

**OXFORD CAMBRIDGE AND RSA EXAMINATIONS
GCSE (9–1)**

J587/01

PHYSICAL EDUCATION

**Physical factors affecting
performance**

WEDNESDAY 16 MAY 2018: Morning

TIME ALLOWED: 1 hour

plus your additional time allowance

MODIFIED ENLARGED 24pt

First name		Last name	
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Centre number						Candidate number				
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**No additional material is required for this
Question Paper**

READ INSTRUCTIONS OVERLEAF



INSTRUCTIONS

Write your name, centre number and candidate number in the boxes on the front page. Please write clearly and in capital letters.

Use black ink.

Answer ALL the questions.

Read each question carefully. Make sure you know what you have to do before starting your answer.

Write your answer to each question in the space provided. If additional space is required, you should use the lined page(s) at the end of this booklet. The question number(s) must be clearly shown.

INFORMATION

The total mark for this paper is 60.

The marks for each question are shown in brackets [].

Quality of extended response will be assessed in the question marked with an asterisk (*).

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SECTION A

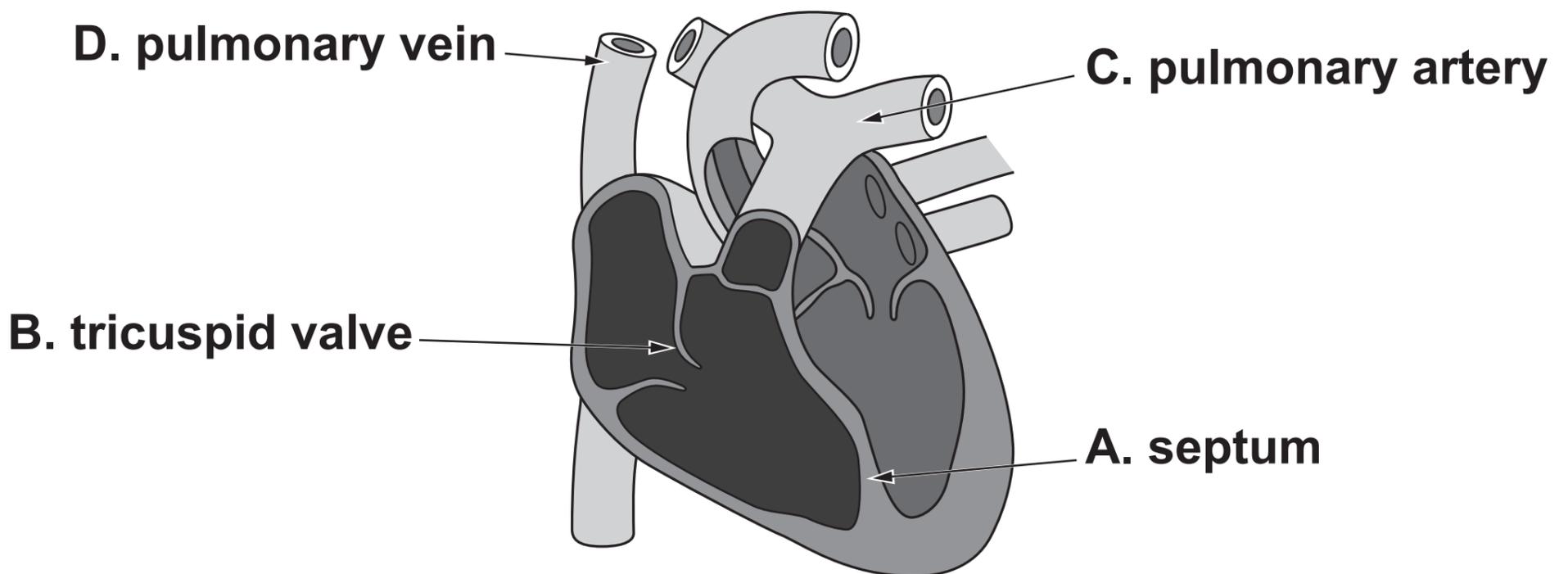
Answer ALL the questions.

1 Describe the function of alveoli.

[2]

2 Fig. 1 below shows a diagram of the heart.

Fig. 1



Identify the part of the heart that is labelled incorrectly in Fig. 1.

[1]

3 Give a definition of a synovial joint.

_____ [1]

4 A rugby player will use their shoulder joint when making a tackle.

Name the TWO articulating bones in the shoulder joint that are at risk of injury during a rugby tackle.

1. _____

2. _____

[2]

5 Reversibility is a principle of training.

Using a practical example, explain what is meant by the term 'reversibility'.

_____ [2]

6 Which ONE of the following shows the correct distances for the multi-stage fitness test and the test for speed?

Put a tick (✓) in the box next to the correct answer. [1]

A 30 m for the multi-stage fitness and 25 m for the speed test

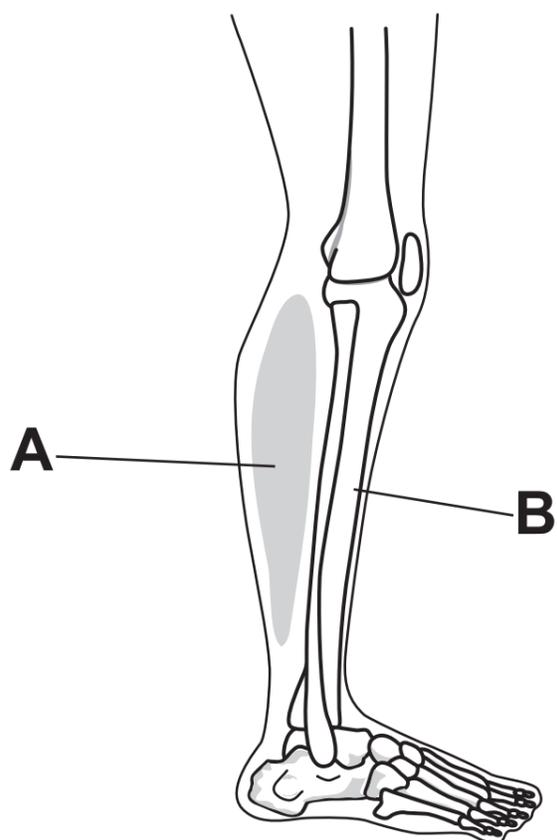
B 20 m for the multi-stage fitness and 25 yards for the speed test

C 20 m for the multi-stage fitness and 30 m for the speed test

D 30 m for the multi-stage fitness and 30 yards for the speed test

7 Fig. 2 shows a diagram of the lower leg.

Fig. 2



Identify muscle A and bone B.

(i) Muscle A: _____ [1]

(ii) Bone B: _____ [1]

8 Identify TWO potential hazards in a swimming pool.

1. _____
2. _____

[2]

9 Using practical examples, explain the difference between the transverse and longitudinal axes of rotation.

[3]

10 Give a practical example where aerobic endurance is important in sport.

[1]

11 (a) Circuit training is a training method that consists of a series of exercise stations.

Describe ONE other feature of circuit training.

[1]

(b) Design a simple circuit training session to overload the upper body by completing the diagram below, placing one of the named exercises in each station. [1]

Bicep curls

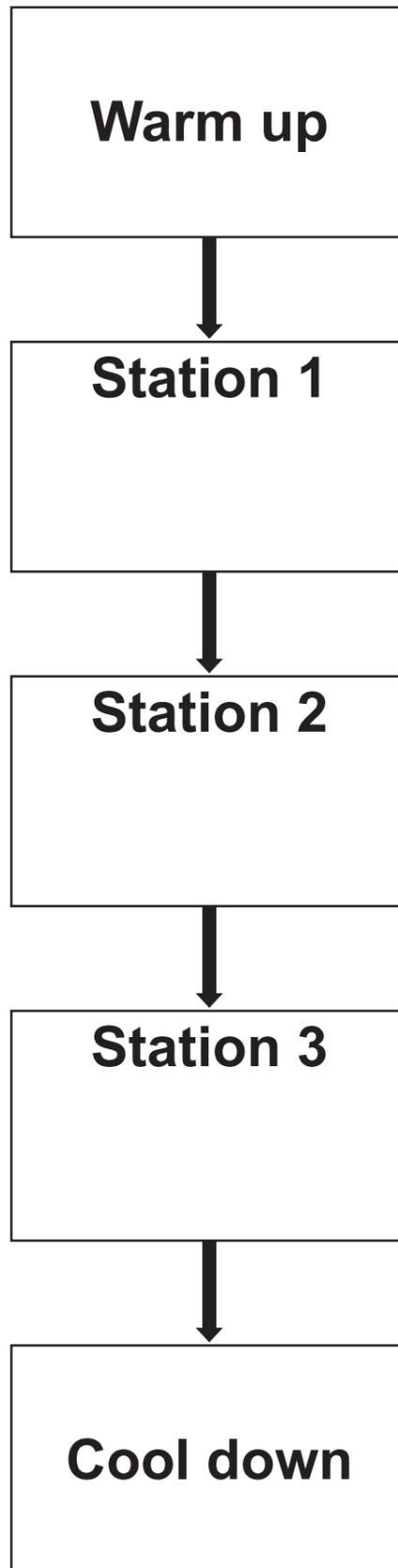
Lunges

Squats

Press ups

Pull ups

Step ups



12 Cartilage plays an important role in the skeletal system.

Assess how cartilage helps a marathon runner during performance.

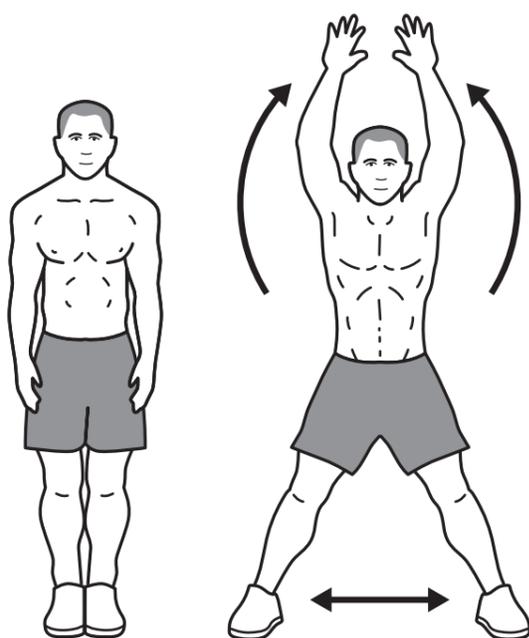
[2]

13 Which class of lever will a weightlifter be using when performing a bicep curl?

[1]

14 The performer in Fig. 3 below has performed a movement that has passed through the frontal plane.

Fig. 3



Is this statement true or false? Draw a circle around your answer. [1]

True

False

15 Which one of the following statements is false?

Put a tick (✓) in the box next to the correct answer. [1]

A Fixators help stabilise a joint and prevent unnecessary movement

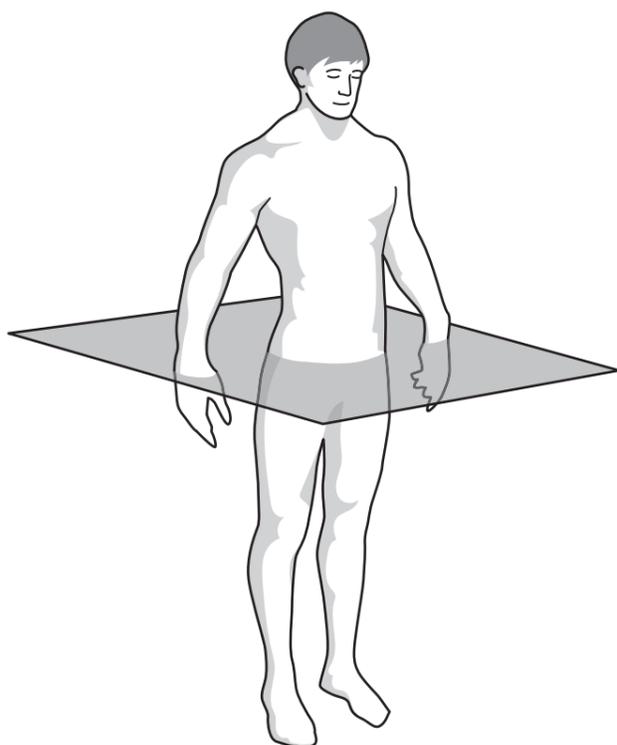
B Most lever systems in the body are 3rd class

C A common hazard in rugby is concussion

D Fartlek training improves speed and endurance

16 Fig. 4 shows a diagram that highlights one plane of movement.

Fig. 4



Name the movement plane highlighted in Fig. 4 above.

_____ **[1]**

17 Describe a suitable cool down for a dancer.

[2]

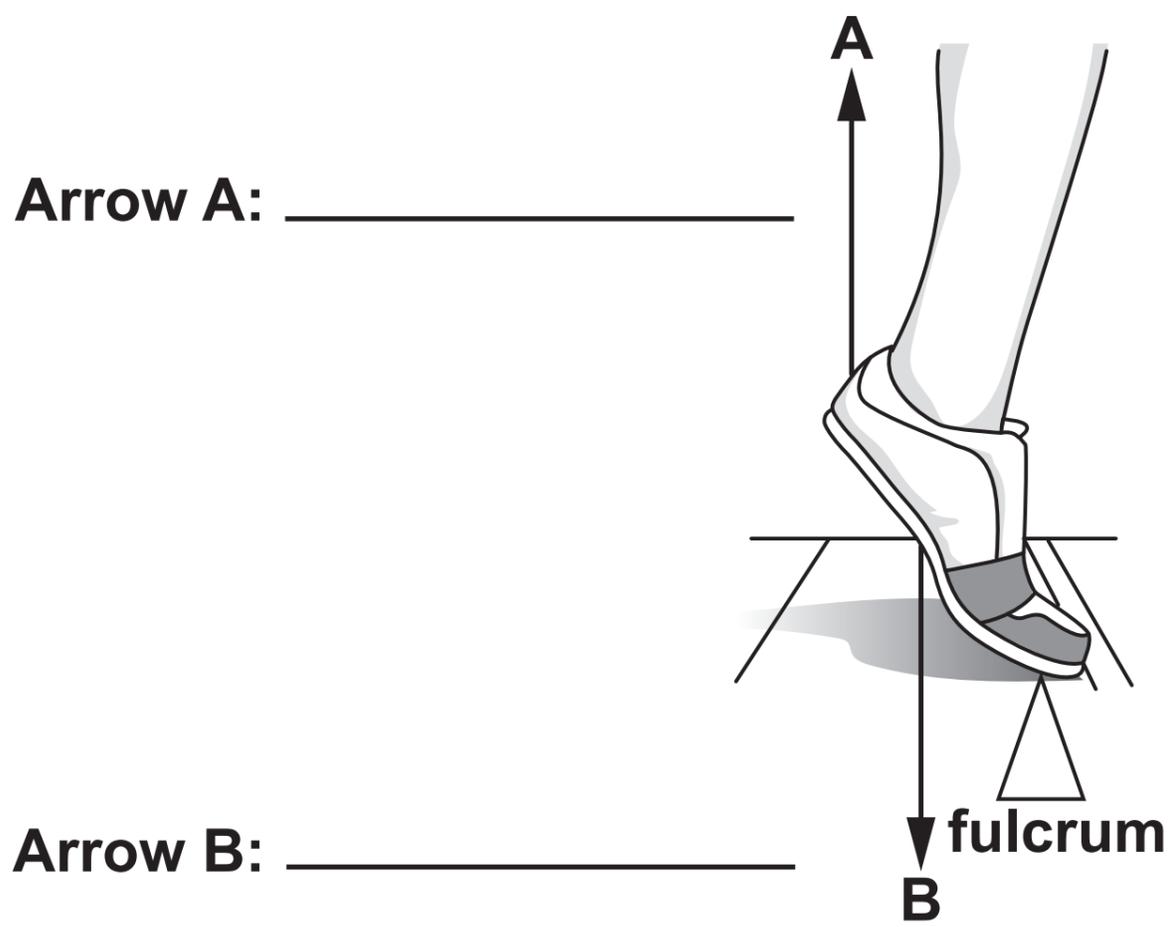
18 Give a practical example of how an appropriate level of competition can prevent injury to a performer in a sport or physical activity.

[1]

19 Fig. 5 shows a picture of the foot of a long jumper taking off.

Label Arrows A and B to correctly identify the components of this lever system. [1]

Fig. 5



20 The human heart is part of a single-circulatory system.

Is this statement true or false? Draw a circle around your answer. [1]

True

False

(b) A swimmer who undergoes a six month training programme will experience muscular hypertrophy.

(i) What is meant by the term ‘muscular hypertrophy’?

[1]

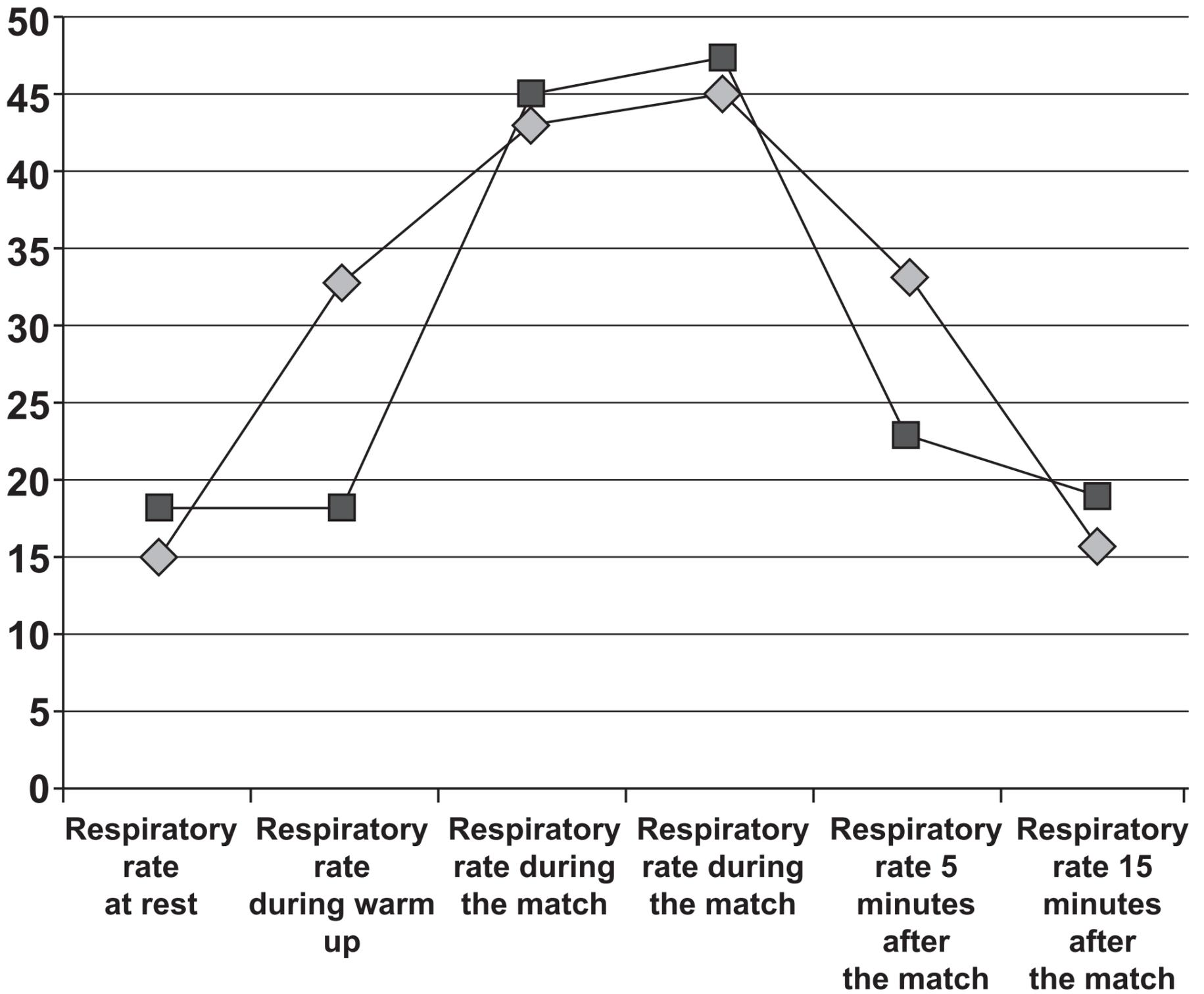
(ii) Describe other muscular benefits the six month training programme might have for the swimmer.

[4]

23 Fig. 6 below shows the respiratory rate for two hockey players before, during and after a match.

Fig. 6

—◇— Player A
—■— Player B



(c) Analyse the effects that lactic acid could have on the performance and recovery of the hockey players.

[3]

END OF QUESTION PAPER

