

# GCSE 2004

## *June Series*



## Mark Scheme

### Physical Education Specification B (3582/W)

---

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.

Further copies of this Mark Scheme are available from:

Publications Department, Aldon House, 39, Heald Grove, Rusholme, Manchester, M14 4NA  
Tel: 0161 953 1170

or

download from the AQA website: [www.aqa.org.uk](http://www.aqa.org.uk)

Copyright © 2004 AQA and its licensors

#### COPYRIGHT

AQA retains the copyright on all its publications. However, registered centres for AQA are permitted to copy material from this booklet for their own internal use, with the following important exception: AQA cannot give permission to centres to photocopy any material that is acknowledged to a third party even for internal use within the centre.

Set and published by the Assessment and Qualifications Alliance.

The Assessment and Qualifications Alliance (AQA) is a company limited by guarantee registered in England and Wales 3644723 and a registered charity number 1073334. Registered address AQA, Devas Street, Manchester, M15 6EX.

*Dr. Michael Cresswell Director General*

**A1**(a) **One** from:

- flexion;
- extension;
- abduction;
- adduction;
- rotation;
- circumduction.

accept ... pronation / elevation / depression/supination;

accept ... bending / straightening/ forwards/ backwards.

*(1 mark)*

(b)

- physical well-being, eg strong heart, toned muscles

- mental well-being

accept ... fit / free from illness / free from stress/ free from injury/ not overweight/cope with daily tasks

Does not have to include a physical and a mental element.*(2 marks)*(c) **Three** such as:

- |  |   |
|--|---|
| ▪ skin goes red/vasodilation;          | ▪ smelling;   |
| ▪ body gets hot;                       | ▪ shallow breathing/panting;                              |
| ▪ vital capacity increases;            | ▪ slower/deeper breathing in recovery;                    |
| ▪ sweating;                            | ▪ blood pressure increases;                               |
| ▪ breathing rate increases;            | ▪ blood flow re-directed;                                 |
| ▪ minute volume increase;              | ▪ dehydration (symptoms grouped);                         |
| ▪ heart rate increases;                | ▪ coughing/wheezing/ breathlessness/ shortness of breath; |
| ▪ stroke volume increases;             |   |
| ▪ cardiac output increases;            | ▪ cramp;  |
| ▪ muscles tire / ache;                 | ▪ stitch;   |
| ▪ tidal volume increase;               | ▪ pick up an injury;                                      |
| ▪ lactic acid is produced/oxygen debt; | ▪ tiredness/fatigue.                                      |
| ▪ VO <sub>2</sub> increases            |   |

*- focus on physical rather than mental.**(3 marks)*(d) (i) **one** example such as :

- 100/200 metres track events; sprinting;
- field events;
- major games ( in short bursts); accept eg football;
- vaulting + other aspects of gymnastics;
- weightlifting;
- rock climbing.

(ii) in the absence of oxygen (1 mark) by:

- |                                     |                                   |
|-------------------------------------|-----------------------------------|
| ▪ the breakdown of ATP;             | (1 mark + 1 mark for description) |
| ▪ via the CP or alactic system;     | (1 mark + 1 mark for description) |
| ▪ via the glucose or lactic system. | (1 mark + 1 mark for description) |

*(1 + 3 marks)**(4 marks)*

**(e) Why ...**

- to maintain strength ...
- to maintain(muscular) stamina ...
- to maintain speed ...
- to maintain suppleness ...
- to maintain muscle tone/tension;
- to maintain shape/definition.

accept ...

... to improve fitness/performance

... to look good;

... to prevent injury;

... to perform daily tasks without tiring. (1 mark)

**How ...**

- by producing force;
- by repetitive contractions;
- by explosive contractions/responses
- by relaxing/stretching

accept...

...by exercising/training;

...by warming up/cooling down;

...by weight training.

(1 mark)

NB. It would be acceptable to answer from the negative perspective VIZ if not in good condition, then ....etc.

Both parts of the question must be answered to gain full marks.

*(5 marks)*

**A2**

- (a) **one** from :
- carbohydrate;
  - fat;
  - protein;
  - vitamins;
  - minerals;
  - fibre;
  - water.
- (1 mark)*
- (b) Any **two** such as:
- horse racing;
  - athletics: distance running;
  - athletics: jumpers;
  - basketball/volleyball;
  - dance;
  - rock climbing.
- accept..... fast bowler in cricket
- (2 marks)*
- (c) **three** from:
- agility;
  - balance;
  - co-ordination;
  - reaction;
  - timing.
- (3 marks)*
- (d) high altitude reduces performance (1 mark); eg run more slowly (1 mark);  
or  
makes it more difficult to maintain standard of performance (1 mark); eg tire more quickly  
(1 mark), by ...
- reducing the density of the air;
  - reducing available oxygen;
  - reducing oxygen ratio in gaseous exchange;
  - reducing VO<sub>2</sub> max;
  -
- accept...
- more difficult to breathe
  - respiration increases
  - respiratory volumes decrease (additional marks for detail)
- no marks for 'return to sea level' effects*
- (4 marks)*

- (e) by ...
- providing levels of activity beyond normal;
  - increasing the number of repetitions;
  - increasing the number of circuits;
  - increasing the time on a particular exercise;
  - increasing the number of stations;
  - varying the focus from whole body to arms, or legs;
  - introducing sport specific exercises;
  - incorporating sport specific actions.

Simply naming four principles of training = 1 mark,  
eg consider:

principle of overload could be applied by...  
working harder than normal, eg increasing number of repetitions or increasing time

principle of specificity could be applied by...  
concentrating stations on the legs (eg for footballers)

*maximum of 4 marks for any one principle.*

*(5 marks)*

**A3**

(a) **One** such as:

- referee;
- umpire;
- timekeeper;
- scorer;
- judge;
- lines(man)/assistant referee;
- fourth official
- recorder.

(1 mark)

(b) **Two** such as:

- watching live events;
- watching on TV/ Big Screen (live or recorded highlights); (on Sky/on BBC = 1 mark);
- watching on CCTV/watching beamback;
- watching on the internet.

(2 marks)

(c) **Three** such as:

- teaching;
- choreography;
- coaching/training/instructing;
- ground / facility maintenance;
- administering / organising / promoting/agent;
- managing;
- product design / manufacture / marketing / retail;
- journalism/ commentator/ photographer/ cameraman;
- sports science/ researcher;
- physiotherapist/ nutritionist;
- health, safety, security (including lifeguards, stewards).

(3 marks)

(d) *Focus on professional players when performing* by:

- playing by the rules;
- showing good sportsmanship and behaving well;
- respecting the opposition;
- playing to a high standard;
- being successful;
- having a responsible attitude towards both victory and defeat;
- inspiring interest;
- having a fashionable image;

*Focus on professional players in another ‘off-duty’ role* by...

coaching youngsters (1 mark); undertaking engagements/ appearances/ endorsements (eg charity work or writing articles) including ambassadorial roles (1 mark).

Not all role models are famous ‘players’ or ‘professionals’; other significant role models include eg parents/friends/teachers who:

- encourage/support
- give up time
- provide finance/transport.

*NB answers can come from the negative perspective, if different.*

(4 marks)

- (e) Problems such as:
- the sport may not be available locally;
  - the environment may not lend itself to the demands of the sport;
  - the climate may not lend itself to the demands of the sport;
  - transport may be unavailable / expensive / difficult schedules, routes;
  - facilities might not be available at a convenient time;
  - costs may be prohibitive/ personal finances may determine affordability;
  - culture / traditions may forbid / disapprove;
  - schools may not offer the sport;
  - fewer opportunities for women compared to men;
  - logistic difficulties for the disabled;
  - not allowed if below a certain age – may need supervision;
  - family might not approve;
  - nobody available to provide coaching;

*NB More than one valid answer can be made from one factor.*

*(5 marks)*



**A4**

- (a) **One** from:
- education;
  - leisure/recreation/environment.
- accept ... local variations. *(1 mark)*
- (b) **Two** such as: they introduce the activity/ encourage participation;
- they develop skill/good habits;
  - they generate enjoyment;
  - they increase motivation/incentives/confidence/competition;
  - they set targets/give progression/train harder;
  - they provide rewards.
- (2 marks)*
- (c) **Three** such as:
- school;
  - college/university;
  - club (sports, incl. youth/scouts);
  - centre of excellence;
  - sports academy;
  - leisure centre / swimming pool;
  - summer holiday course / play-scheme;
  - activity holiday / camp;
  - private gym;
  - national sports centre (named = 1 mark)/EIS.
- (3 marks)*
- (d) By:
- promoting an understanding of the countryside;
  - maintaining the Country Code;
  - publicising the attractions/benefits of the countryside;
  - giving advice, information (as a result of research);
  - improving and extending opportunities within the countryside;
  - identifying and managing activities and their impact;
  - conserving the natural beauty of the countryside;
  - managing the National Parks;
  - giving grants for recreation and conservation;
  - advising government on countryside policy.
- (4 marks)*
- (e) national government by:
- raising taxes such as ...
    - on income;      on business;
    - VAT;              on gambling (eg football pools / betting on horses);
    - the Lottery;
  - interest on investments;
  - borrowing;
  - selling off something of value.
- local government by:
- receiving grants from national government/Sport England;
  - raising council tax from residents;
  - raising tax from business rate payers;
  - charging admission fees/membership fees;
  - hiring out facilities;
- sponsorships/partnerships with business. *(5 marks)*

**B1**

(a) Circulatory responses include:

- rapid rise in heart rate (pulse);
- stroke volume increases;
- cardiac output increases;
- blood pressure increases;
- blood vessels dilate/blood vessels burst;
- circulation of blood increases;
- blood is re-directed to the working muscles;
- blood sugar levels fluctuate;
- potential for heart attack.

Respiratory responses include:

- breathing rate increases;
- hold breath in some cases/activities;
- shallow breathing / panting/wheezing;
- vital capacity increases;
- other respiratory volumes increase;
- rate of gaseous exchange increases;
- more oxygen taken into the bloodstream;
- more carbon dioxide taken out of bloodstream.

(b) Advice to someone beginning an exercise programme might include:

- have a medical check up;
- take advice from the doctor;
- have a fitness assessment;
- follow the advice from the instructor supervising the programme;
- wear the correct clothing / use quality equipment;
- join a club /fitness centre;
- have a training partner;
- choose a suitable activity;
- make it interesting/enjoyable;
- devise a plan - set targets
  - realistic expectations;
- don't overdo it/overload carefully;
- start gradually / progress steadily;
- include rest intervals;
- monitor pulse;
- warm up / cool down;
- consider dietary habits;
- avoid/restrict drug taking (tobacco/alcohol);
- maintain water/fluid balance.

NB. All parts of the question must be answered to gain full marks (13 + 1 + 1)

*(15 marks)*

**B2**

(a) Family can encourage/support participation by:

- being a role model;
- playing;
- fostering a tradition or ethos of activity within the family (including aspects of culture);
- watching live and recorded sport;
- talking about sport;
- providing/keeping books etc on sport to read;
- allowing a child to play.
- paying for kit and equipment;
- providing transport;
- going to watch the child play;
- providing the first teaching, or later coaching;
- managing the local team/club.

Friends can encourage participation because:

- they play, or spectate, so you do...peer pressure/persuasion.

NB. The answer may be approached from the opposite perspective (if different)... that negative attitudes and actions by family and/or friends discourage participation.

(b) Through a variety of media (eg. T.V., radio, internet, papers) participation is encouraged by:

- informing people through sport coverage;
- educating people through a variety of features provoking thought and study;
- publicising sport to a wide audience – peak viewing times;
- motivating people into action through coverage of major events of interest;
- stimulating people's interest through reports and previews of a range of physical activities;
- entertaining people and hence inspiring participation to higher levels;
- creating role models who stimulate interest and participation.

NB. The answer may point out ... that nil, negative, or even too much coverage of sport can have a discouraging effect on participation.

NB. All parts of the question must be answered to gain full marks (13 + 1 + 1)

*(15 marks)*

**B3**

(a) Local frameworks for junior and adult sport participation include:

schools' extra-curricular sport, through the provision of ...

- clubs;
- inter-form competitions;
- school matches;
- festivals / sports days;
- facilities;
- coaching;

schools' sports associations, through the provision of ...

- representative teams.

voluntary organisations such as the scouts, or the army cadets, through the provision of ...

- competitions and matches;
- coaching;

Council leisure services, through the provision of ...

- weekend and/or holiday coaching courses for youngsters;
- festivals / sports days;
- mini, or indoor, leagues for adults in evenings;
- facilities;
- financial grants;
- sport development services;

governing bodies of sport, through the provision of ...

- junior leagues and other competitions;
- open-age leagues and other competitions;
- coaching qualifications;

amateur clubs, through the provision of ...

- special events and other competitions;
- facilities;
- coaching;

professional clubs, through the provision of ...

- academy schemes;
- coaching and competitions.

(b) National frameworks for the development of elite players include :

governing bodies of sport, through the provision of ...

- regional and national leagues, and other competitions, including those for professionals;
- centres of excellence for specialist training;
- developmental squads to identify talent and progress it 'upwards'
- international squads (at different age groups = 1 mark) / teams to compete against other countries, singularly, or in major festivals.

UKSport, through the provision of ...

- the English Institute of Sport;

- the National Sports Centres (max 1 extra mark for an example eg rowing at Holme Pierrepont);
- financial aid.

The British Olympic Association, through the provision of ...

- expert advice, and support services such as sports medicine/nutritionist;

Sportscoach UK, through the provision of ...

- advanced level coaching courses.

NB. Both parts of the question must be answered to gain full marks.

*(15 marks)*

**MARKING CRITERIA FOR QUALITY OF  
WRITTEN COMMUNICATION****3582 /W**

<b>High Performance</b>	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 marks
<b>Intermediate Performance</b>	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
<b>Threshold Performance</b>	Candidates spell, punctuate and use the rules of grammar with reasonable accuracy; they use a limited range of specialist terms appropriately.	1 mark
<b>Below Threshold Performance</b>		0 marks