

Write your name here

Surname

Other names

**Pearson**  
**Edexcel GCSE**

Centre Number

--	--	--	--	--

Candidate Number

--	--	--	--	--

# Physical Education

## Unit 1: The Theory of Physical Education

Friday 16 May 2014 – Afternoon  
**Time: 1 hour 30 minutes**

Paper Reference

**5PE01/01**

**You do not need any other materials.**

Total Marks

### Instructions

- Use **black** ink or ball-point pen.
- **Fill in the boxes** at the top of this page with your name, centre number and candidate number.
- Answer **all** questions.
- Answer the questions in the spaces provided  
– *there may be more space than you need.*

### Information

- The total mark for this paper is 80.
- The marks for **each** question are shown in brackets  
– *use this as a guide as to how much time to spend on each question.*
- Questions labelled with an **asterisk** (\*) are ones where the quality of your written communication will be assessed  
– *you should take particular care on these questions with your spelling, punctuation and grammar, as well as the clarity of expression.*

### Advice

- Read each question carefully before you start to answer it.
- Keep an eye on the time.
- Try to answer every question.
- Check your answers if you have time at the end.

Turn over ►

P43351A

©2014 Pearson Education Ltd.

1/1/1/1/1



**PEARSON**

**Answer ALL questions.**

**For each part of Question 1, choose an answer, A, B, C or D, and put a cross in a box ☒.  
If you change your mind about an answer, put a line through the box ☒  
and then mark your new answer with a cross ☒.**

- 1 (a) The development of friendships and social mixing are two social benefits of exercise.

Which **one** of the following is also a **social** benefit of exercise?

(1)

- A** Physical challenge
- B** Aesthetic appreciation
- C** Competition
- D** Cooperation

- (b) The answers below show examples from the six key influences that can impact on involvement in physical activity.

Which **one** of the following, **A, B, C** or **D**, correctly identifies one example from each key influence?

(1)

- A** Family, fashion, peers, age, illness, cost
- B** Role models, access, time, illness, status, race
- C** Peers, media, gender, time, cost, status
- D** Family, fashion, race, access, illness, cost

- (c) Which **one** of the following is a definition of exercise?

(1)

- A** A complete state of mental, physical and social wellbeing
- B** A form of physical activity done to maintain or improve health and/or fitness
- C** The ability to meet the demands of the environment
- D** The ability to exercise the entire body for long periods of time



(d) Which method of training is being described in the statement below?

A series of exercises where the participant moves from one exercise station to the next. The session can be designed to improve skill or fitness.

(1)

- A** Continuous
- B** Fartlek
- C** Circuit
- D** Cross

(e) Which **one** of the following correctly identifies **four** factors affecting optimum weight?

(1)

- A** Bone structure, gender, muscle girth, height
- B** Height, diet, muscle growth, body composition
- C** Bone structure, age, muscle mass, weight
- D** Body composition, muscle mass, sport played, height

(f) Which **one** of the following statements is correct?

(1)

- A** Obese – a term meaning very overweight
- B** Overweight – a term meaning excess body fat
- C** Overfat – a term meaning weight in excess of normal
- D** Anorexic – a term meaning a prolonged eating disorder due to loss of appetite

(g) Which **one** of the following terms, **A**, **B**, **C** or **D**, is being described in the statement below?

The volume of blood leaving the heart per beat.

(1)

- A** Maximum cardiac output
- B** Stroke volume
- C** Cardiac output
- D** Heart rate



(h) Which **one** of the following, **A, B, C** or **D**, correctly completes the statement below about vital capacity?

Vital capacity is the maximum amount of

(1)

- A** blood that can circulate around the body during exercise.
- B** physical activity we can complete aerobically.
- C** air we can breathe out after breathing in fully.
- D** weight we can lift in one go, our one rep max.

(i) Which **one** of the following correctly describes a reason for muscle atrophy?

(1)

- A** Inability to continue training
- B** Regular participation in weight training
- C** Too much protein in the diet
- D** A build-up of lactic acid

(j) Which **one** of the following is **not** a joint injury?

(1)

- A** Strain
- B** Dislocation
- C** Sprain
- D** Tennis elbow

**(Total for Question 1 = 10 marks)**



**2** Participation in physical activity can bring many health benefits.

(a) Classify the following benefits of a healthy, active lifestyle.

(i) Prevention of stress-related illness.

(1)

(ii) Drop in resting heart rate.

(1)

(b) Explain how participation in physical activity can stimulate cooperation.

(3)

**(Total for Question 2 = 5 marks)**





4 Usman and Tony enjoy participating in athletics.

(a) Which **two** components of health-related exercise is Tony most likely to improve through regular training sessions using Fartlek training?

(2)

1 .....

2 .....

(b) Complete the statement below about Usman's training.

(1)

(i) Usman has a short stride length. To improve his range of movement he

works on his ....., a component of health-related exercise.

(ii) Name a fitness test that Usman could use to monitor improvement in this component of health-related exercise.

(1)

(c) Targets are often used to improve motivation.

Explain how **one** of the principles of SMART target setting could help Usman and Tony maintain their motivation to train.

(3)

.....  
.....  
.....  
.....  
.....  
.....  
.....  
.....

**(Total for Question 4 = 7 marks)**



- 5 Games players, such as the rugby and netball players shown in Figure 1 and Figure 2, require good levels of agility and balance to be successful in their sports.



**Figure 1**



**Figure 2**

- (a) (i) Using **Figure 1**, state how the rugby player with the ball is using agility in his sport.

(1)

- (ii) Using **Figure 2**, state how the netball player without the ball is using balance in her sport.

(1)





(b) Explain the importance of **two** components of skill-related fitness other than agility and balance for any games player.

Name of component of skill-related fitness 1

Explanation

(2)

Name of component of skill-related fitness 2

Explanation

(2)

**(Total for Question 5 = 6 marks)**



6 Diet is an important consideration in a healthy, active lifestyle.

The table below lists six of the seven nutrients required for a balanced diet.

Fats	Water	Vitamins
Fibre	Minerals	Protein

(a) Identify the nutrient missing from the table. (1)

(b) State the importance of the missing nutrient in maintaining an active lifestyle. (1)

(c) Some vitamins and minerals can increase bone strength.  
Apart from diet, how else can a person increase their bone strength? (1)

(d) Explain why we are told not to exercise immediately after eating a large meal. (3)

**(Total for Question 6 = 6 marks)**



**7** Describe a characteristic of a mesomorph that makes it the ideal body type for 100m sprinters.

.....

.....

.....

.....

**(Total for Question 7 = 2 marks)**



8 Several items of protective clothing are being used by the performers in Figure 3.



**Figure 3**

(a) Identify **one** item of protective clothing visible in **Figure 3** and explain how this helps to reduce the risk of injury.

(3)

Item of clothing

Explanation



(b) Risk can also be reduced before the start of any physical activity.

Identify a risk reduction measure, other than protective clothing, that should be carried out **prior** to physical activity and explain how this helps to maintain wellbeing.

(3)

Risk reduction measure

Explanation

**(Total for Question 8 = 6 marks)**



9 (a) Complete the following statements about the effects of exercise on the cardiovascular system.

(i) A decreased resting heart rate is a ..... effect of exercise. (1)

(ii) The heart responds to exercise by beating faster. As a result blood flow ..... to meet the higher demands being made on the body during exercise. (1)

(iii) Rest **between** exercise sessions allows the cardiovascular system to adapt. .... is an example of how the cardiovascular system may adapt. (1)

(b) State the effect of alcohol on resting blood pressure. (1)

(Total for Question 9 = 4 marks)

10 Describe the antagonistic muscle action that allows flexion and extension at the elbow **and** knee.

(Total for Question 10 = 4 marks)



**11** The shoulder is an example of a ball and socket joint. One possible range of movement at a ball and socket joint is flexion to extension.

(a) State the other **two** ranges of movement possible at a ball and socket joint.

(2)

1 .....

2 .....

(b) Give an example of a specific sporting action that uses the range of movement **flexion to extension** at the **shoulder** joint.

(1)

.....

**(Total for Question 11 = 3 marks)**



**12** Sam is studying GCSE PE.

As part of his course, he learns about ways to reduce high blood pressure.

(a) Describe **two** ways to reduce high blood pressure.

(4)

1 .....

.....

.....

.....

2 .....

.....

.....

.....

During his GCSE PE course Sam designed a Personal Exercise Programme (PEP).

His aim was to improve his cardiovascular fitness.

One popular test to measure cardiovascular fitness is the Harvard Step test.

(b) Name another fitness test that Sam could use to measure his cardiovascular fitness.

(1)

(c) The Harvard Step test requires the participant to measure their heart rate at one-minute intervals after exercise.

(i) What name is given to the heart rate recorded at one-minute intervals following the Harvard Step test?

(1)

(ii) Why would Sam measure his resting heart rate each week as part of his PEP?

(1)

.....

.....



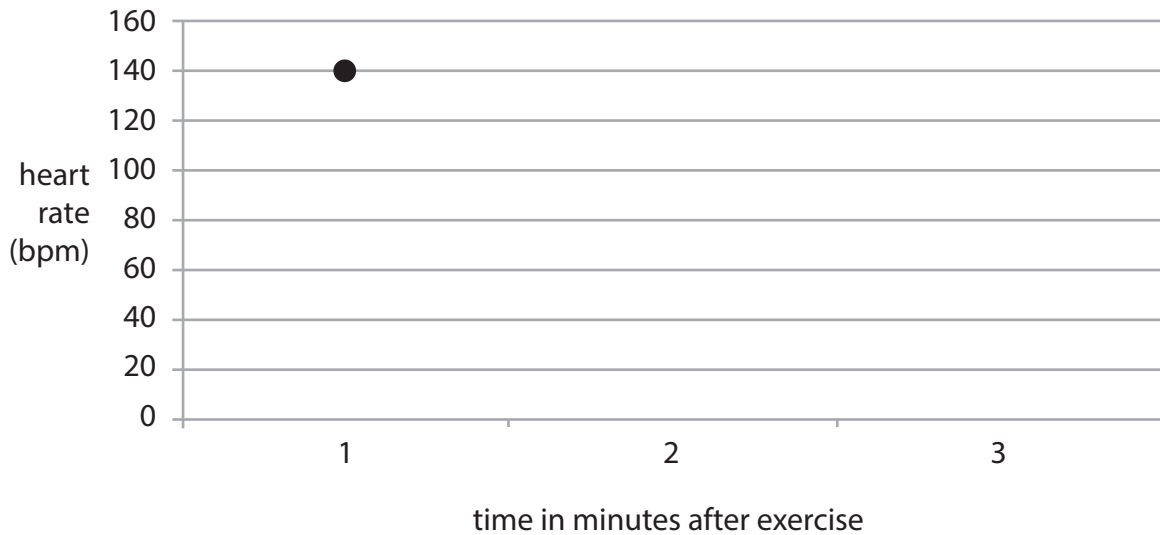


The graph in Figure 4 shows Sam's heart rate one minute after completing the fitness test.

(iii) Draw a line on the graph to show what is likely to happen to Sam's heart rate during the three-minute rest period.

(1)

**Sam's heart rate values at one-minute intervals after exercise**



**Figure 4**

(d) Give **two** immediate effects that this exercise session would have on Sam's respiratory system.

(2)

1 .....

2 .....

**(Total for Question 12 = 10 marks)**



**\*13** Discuss, using examples, how the principles of training can improve the fitness of a group of GCSE PE students.

**Candidates are not expected to use all the space provided.**

A series of horizontal dotted lines for writing.







(Total for Question 14 = 6 marks)

**TOTAL FOR PAPER = 80 MARKS**



**BLANK PAGE**



**BLANK PAGE**



**BLANK PAGE**

**Acknowledgements**

Page 8

© PhotoStock10 / Shutterstock.com

Page 8

© Natalie Jezzard / Alamy

Page 12

© Robert Beck / Getty Images

