

Oxford Cambridge and RSA Examinations
General Certificate of Secondary Education

PHYSICAL EDUCATION (GAMES)

1971

Specimen Paper 2003

Additional materials: None
Candidates answer on the question paper.

TIME 1 hour 45 minutes

| | | | | | | | | | | | |
|----------------|--|------------------|--|--|--|--|--|--|--|--|--|
| Candidate Name | Centre Number | Candidate Number | | | | | | | | | |
| | <table border="1" style="width: 100%;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table> | | | | | | <table border="1" style="width: 100%;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table> | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

INSTRUCTIONS TO CANDIDATES

- Write your name in the space above.
- Write your Centre number and Candidate number in the boxes above.
- Answer all the questions.
- Write your answers, in blue or black ink, in the spaces provided on the question paper.
- Read each question carefully and make sure you know what you have to do before starting your answer.

INFORMATION FOR CANDIDATES

- The number of marks is given in brackets [] at the end of each question or part question.
- The total number of marks for this paper is 80.
- You will be assessed on the quality of written communication in **Section B, questions B1 and B2.**
- **Four** marks will be available for the quality of written communication.

Section A

Answer **all** questions in this section.

- 1 Identify **one** indoor game in which the following aspects of fitness would be particularly important:

(a) good flexibility;

_____ [1]

(b) strength.

_____ [1]

- 2 Explain how participation in games can improve fitness and health.

_____ [1]

- 3 Explain **one** way in which smoking can reduce performance in games.

_____ [1]

- 4 Explain how the quadriceps muscle produces movement in a game.

_____ [2]

5 Explain, using an example, how a synergist muscle works to enable certain movements to take place in a named game.

Game _____

[2]

6 If you were trying to persuade someone to take part in your favourite game what **two** reasons would you give them for taking part?

[2]

7 (a) If you were the Volleyball coach in your area name the body type (somatotype) you would expect most of the best Volleyball players to have.

[1]

(b) Explain why this body type is important in Volleyball.

[1]

8 Give **two** reasons why it is important for games players to 'cool down' after a training session.

[2]

9 Identify **two** components of a balanced diet and explain the importance of each component to a team game player.

[2]

10 In a named game explain the importance of a high cardiac output.

Game _____

[4]

[TOTAL 20]

Section B

Answer **all** questions in this section.

B1: Factors affecting participation and performance.

Lisa is a good Badminton player who competes for both her school and local club.

- (a) Which function of the skeleton will be most important to Lisa when playing Badminton?

[1]

- (b) Identify and explain **two** social factors that may have had a positive influence on Lisa's success in Badminton.

[2]

- (c) Explain **two** ways in which Lisa's coach could motivate her to improve her performance in Badminton.

[2]

- (d) One of Lisa's greatest strengths is her speed of movement around the court. Identify which muscle fibre type is important to a Badminton player, such as Lisa, and explain why.

[3]

(e) Explain **four** reasons, other than fitness, why Lisa may have become involved in Badminton.

[4]

(f) Explain why most of the skills in Badminton are classed as open skills and why they are often practised as closed skills.

[4]

(g) Lisa has been training regularly and hard to maintain her position in the school Badminton team.

Explain in detail the long term effects that playing regularly in a singles game of Badminton will have on Lisa's heart, circulatory and respiratory systems.

[7]

[TOTAL 23]

B2: The relationship between health, fitness and games.

At the start of the Under-16 Hockey team's pre-season training Jon, Paul, Kevin and Ajay took part in a series of fitness and skill tests. Each test was timed and the results recorded on the table below.

HOCKEY FITNESS AND SKILL TESTS

| | Shuttle sprint 10 x 10 m | Dribble round cones | Target shooting (Shots on goal in 1 minute) | 4 laps of the Hockey pitch | Sit ups (in 1 minute) |
|-------|-----------------------------|---------------------------|---|-------------------------------|--------------------------|
| Jon | 24 secs. | 31 secs. | 14 | 5 mins. 30 secs. | 14 |
| Paul | 15 secs. | 25 secs. | 9 | 6 mins. 6 secs. | 20 |
| Kevin | 18 secs. | 35 secs. | 12 | 6 mins. 45 secs. | 18 |
| Ajay | 21 secs. | 28 secs. | 4 | 5 mins. 23 secs. | 35 |

- (a) If you have to choose one of the Hockey players to play in a position where speed and dribbling ability are important considerations, which player would you choose?

_____ [1]

- (b) Running continuously for long periods of time is important to mid field players. Based on the test results which of the boys is most suited to this role?

_____ [1]

- (c) Each of the tests taken by Jon, Paul, Kevin and Ajay measures a specific component of skill or fitness. Identify those tests which are skill related and those which are fitness related and explain.

Skill related tests:

Fitness related tests:

_____ [2]

- (d) Paul wishes to play in goal this year. Identify and explain **two** components of fitness or skill related fitness, not already mentioned in the table above, and explain why they are important in playing in this position.

[4]

- (e) In order for Jon to improve the weaknesses and maintain the strengths identified in the fitness and skill tests, explain in detail **two** training principles and **two** training methods he needs to follow during the year.

Training principles:

Training methods:

[4]

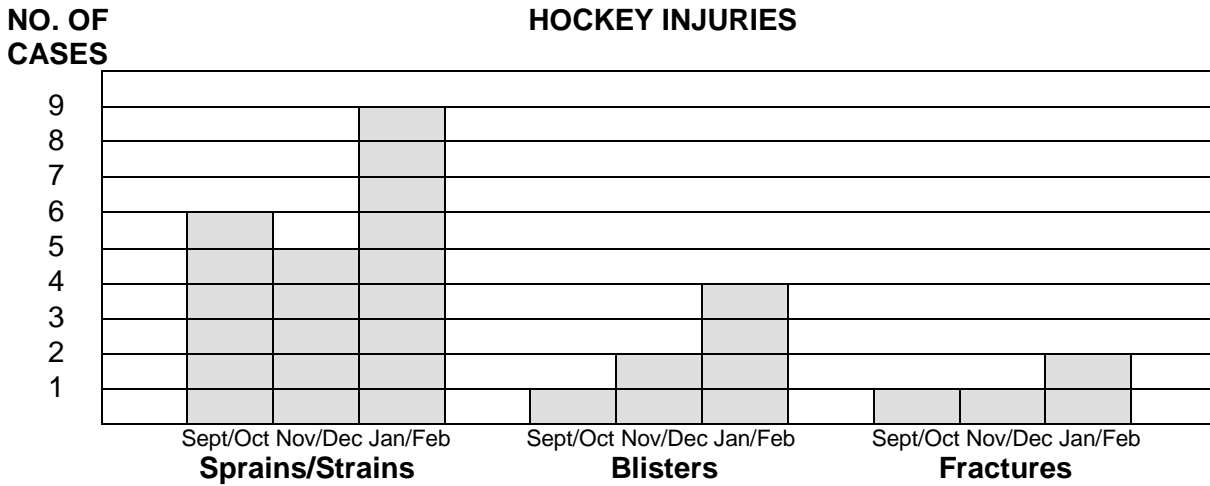
- (f)** Test results do not always provide the most reliable information about players' ability. Explain what factors may have affected the test results achieved by Jon, Paul, Kevin and Ajay.

[6]

[TOTAL 18]

B3: Risk assessment in games.

Jane's GCSE PE group carried out an injury survey of all the teams in their local Hockey league. They recorded their findings over six months from the start of the season in September to February, noting the injuries every two months. The results are shown in the table below.



- (a) Which type of injury occurred the most times during the Hockey season from November to December?

[1]

- (b) Explain the likely causes of blisters in Hockey and how the players might reduce the risk of this type of injury.

[3]

(c) Explain the treatment procedure you would carry out on a player suffering from a strain or a sprain.

[4]

(d) Identify the potential hazards that outdoor games players need to be aware of when playing or training outdoors during the winter. Suggest ways in which the players could reduce the effects of these hazards.

[7]

[TOTAL 15]

**Oxford Cambridge and RSA Examinations
General Certificate of Secondary Education**

PHYSICAL EDUCATION (GAMES)

1971

MARK SCHEME

Specimen Paper 2003

Section A

| | | | |
|----|---|--|--|
| 1 | a | Badminton/fencing/squash etc. | 1 mark |
| | b | Basketball/tennis/judo etc. | 1 mark |
| 2 | | Feel good/strong heart/stronger muscles/greater flexibility/improved CV endurance/muscular endurance/reduce heart disease/heart attack/improve skill level | 1 mark |
| 3 | | It reduces the efficiency of the lungs, it kills cilia. It increases the risk of heart disease, lung, throat and liver cancer. Narrows arteries to muscles. | 1 mark |
| 4 | | Quadriceps contract/concentrically/shorten/pulling/(via the tendon attachment)/the bent lower leg straightens. (allow reverse i.e. eccentric contraction to let leg bend) contraction and relaxation of the quadriceps allows the lower leg to bend and straighten at the knee causing movement. | 2 marks |
| 5 | | Helps other muscles/the prime mover to do its job by holding/fixing other parts of the body in position while the movement takes place. e.g.: abdominals. | 2 marks |
| 6 | | Health/fitness/leisure interest/friendship/to socialise/peer pressure/vocation. | 2 marks |
| 7 | a | Ectomorph/lean/thin and light. | 1 mark |
| | b | Less weight to carry/lift off the ground. | 1 mark |
| 8 | | Helps remove CO ₂ and lactic acid (waste products). Blood continues to circulate preventing pooling leading to light-headedness. Prevents muscle soreness. Shortens recovery time. | 2 marks for two of. |
| 9 | | Carbohydrates - provide main source of energy. Proteins - for muscular growth and repair. Water - maintain fluid balance, keeps us from dehydrating. Fats - warmth/protection of vital organs/reserve fuel supply. Vitamins - regulate chemical reactions/growth and repair. Minerals - each has its own role, e.g. calcium needed for muscles to work and for bones to be strong. | 2 marks, one for each explained dietary component. No marks for component only. |
| 10 | | Soccer/hockey or other prolonged game. Explanation: CO = max. amount of blood pumped by the heart in 1 min. Blood carries O ₂ to the working muscles which require it. Can supply the same amount of blood at a lower heart rate. High CO ₂ therefore means activity can go on longer at the same intensity. Delays the onset of lactic acid build up in the muscles. Repay the O ₂ debt more quickly. Recover after exercise more quickly. | 4 marks. No mark for naming an activity. 4 marks for four of. |

Section B

B1: Factors affecting participation and performance.

| | | | |
|---|---|--|---|
| 1 | a | Movement | 1 mark |
| | b | Supportive parents/parents who are also Badminton players encourage participation. Supportive friends or peer group/friends also involved. School/teacher(s) has given a positive image of Badminton. No gender barriers put in front of her participation. The media portrays Badminton in a positive light. Badminton role models created to follow. Media/TV coverage given over to Badminton. Good facilities are available close by. | 2 marks for two of. |
| | c | Coaches motivating strategies are largely extrinsic. Praise. Give rewards/prizes. Award badges/certificates. Set goals/targets (p.b.) Make it enjoyable. | 2 marks for two of. |
| | d | Fast twitch. FT fibres have a fast contraction time. Making movements more rapid. Recruited in short duration/anaerobic activities. | 3 marks. 1 mark for FT and 2 marks for any 2 explanations. |
| | e | Health. Body image improvement. Leisure interest/enjoyment. Friendship/socialise. Copy role model. Become a professional. | 4 marks for four of. |
| | f | Open skills: Open to effects of the environment (weather/surface/opposition). Adaptable to suit specific situation. Largely perceptually controlled. Skills practised as closed skills because: The conditions are predictable and stable. The movements are repeated (replicated). Participant gets the 'feeling' for the movement. Teachers/coaches can concentrate and advise on the skill and technique. | 4 marks. 1 or 2 marks for 1 or 2 reasons for open skills, 1 or 2 marks for 1 or 2 of the reasons why skills practised as closed skills. |
| | g | Lower resting heart rate. Heart muscle increases in size. Stroke volume increases. Cardiac output increases. Capillary network in the muscles increases. Blood pressure lowers. Minute ventilation increases/can take in more O ₂ per min. Gaseous exchange becomes more efficient. CO ₂ max. increases. Recovery rate after exercise shortens. Work longer before building up an O ₂ debt. Hemoglobin content of blood increases. | 7 marks for seven of. (Answers must relate to training effects, not immediate short-term effects). |

| | |
|--|---------|
| Quality of written communication | |
| Candidates spell, punctuate and use the rules of grammar with reasonable accuracy; they use a limited range of specialist terms appropriately. | 1 mark |
| Candidates spell, punctuate and use the rules of grammar with considerable accuracy; they use a good range of specialist terms adeptly and with precision. | 2 marks |

B2: The relationship between health, fitness and games.

| | | | |
|---|---|---|--|
| 2 | a | Paul | 1 mark |
| | b | Ajay | 1 mark |
| | c | Skill related: Dribbling round cones, Target shots on goal. Fitness related: Shuttle sprint, 4 laps of the Hockey pitch, Sit-ups. | 2 marks, 1 for one, two or three correct, 2 for four or five correct. |
| | d | Fitness related tests: Speed e.g. Short sprints. Power e.g. jumping (Sargent Jump). Muscular endurance e.g. Pull ups or press-ups. Skill related tests: Tests involving any of the skills of Hockey e.g. catching, diving, kicking. Explanations: Speed for movement about the goal, when defending. Flexibility/agility for executing diving/reaching to intercept shots on goal. Power for generating spring and defending against robust forwards. Strength to withstand challenges in the goal area. | 4 marks, 2 mark for each correctly identified component, 2 marks for providing correct explanation. |
| | e | Training Principles: He must plan his training so that his fitness peaks at the right time of the season (e.g. cup or league run). His training should gradually progress i.e. gets harder over time. He should try to work harder each session so as to overload his body systems compared to what it is normally used to doing. Allow them to adapt. FITT e.g. run further/do more reps/lift heavier weights/train more often/longer. All his training will need to be specific to the particular fitness component he is working on. Training methods: Continuous or fartlek training will improve his CV endurance. (Mention of appropriate heart rate training zone can be credited.) Active or passive stretching will improve flexibility. Sprint training will improve his speed. Weight training (isotonic) plyometrics will improve his standing broad jump and aid speed. Circuit training will help maintain his muscular endurance. | 4 marks, 2 for principles of training and 2 for methods of training. Allow one mark for each of the FITT principles explained with a suitable example. |
| | f | Good/poor diet or related answers e.g. not enough carbohydrates in diet. Physique/somatotype e.g. overweight (endomorph) effect endurance tall, may effect flexibility mesomorph greater strength/power. Injury reduced performance levels. Illness reduced performance levels. Smoking/drugs. Too much alcohol. Stress e.g. worrying about exams. level of physical development, some develop earlier than others. | 6 marks for six of, max. of 2 marks for diet related answers. |

| Quality of written communication | |
|--|---------|
| Candidates spell, punctuate and use the rules of grammar with reasonable accuracy; they use a limited range of specialist terms appropriately. | 1 mark |
| Candidates spell, punctuate and use the rules of grammar with considerable accuracy; they use a good range of specialist terms adeptly and with precision. | 2 marks |

B3: Risk assessment in games.

| | | | |
|---|---|--|---|
| 3 | a | Strain/sprain | 1 mark |
| | b | <p>Blisters caused by; Badly fitting shoes, too big or too small. Friction of skin against shoe caused by movement within the shoe. Hard playing surfaces. The nature of the movements of the athlete, e.g. sharp turning movements. Precautions: Wear good fitting trainers/running spikes or avoid tight fitting trainers/ running spikes (one of). Spikes are not too long for the surface. Wear in new trainers before running in them. Padded socks/socks that don't rub.</p> | 3 marks. Max. of 1 for causes and 2 for precautions or 2 for causes and 1 for precautions. |
| | c | <p>Stop playing immediately (rest). Apply ice to the injured part to help reduce the swelling and restrict internal blood flow into the muscle (ice). Apply light support bandaging to the injured part (compression). Raise the injured part to help excess fluids drain away from the injury (elevation).</p> | 4 marks, 1 for each part of the procedure explained. Only 1 mark for RICE alone. |
| | d | <p>Types of hazards: Frozen pitches or waterlogged areas. Badly rutted/uneven playing surface. Foreign objects on playing area (glass/cans/dog mess/etc). Post and corner flags not secured properly. Players not wearing correct kit (e.g. shin pads, mouth guards) Lime used for pitch markings. Players not wearing correct kit (e.g. correctly studded boots). Extremely cold weather - hypothermia . Solutions to the hazards: Transfer to another area if waterlogged/frozen or move training indoors. Get grounds staff to inspect and clear/sweep playing area. Do a visual search of playing area for objects before starting. Ground staff check goal posts and corner flags, playing areas and all equipment before game starts. Officials check length of studs/jewellery removed/not chewing. Players properly warm up in cold weather. Additional warm clothing, including gloves worn in cold conditions.</p> | 7 marks for seven of. A maximum of 3 marks for either types of hazards or solutions to the hazards. |

