Centre No.						Paper Reference							Surname	Initial(s)
Candidate No.						1	8	2	7	/	0	1	Signature	

Paper Reference(s)

1827/01

Edexcel GCSE

Physical Education

Paper 1

Wednesday 24 May 2006 – Afternoon

Time: 1 hour 45 minutes

Materials required for examination
Nil

Items included with question papers
Nil

Examiner's use only

Team Leader's use only

Question Number	Leave Blank
1	
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18	
Total	

Instructions to Candidates

In the boxes above, write your centre number, candidate number, your surname, initial(s) and signature.
Check that you have the correct question paper. Answer ALL the questions.
For Section ONE: Do not use pencil. Use blue or black ink. For each question, choose an answer, A, B, C or D, and put a cross in the box (☒). Mark only one answer for each question. If you change your mind about an answer, put a line through the box (~~☒~~) and then mark your new answer with a cross (☒).
Write your answers to Sections TWO and THREE in the spaces provided.

Information for Candidates

The marks for individual questions and the parts of questions are shown in round brackets: e.g. **(2)**.
There are 18 questions in this question paper. The total mark for this paper is 150.
There are 28 pages in this question paper. Any blank pages are indicated.

Advice to Candidates

You are reminded of the importance of clear English and orderly presentation in your answers.

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SECTION ONE

Answer ALL the questions.

For each question, choose an answer, A, B, C or D, and put a cross in the box (☒). Mark only one answer for each question. If you change your mind about an answer, put a line through the box (☒) and then mark your new answer with a cross (☒).

eg: Mark the box like this:

☒	**A**	
☒	**B**	
☒	**C**	*This shows your answer*
☒	**D**	

If you change your mind, mark the boxes like this:

☒	**A**	*This shows your final answer*
☒	**B**	
~~☒~~	**C**	*First answer*
☒	**D**	

1. (a) Exercise is:

☒ **A** The ability to meet the demands of the environment.

☒ **B** Training regularly.

☒ **C** A state of complete mental, physical and social well-being, and not merely the absence of disease and infirmity.

☒ **D** A form of physical activity done primarily to improve one's health and physical fitness.

(1)

(b) The cardiovascular system is made up of:

☒ **A** Heart, lungs, blood

☒ **B** Heart, blood, blood vessels

☒ **C** Heart, lungs

☒ **D** Heart, lungs, blood, blood vessels

(1)

Leave blank

(c) Which of the following components of fitness is skill-related **and** important to the sprinter shown in Figure 1 to get a good start from the blocks?

Figure 1

(Source: Wesson, Wiggins and Thompson, *Sport and PE – A complete guide to advanced level study*, Hodder and Stoughton, 1998)

☒ **A** Strength

☒ **B** Coordination

☒ **C** Body composition

☒ **D** Reaction time

(1)

(d) The FITT principle of training is made up of four parts. Which of the following statements covers **all** four aspects of the FITT principle?

☒ **A** How hard and often you work, making sure you do not do too much.

☒ **B** How long, hard and often you work, whilst avoiding boredom.

☒ **C** How hard and often you work; making sure that your training fits the requirements of the activity.

☒ **D** How long, hard and often you work; making sure that your training fits the requirements of the activity.

(1)

(e) Which of the following *body types* would be **most** appropriate for a high jumper?

☒ **A** Endomorph

☒ **B** Somatotype

☒ **C** Ectomorph

☒ **D** Mesomorph

(1)

Leave blank

(f) Which of the following statements gives the **most** important reason for wearing the correct clothing when taking part in physical activity?

☒ **A** It gives you the opportunity to look good.

☒ **B** It gives you a psychological advantage over the opposition.

☒ **C** It reduces the chance of injury.

☒ **D** It is in the rules of the practical activity.

(1)

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

☒ **A** Dislocation

☒ **B** Concussion

☒ **C** Tennis elbow

☒ **D** Golfer's elbow

(1)

(h) Which of the following statements describes *cardiac output*?

☒ **A** The number of times the heart beats per minute.

☒ **B** The amount of blood leaving the heart per minute.

☒ **C** The amount of blood leaving the heart per beat.

☒ **D** The amount of blood leaving the heart per breath.

(1)

(i) Which of the following statements describes the movement of the ribs and diaphragm during *expiration*?

☒ **A** The ribs move up and out and the diaphragm moves down.

☒ **B** The ribs move up and out and the diaphragm moves up.

☒ **C** The ribs move down and in and the diaphragm relaxes.

☒ **D** The ribs move down and in and the diaphragm contracts.

(1)

Leave blank

(j) Which of the following muscles allows *abduction* of the arm at the shoulder during a tennis serve?

☒ **A** Latissimus dorsi

☒ **B** Pectorals

☒ **C** Deltoids

☒ **D** Triceps

(1)

Q1

(Total 10 marks)

TOTAL FOR SECTION ONE: 10 MARKS

Leave blank

SECTION TWO

Answer ALL the questions. Write your answers in the spaces provided.

2. Complete the statements below about the benefits gained from participating in practical activity.

(i) Many people take part in physical activity to ..... stress. This is a ..... benefit of physical activity

(2)

(ii) Weight loss as a result of physical activity is a physical benefit of exercise. Weight loss could also have a mental benefit to the individual, for example, ...

.....

(1)

(iii) Weight loss as a result of physical activity is achieved by .....

.....

.....

(2)

(iv) Some people take part in physical activity for the ..... benefits, for example, it allows them to meet new people and make new friends

(1)

(v) People who take part in physical activity, especially activities such as gymnastics and dance, can gain an ..... appreciation of the activity due to the quality of the movements being performed.

(1)

Q2

(Total 7 marks)

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3. (a) What term is being described in the statement below?

The ability to meet the demands of the environment.

.....

(1)

(b) Figure 2 shows a gymnast.

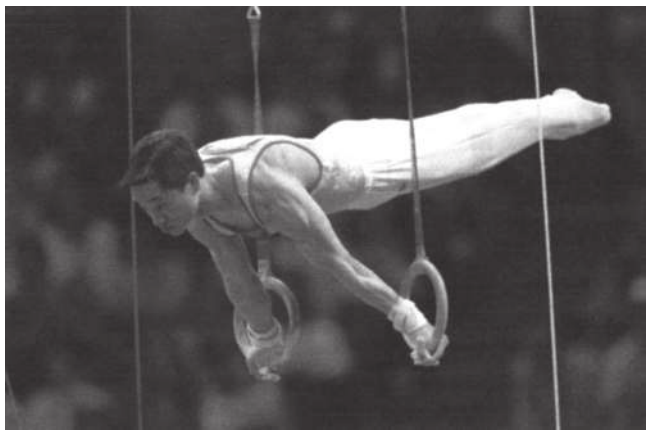


Figure 2

(Source: Wesson, Wiggins and Thompson,
Sport and PE – A complete guide to advanced level study, Hodder and Stoughton, 1998)

If the performer in Figure 2 was unable to meet the demands of his environment, what would happen to his performance?

.....

(1)

(c) Explain the term **performance**.

.....

.....

(1)

Leave blank

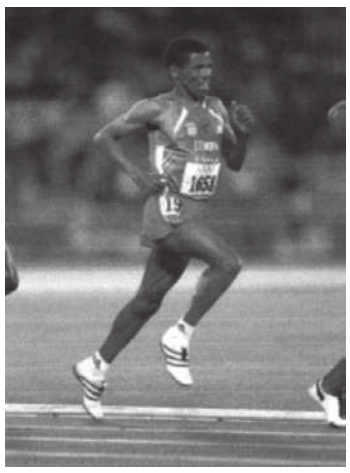


Figure 3

(Source: Wesson, Wiggins and Thompson,
Sport and PE – A complete guide to advanced level study, Hodder and Stoughton, 1998)

(d) Different sports make different demands on sport performers.

Give **one** example of how the demands on the gymnast in Figure 2 would differ from the demands on the long distance runner shown in Figure 3 above.

.....

.....

.....

(1)

(e) Flexibility is an important component of health-related exercise. Give an example of how flexibility would help each of the performers in Figure 2 and Figure 3.

Gymnast in Figure 2 .....

.....

(1)

Long distance runner in Figure 3 .....

.....

(1)

(f) Good health is important to sport performers. Explain why we cannot tell by looking at the performers in Figures 2 and 3 whether one performer is healthier than the other.

.....

.....

.....

(1)

(Total 7 marks)

Q3

Leave blank

4. (a) Look at the images in Figure 4 and complete the table below by stating how each of the performers will use **speed** in their performance.

Athlete – Sprinter

Games player

Athlete – Discus

Figure 4

(Source: Wesson, Wiggins and Thompson, *Sport and PE – A complete guide to advanced level study*, Hodder and Stoughton, 1998)

	How speed is used in their performance
Athlete – Sprinter	
Games player	
Athlete – Discus	

(3)

(b) Coordination is also important to the performers in Figure 4. Complete the table below by:

(i) Giving an example of the parts of the body being coordinated.

(ii) Explaining how your example of coordination is important to the performers.

	(i) Example of body parts being coordinated	**(ii) Explanation of why example of coordination is important to performance**
Athlete – Sprinter		
Games Player		

(4)

(Total 7 marks)

Q4

Leave blank

5. (a) The principles of training should be applied to make sure your training is effective. Complete the table below by naming and explaining **four** principles of training which you applied in your Personal Exercise Programme (PEP). Do NOT use the FITT principle as one of your answers.

	Principle of training	**Explanation of principle**
(i)		
(ii)		
(iii)		
(iv)		

(8)

(b) Complete the table below by selecting **two** of the principles of training you used in part (a) and give **specific examples** of how you applied these principles of training within your PEP.

	Principle of training	**Specific example of how principle was applied in PEP**
(i)		
(ii)		

(2)

(Total 10 marks)

Q5

Turn over

Leave blank

6. The gymnast in Figure 5 is holding a handstand position.

Figure 5

(Source: Colorsport)

(a) The muscles in the gymnast's body are working to maintain this upright, stationary position. What type of muscle contraction is taking place?

.....

(1)

(b) Name and explain another type of muscle contraction and give an example of its use in sport.

(i) Name of contraction .....

(1)

(ii) Explanation .....

.....

(1)

(iii) Example of its use in sport .....

.....

.....

(1)

(Total 4 marks)

Q6

Leave blank

7. (a) Which of the following three body conditions is considered to be the most dangerous to our health?

OBESE	OVERWEIGHT	OVERFAT

.....

(1)

(b) Why is it **unlikely** that an elite performer will have this condition?

.....

.....

.....

(1)

(c) Some elite performers, for example rugby players, will weigh more than their 'expected' weight, but still be the appropriate weight for their sport. Why will these performers weigh more than expected?

.....

.....

(1) **Q7**

(Total 3 marks)

8. Give **three** reasons why it is important that players follow the rules of the sport they are playing.

1 .....

(1)

2 .....

(1)

3 .....

(1) **Q8**

(Total 3 marks)

Leave blank

9. The competitions in the table below have all been balanced.

(a) Explain the term **'balanced' competition**.

.....

.....

(1)

(b) Give one reason why a tournament organiser should want to balance competition.

.....

.....

(1)

(c) Complete the table below by stating the way in which the competition has been balanced

Competition	**How competition has been balanced**
Under 19s' football tournament	
Women's indoor athletics championships	
Judo brown belt competition	
Heavyweight boxing competition	

(4)

Q9

(Total 6 marks)

Leave blank

10. Injuries can occur in sporting activities, for example when playing squash there is a potential risk of eye injury if the player is hit in the eye with the ball.

(a) The box below lists several different activities.

Badminton	Dance	Long jump
800 m	Javelin	Rounders

(i) Complete the table below by selecting 3 activities from the box above. For each activity state a possible risk associated with that activity. (You must state a different risk for each activity)

Activity	**Potential risk associated with activity**

(3)

(ii) Which activity from the box above presents the **greatest** risk?

.....

(1)

(iii) Explain why you have selected this activity.

.....

.....

(1)

Leave blank

(b) Trampolinists may receive soft tissue injuries as a result of taking part in their sport.

(i) What is a soft tissue injury?

.....

.....

(1)

(ii) State two signs or symptoms of a soft tissue injury.

1 .....

(1)

2 .....

(1)

(iii) How should a soft tissue injury be treated?

.....

(1)

(Total 9 marks)

Q10

11. Figure 6 shows three different types of blood vessels, A, B and C.

Figure 6

(Source: Fountain and Gee, *PE to 16*, Oxford University Press, 1996)

(a) Use Figure 6 to complete the table below by:

(i) naming the blood vessels A, B and C

(ii) stating a visible difference between each of the blood vessels shown in Figure 6

	(i) Name of blood vessel	**(ii) Visible difference**
A		
B		
C		

(6)

Leave blank

(b) Complete the following statements about blood flow through these vessels.

(i) Vessel type ..... takes blood away from the heart.

(1)

(ii) Vessel type ..... is where oxygen leaves the blood and enters the muscles.

(1)

(iii) The vena cava is an example of vessel type ..... .

(1)

(Total 9 marks)

Q11

12. The body needs energy to work. **Figure 7** shows part of the energy equation.

GLUCOSE + OXYGEN ⇒ ENERGY + X + Y

Figure 7

Name the two missing items from the equation, shown in Figure 7 as X and Y.

(i) X .....

(1)

(ii) Y .....

(1)

(iii) What happens to the levels of X and Y during aerobic exercise compared to their levels when the performer is at rest?

.....

(1)

(Total 3 marks)

Q12

13.

Scapula	Periosteum	Epiphysis	Clavicle
Bone	Cartilage	Tendons	

Use some of the words from the box above to complete the following statements about the skeleton. Words may be used more than once.

(i) ..... is formed through a process called ossification.

(1)

(ii) Ossification occurs at the ..... .

(1)

(iii) ..... protects the end of the ..... .

(2)

(Total 4 marks)

Q13

Leave blank

14. Figure 8 shows two views of a typical synovial joint.

(a) Name the parts of the joint labelled A, B and C

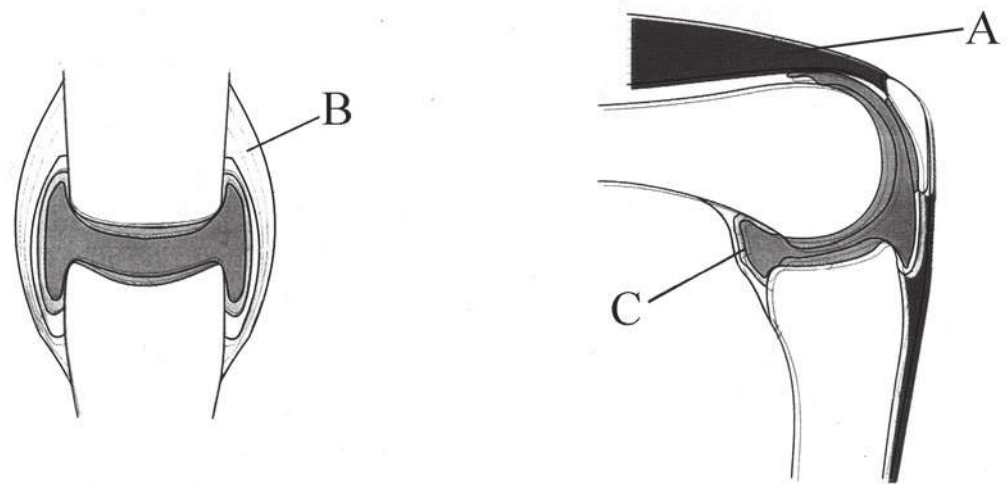


Figure 8

(Source: Fountain and Gee, *PE to 16*, Oxford University Press, 1996)

(i) A .....
(1)

(ii) B .....
(1)

(iii) C .....
(1)

(b) What is the function of the part of the joint labelled B?

.....

.....
(1)

(Total 4 marks)

Q14

Leave blank

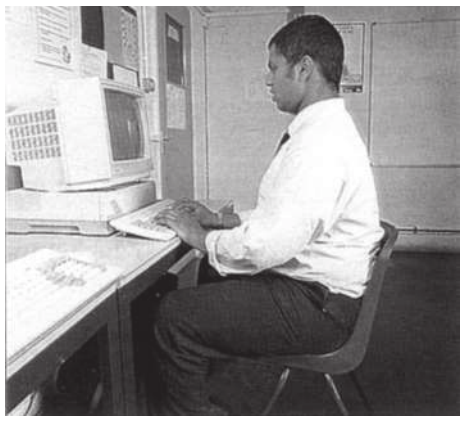
15. (a) Explain the term **muscle tone**.

.....

.....

(1)

(b) Muscle tone is important in maintaining good posture. Figure 9 shows the posture of two different people, A and B.



A

B

Figure 9

(Source: Fountain and Gee, *PE to 16*, Oxford University Press, 1996)

(i) Which person, A or B, has the correct posture?

.....

(1)

(ii) State one of the 'faults' with the posture of the other person.

.....

.....

(1)

(iii) How might having a good posture help you to develop self-esteem?

.....

.....

.....

.....

(1)

Q15

(Total 4 marks)

TOTAL FOR SECTION TWO: 80 MARKS

Leave blank

SECTION THREE

Answer ALL the questions. Write your answers in the spaces provided.

16. Ade represents the school in athletics competitions. He runs the 1500 m and has recently been entered for the shot putt as well.

(a) How does Ade's involvement in sport contribute to his good health **and** enjoyment?

(i) Health .....

.....

(1)

(ii) Enjoyment .....

.....

(1)

(b) Name the component of health related exercise that is **especially** important to Ade to:

(i) achieve a good distance in the shot putt

.....

(1)

(ii) complete the distance in the 1500 m

.....

(1)

(c) Figure 10 shows an athlete preparing to putt the shot

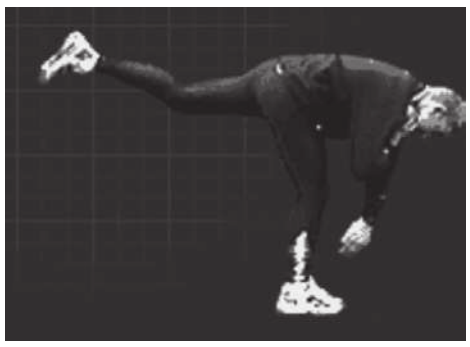


Figure 10

(Source: *http//news.bbc.co.uk/sport1/hi/athletics/skills/4250122.stm*)

(i) What component of skill-related fitness is essential to help him maintain this position?

.....

(1)

Leave blank

(ii) At what other point during the throw will the athlete use this component of fitness **and** why does he need it at this time?

When .....

.....

(1)

Why .....

.....

(1)

(d) To improve his performance in the shot and 1500 m, Ade has planned a personal exercise programme (PEP). If you were planning his PEP for him:

(i) What training method would you suggest Ade used to improve his performance in the shot putt, if this was his only event?

.....

(1)

(ii) Explain why you have selected this training method.

.....

(1)

(iii) What training method would you suggest Ade used to improve his performance in the 1500 m, if this was his only event?

.....

(1)

(iv) Explain why you have selected this training method.

.....

(1)

(e) Ade is training for two events, the 1500 m and the shot putt.

(i) Name the training method that allows performers to train for different types of events.

.....

(1)

(ii) Why would Ade need to use this training method?

.....

(1)

Leave blank

Figure 11 is a diagram of the heart

(f) An important part of Ade's training will be to improve the efficiency of his heart.

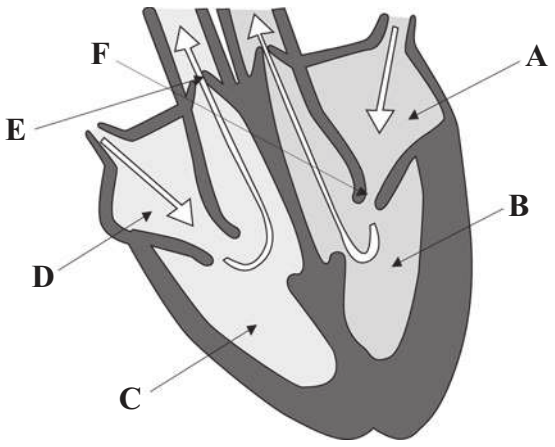


Figure 11

(Source: Fountain and Gee, *PE to 16*, Oxford University Press, 1996)

(i) Which of the chambers of the heart, A, B, C or D, shown in Figure 11 is responsible for pumping the blood out of the heart and around the body?

.....

(1)

(ii) What long-term effect will Ade's training have on this part of the heart?

.....

(1)

(iii) What effect would this have on Ade's resting heart rate **and** stroke volume?

Heart rate .....

(1)

Stroke volume .....

(1)

(iv) Name the parts labelled E and F in Figure 11 and explain why they are important

E .....

(1)

F .....

(1)

They are important because .....

.....

(1)

Q16

(Total 20 marks)

Leave blank

17. John plays rugby at school and for a local club. He has been told by his club that he should be more careful about the food that he eats, so he has the necessary energy to participate and is not carrying unnecessary weight.

(a) Fibre, vitamins and minerals are important parts of a balanced diet. Complete the table below by:

(i) naming **four other** nutritional requirements of a balanced diet

(ii) explaining how each helps John participate in sport.

	(i) Nutritional requirement	**(ii) How this helps John participate in sport**
1		
2		
3		
4		

(8)

(b) John and the rest of the squad are expected to start each training session with a warm-up and finish with a cool-down.

(i) Give **two** reasons why the players should warm up before playing their sport

1 .....

2 .....

(2)

(ii) Why do players cool down after playing sport?

.....

.....

(1)

(c) During one of his training sessions, John dislocated his shoulder. What is a dislocation?

.....

(1)

Leave blank

(d) As a result of his injury John was offered some pain-relieving drugs. What **type** of drugs are these?

.....

(1)

(e) In order to play sport, the body uses the skeleton, muscles and joints to bring about movement. Each joint has its own range of movement.

(i) What **type** of synovial joint gives the greatest range of movement?

.....

.....

(1)

(ii) What **type** of synovial joint gives the smallest range of movement?

.....

(1)

(f) One function of the skeleton is to enable movement.

(i) State another function of the skeleton.

.....

.....

(1)

(ii) Give an example of the use of this function when participating in physical activity.

.....

.....

(1)

(g) The correct type of exercise can help to strengthen bones. Suggest another way in which John can maintain the strength of his bones throughout his life.

.....

(1)

(h) Muscles move the bones they are attached to. Name **two** of the muscles of the leg that are used when running.

(i) .....

(1)

(ii) .....

(1)

Q17

(Total 20 marks)

Leave blank

18. Emma is a fast runner and enjoys playing rounders

(a) Figure 12 shows one of the members of the rounders team preparing to hit the ball.

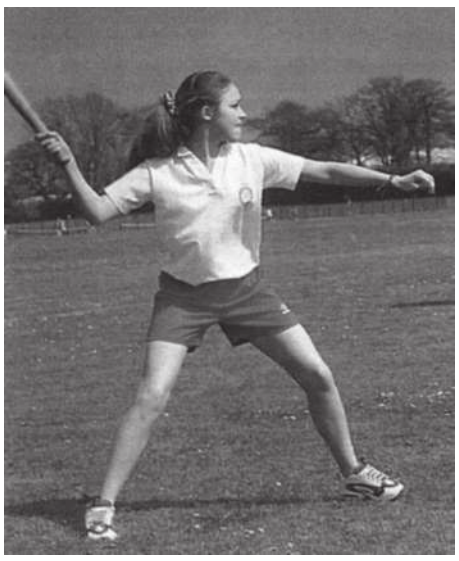


Figure 12

(Source: *Essential GCSE PE for Edexcel*, Hodder Arnold, 2005)

(i) Name the bones of the upper and lower arm.

.....

.....

.....

(3)

(ii) What **type** of synovial joint is formed where all of these bones meet?

.....

(1)

(iii) Another type of synovial joint is a pivot joint. What **type** of movement is possible at this joint?

.....

(1)

(iv) With reference to Figure 12, give an example of how the player is using this type of joint.

.....

(1)

Leave blank

(b) Tendons are very important components of a joint. What is their function?

.....

.....

(1)

(c) (i) What *joint* action is shown at the elbow of the arm holding the rounders bat?

.....

(1)

(ii) Which muscle is contracting to allow this joint action to take place?

.....

(1)

(iii) Which muscle is relaxing to allow this joint action to take place?

.....

(1)

(iv) Complete the following statement.

When one muscle contracts and another relaxes to allow a movement to take place, the muscles are said to be working .....

(1)

(d) In the game, Emma has to sprint between the posts. If she sprints round all four posts she will build up an oxygen debt.

(i) Explain the term **oxygen debt**.

.....

.....

.....

(3)

(ii) How does Emma repay this oxygen debt?

.....

(1)

Leave blank

(iii) Emma trains **regularly** to increase her fitness. State **two** ways in which the respiratory system is affected by regular training.

1 .....

.....

(1)

2 .....

.....

(1)

(e) There are risks associated with any sporting activity. What sports injuries or conditions are being described in the statements below?

(i) It was a hot day and Emma had played continuously for over two hours without drinking any water.

.....

(1)

(ii) As Emma was running between the posts, she slipped and twisted her ankle.

.....

(1)

(iii) As Emma was sprinting between the posts, she stopped suddenly as she had torn a muscle.

.....

(1)

Q18

(Total 20 marks)

TOTAL FOR SECTION THREE: 60 MARKS

TOTAL FOR PAPER: 150 MARKS

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