21	18	0
	UMS	90	72	63	54	45	36	0
2566	Raw	60	47	42	38	34	30	0
	UMS	120	96	84	72	60	48	0

Specification Aggregation Results

Overall threshold marks in UMS (i.e. after conversion of raw marks to uniform marks)

	Maximum Mark	A	B	C	D	E	U
3875	300	240	210	180	150	120	0
7875	600	480	420	360	300	240	0

The cumulative percentage of candidates awarded each grade was as follows:

	A	B	C	D	E	U	Total Number of Candidates
3875	6.4	23.3	46.3	74.6	96.5	100.0	384
7875	5.1	23.7	49.2	79.7	94.9	100.0	65

449 candidates aggregated this session

For a description of how UMS marks are calculated see;
www.ocr.org.uk/OCR/WebSite/docroot/understand/ums.jsp

Statistics are correct at the time of publication

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