



General Certificate of Secondary Education

Physical Education 3581

Specification A

Mark Scheme

2006 examination - June series

Mark schemes are prepared by the Principal Examiner and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation meeting attended by all examiners and is the scheme which was used by them in this examination. The standardisation meeting ensures that the mark scheme covers the candidates' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for the standardisation meeting each examiner analyses a number of candidates' scripts: alternative answers not already covered by the mark scheme are discussed at the meeting and legislated for. If, after this meeting, examiners encounter unusual answers which have not been discussed at the meeting they are required to refer these to the Principal Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of candidates' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

Physical Education

2006

Specification A

1 (a) (i) Award **one** mark for **each** reason for a warm-up. This includes:

- To reduce injury
- To increase the body temperature
- To increase the range of movement
- To increase heart rate
- To increase breathing rate
- For psychological reasons
- Skill preparation
- To gradually increase effort to full pace.

Accept all of the above plus any other suitable examples.

(max 2 marks)

(ii) Award **one** mark for each reason why a warm-down should be completed.

- To allow the body to recover
- to prevent the possibility of soreness / stiffness / aching
- safe removal of lactic acid
- not warming down can cause blood to 'pool' in the veins
- to gradually decrease effort to resting levels.

Accept all of the above plus any other suitable examples.

(max 2 marks)

(b) (i) Award **one** mark for each factor.

- Excess amounts of food/junk food
- Lack of exercise
- An unbalanced diet/due to excess fats. Accept unhealthy diet.

(max 2 marks)

(ii) Award **one** mark for a correctly identified substance and **one** further mark for why it is important.

- Carbohydrate/energy source
- Fat/energy source, warmth/shock absorber or protection
- Vitamins/help bones/ teeth/ skin grow/regulate chemical reactions and processes in the body
- Minerals/calcium salts strengthen bones/essential for efficient working of the body
- Fibre/keeps digestive system working
- Water/prevents dehydration/helps regulate body temperature.

(max 2 marks)

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- (c) (i) **One** mark should be awarded for considering what being healthy is. Reference should be made to physical, social or mental well being/the absence of disease/illness.
(max 1 mark)
- (ii) **One** mark should be awarded for considering what general fitness is. Reference should be made to the ability of your body to cope with the demands of everyday life.
(max 1 mark)
- (iii) Up to **two** marks for considering how the elements combine.
- It is necessary to be healthy in order to attain basic fitness
 - Higher levels of competition put more strain on a performer
 - Even minor health problems(colds, hay fever etc.) can result in poor performance
 - Regular check ups, inoculations will be essential
 - Dietary requirements should be considered.
- Accept all of the above plus any other suitable examples.
(max 2 marks)
- (d) Award up to **three** marks for a full description and explanation.
- The demands on a top level performer are greater/as they may have to perform at a faster rate or a more competitive rate or higher level.
 - They would therefore have to improve either speed or endurance levels/to cope with these demands
 - Basic levels of fitness would not be sufficient/performers would need to have a high level of specific fitness
 - Club standard performer takes part to keep fit and international standard performer keeps fit to take part.
- Accept all of the above plus any other suitable examples
(max 3 marks)

- 2 (a) (i) Award **one** mark for **each** correct function of the skeleton other than movement.
- Support
 - Protection
 - Shape
 - Blood production
 - Mineral storage.
- (max 3 marks)*
- (ii) Award up to **two** marks for a correct explanation.
- Cushions between bones
 - To stop rubbing during movement
 - Acts as a shock absorber
 - Stabilises joints
 - Prevents excess movement
 - Allows easier movement
- Accept the above or any other acceptable answer.
- (max 2 marks)*
- (b) (i) Award **one** mark for a correct definition. An equation is acceptable.
Aerobic – respiration in the presence of oxygen
Glucose + oxygen = energy + carbon dioxide + water
- (max 1 mark)*
- (ii) Award up to **two** marks for an accurate description. For maximum marks reference should be made to the intensity and length of time of the situation.
e.g. activities that need long term energy systems, such as cross country running or long distance cycling
- (max 2 marks)*
- (iii) Award **one** mark for a correct definition. An equation is acceptable.
Anaerobic – respiration in the absence of oxygen
glucose → energy + lactic acid
- (max 1 mark)*
- (iv) Award up to **two** marks for an accurate description. For maximum marks reference should be made to the intensity and length of time of the situation.
Activities that need short term energy systems such as 100m sprinting or weightlifting.
- (max 2 marks)*
- (c) (i) Award up to **two** marks for describing the transport function:
It carries glycogen/, water/, oxygen/ or nutrients throughout the body/ to the working muscle/and helps with the transport and removal of waste/carbon dioxide/lactic acid/away from the working muscle.
- (max 2 marks)*
- (ii) Award up to **two** marks for describing the control of body temperature function. The blood absorbs body heat/then carries it to the skin and lungs/where it is released/veins dilate/to cool you down.
- (max 2 marks)*

- 3 (a) (i) Award up to **one** mark for an advantage of interval training.
- You can mix aerobic and anaerobic work
 - Less chance of boredom
 - Easy to see when an athlete gives up
 - Easy to monitor progress

Accept all of the above plus any other suitable examples.

(max 1 mark)

- (ii) Award up to **two** marks for an explanation of progression.
Gradually increase / decrease resting interval/increase active interval

(max 2 marks)

- (b) (i) Award up to **three** marks for considering the need to follow the rules. Reasons must be stated with clarification regarding what needs to be done. If just a list of reasons is given then award a maximum of **two** marks.
- In athletics throwing events it is important to stay behind the thrower/to avoid being hit by the equipment/and suffering an injury
 - In trampolining spotters must be focused on the performer/to stop them falling off the trampoline/and getting injured
 - In football no two-footed tackles/to prevent injury to the player/from studs.

(max 3 marks)

Accept the above plus any other suitable examples.

- (ii) Award up to **three** marks for considering the need for checking equipment. Reasons must be stated with clarification regarding what needs to be done. If just a list of reasons is given then award a maximum of **two** marks.
- The equipment used must be the correct equipment for the activity/ Wearing athletics spikes in football/ would be dangerous and could cause injury.
 - The equipment used must be worn or set up correctly./ Hockey or cricket pads should be done up correctly so that they do not fall off/ and cause injury.
 - In gymnastics apparatus should have appropriate mats around them/ so gymnasts are protected if they fall / and cause injury.
 - The equipment must be in good condition./ Studs must not be sharp./ (Rusty goal posts may collapse) / and cause injury.
 - Football/Hockey goals/Basketball backboards etc. all secure so they will not fall/collapse / and cause injury.

(max 3 marks)

Accept the above plus any other suitable examples.

(c) (i) Award **one** mark for correctly identifying physiological factors as being those which directly affect the body or body systems. (max 1 mark)

(ii) Award **one** mark for correctly identifying psychological factors as affecting the state of mind. (max 1 mark)

(iii) Award up to **four** marks for giving correct examples for each and correctly describing the effect it can have.
One mark for each example plus **one** mark for the effect (2 x 2 marks)

Physiological factor	Effect on performance
Illness or medical condition such as asthma	Performer has difficulties breathing/negative effect on performance
Fatigue	Decrease in skill level/may have to stop

Accept the above plus any other suitable response.

Psychological factor	Effect on performance
Tension/anxiety	Causes drop in performance level
Motivation	Can have a positive effect – inspires performer to higher level Can have a negative effect – can cause drop in performance due to extra pressure

Accept the above plus any other suitable response.

(max 4 marks)

- 4 (a) Award **one** mark for each of the following.
- Stimulants or amphetamines
 - Narcotic analgesics
 - Anabolic agents or steroids
 - Diuretics
 - Peptide and glycoprotein hormones and analogues
 - Beta blockers
 - Blood doping.

(max 2 marks)

(b) (i) Award **one** mark for correctly explaining each term.
 Dislocation – occurs at a joint where one bone comes out of its normal position against another.
 Sprain – overstretching or tearing of ligaments at a joint.

(max 2 marks)

(ii) Award **one** mark for the cause and **one** mark for the treatment of hypothermia.
 Cause – rapid cooling of the body where body temperature falls quickly and seriously.
 Treatment – best cure is prevention, wear plenty of warm clothing/insulate casualty with clothing or blankets/remove wet clothing and replace with dry clothing/shelter casualty from elements/provide hot drinks/send for help.

(max 2 marks)

- (c) Award **one** mark for each correct type of strength and a further **one** mark for an accurate example from a **named physical activity**.

Dynamic strength/muscular endurance/endurance strength
 e.g. performing a trampolining or gymnastics routine requires dynamic strength in all the muscle groups.

Static strength/maximum strength
 e.g. maintaining a balance such as a handstand requires static strength.

Explosive strength/muscular power
 e.g. a sprinter leaving the starting blocks.
One mark for the type and **one** mark for the example (2 x 2marks)
 Accept the above plus any other suitable examples.

(max 4 marks)

- (d) (i) Award **one** mark for:
 Introvert - quiet/and self centred/low in self confidence/not looking to lead

(max 1 mark)

- (ii) Award **one** mark for:
 Extrovert - confident/outgoing/high opinion of themselves/leader.

(max 1 mark)

- (iii) Award 1 mark for a named physical activity which would suit the chosen personality type and up to **two** further marks for the explanation.

	INTROVERT	EXTROVERT
Perform better at a	Lower level of arousal	Higher level of arousal
Type of activity favoured	Individual activities or ones requiring fine physical skills	Team games or ones involving the whole body
Reasons for preference	Ones with little variety and more certain outcomes/ such as cross country or distance swimming	Activities with varied outcomes and plenty of action/such as invasion games. Have been shown to have greater pain tolerance so are suited to any contact sport, or one which allows contact.

Accept the above and any other suitable responses.

(max 3 marks)

- 5 (a) (i) Award up to **two** marks for correctly describing a positive effect your peer group might have on participation.
- If your peer group or friends enjoy taking part in an activity and/or appreciate the benefits/ they will encourage and motivate others to join in as well.
- Accept the above and any other suitable responses.
- (max 2 marks)*
- (ii) Award up to **two** marks for correctly describing a negative effect your socio-economic group might have on participation.
- An individual from a low socio-economic group will not be very wealthy/so will not be able to take part in activities/that need expensive equipment/or are expensive.
- Accept the above and any other suitable responses.
- (max 2 marks)*
- (b) (i) Award up to **two** marks for correctly identifying and explaining **one** benefit that being a coach can bring.
- Can give advice during the activity/to enable performers to improve performance or correct errors (benefit to those being coached).
 - Prepare performers for an activity or match/to enable performers to produce their best (benefit to those being coached).
 - Self worth/leadership opportunities/a chance to gain qualifications (benefit to person fulfilling the role)
- Accept the above and any other suitable responses.
- (max 2 marks)*
- (ii) Award up to **two** marks for correctly identifying and explaining **one** benefit that being an official can bring.
- Greater knowledge of the rules/allows the performer to play take part in the activity more effectively.
 - When unable to participate actively/can still contribute to the activity.
 - School has the benefit of additional officials/releasing the staff to concentrate on teaching.
- Accept the above and any other suitable responses.
- (max 2 marks)*
- (iii) Award up to **two** marks for correctly identifying and explaining **one** benefit that being an organiser can bring.
- Through taking on the responsibility/an insight into organisational skills is gained.
 - If it is an activity you are not particularly able at/ it gives you an opportunity still to get involved.
 - As it is not only the teacher who is the organiser/ it enables more activities to be organised.
- Accept the above and any other suitable responses.
- (max 2 marks)*

- (c) Award **one** mark for each stated advantage and a further **one** mark for the accompanying description. (3 x 2 marks).

Individual's advantage:

- Increased knowledge about sport, health and fitness/will make individuals more aware of their bodies and the need for good health and fitness.
- Career advancement/better prepared for a career in sport or allow entry onto further/higher education courses.
- Greater subject choice for the students.

School's advantage:

- Makes better use of school facilities/it is like having an additional subject.
- Raises the profile of the subject, improves status/seen as same as other exam subjects and not just as a core or non-exam subject.
- Raises the profile of the school with more GCSE passes.

Accept the above and any other suitable responses.

(max 6 marks)

- (d) Award up to **two** marks for a full description of what each organisation does (2x2 marks).

- (i) The role of the NCF is:

- Coach education which has the effect of producing better quality coaching in the country
- Provides information and resources to coaches
- Runs coaching courses at a range of levels.

(2 marks)

- (ii) The role of Sport England is:

- To raise standards of performance/which has the effect of performers gaining more medals in competition
- Develops sport at grass roots level/promotes excellence in sport
- Promotes sports opportunities for groups underrepresented in sport e.g. women/ethnic minorities/sports people with disabilities
- Responsible for giving out National Lottery funding to sport for sport provision, e.g. to build or improve facilities
- Runs Centres of Excellence / an example.

(2 marks)

- 6 (a) (i) Award up **two** marks for describing a positive effect that media coverage may have on attendance at a sporting event. (One mark for example and one for how.)
- Increased media coverage may increase interest or attendance as people wish to see their role models/ e.g. increased attendance at Premiership rugby to see World Cup winners.
 - Increased media coverage may increase participation in the sport so people can emulate role models/ e.g. higher membership numbers at rugby clubs.

Accept the above and any other suitable responses.

(max 2 marks)

- (ii) Award up **two** marks for describing a negative effect that media coverage may have on attendance at a sporting event.
- Media coverage can decrease the number of people attending because they can watch it in comfort at home/ e.g. large number of live football matches on TV on Sunday and Mondays or more televised rugby union.
 - Media coverage can over-sensationalise or promote events leading to problems accommodating all of those who wish to attend/ e.g. difficult to get tickets for FA Cup Final or Wimbledon finals.

Accept the above and any other suitable responses.

(max 2 marks)

- (b) Award up to **two** marks for each full and detailed description. (One mark for stating, one mark for why.)

- Qualified stewards at events/ to watch the crowd and help seat them/help with emergency situations such as evacuation
- Increased police presence/to ensure correct behaviour to and from games or events
- Use of video surveillance/ to identify trouble makers
- All-seater stadia/ to ensure no overcrowding
- Upgrading facilities/ to make sure that they are safer
- Fencing removed from perimeter of pitches/ to allow crowds to get out in an emergency
- All ticket matches or membership schemes/to prevent known trouble makers from attending
- More severe penalties for trouble makers/to discourage hooliganism.

Accept the above and any other suitable responses.

(max 6 marks)

- (c) Award up to **two** marks for stating and explaining each advantage and a further **one** mark for giving a specific example. (2 x 3 marks).

- Performers can concentrate on sport/training full time or without financial worries e.g. any professional sportsperson.
- Performers can receive clothing/free of charge or at a cheap rate e.g. Jonny Wilkinson and David Beckham have a boots and clothing deal with Adidas.
- Performers can receive equipment/free of charge or at a cheap rate/ e.g. Tim Henman receives rackets from Slazenger.
- The sponsor can get extra advertising/ free or cheaper than TV/ e.g. shirt sponsors for sports or hoardings in stadia.
- The sponsor can get increased revenue/ from higher sales of goods/ Nike from its association with Tiger Woods, Andre Agassi.

Accept the above and any other suitable responses.

(max 6 marks)

- (d) Award up to **four** marks for a full and detailed response. For maximum marks the candidate must consider private and public sector funded facilities.
- Publicly funded facilities, provided by local authorities/ funded by tax payers or council tax/ subsidised by the Authority and maintained by the public paying to use them/tend to be cheaper to use
 - Privately funded facilities, provided or owned by local firms or individuals/ run as businesses to make money/ and where members pay to use/tend to be more expensive to use/can be exclusive due to costs involved in using the facilities.
- Accept the above and any other suitable responses.

(max 4 marks)

**MARKING CRITERIA FOR QUALITY OF
WRITTEN COMMUNICATION**

3581/W

High Performance	Candidates spell, punctuate and use the rules of grammar with almost faultless accuracy, deploying a range of grammatical constructions; they use a wide range of specialist terms adeptly and with precision.	4 - 5 marks
Intermediate Performance	Candidates spell, punctuate and use the rules of grammar with considerable accuracy; they use a good range of specialist terms with facility.	2 –3 marks
Threshold Performance	Candidates spell, punctuate and use the rules of grammar with reasonable accuracy; they use a limited range of specialist terms appropriately.	1 mark
Below Threshold Performance		0 marks