

Please check the examination details below before entering your candidate information

Candidate surname

Other names

Pearson BTEC
Level 3 Nationals
Diploma

Centre Number

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Learner Registration Number

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Friday 17 January 2020

Morning (Time: 1 hour 30 minutes)

Paper Reference **31814H**

Sport and Exercise Science

Unit 2: Functional Anatomy

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 learner registration 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 60.
- The marks for **each** question are shown in brackets
– *use this as a guide as to how much time to spend on each question.*

Advice

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

Turn over ►

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

Table 1 shows a classification of a joint and an example of its location in the body.

1 Complete the table by:

- stating **two other** classifications of joint
- giving an example of a location of each classification of joint in the body.

Classification of joint	Location in the body
Fibrous	Cranium

Table 1

(Total for Question 1 = 4 marks)

2 Give the meaning of the following anatomical terms.

(a) Anterior

(1)

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(b) Lateral

(1)

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(Total for Question 2 = 2 marks)

A tuberosity is an example of a bony landmark.

3 Describe the function of a tuberosity.

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(Total for Question 3 = 2 marks)



4 Describe what is meant by 'pronation'.

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(Total for Question 4 = 2 marks)

Figure 1 shows a cartwheel.

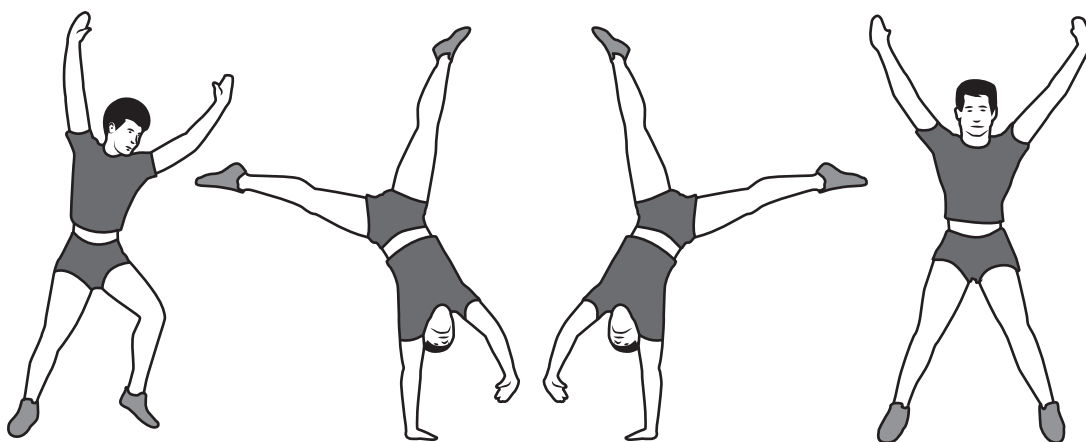


Figure 1

5 Describe the plane of movement used during a cartwheel, as shown in Figure 1.

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(Total for Question 5 = 3 marks)



Figure 2 shows the heart.

6 (a) Identify the components labelled A, B and C.

(3)

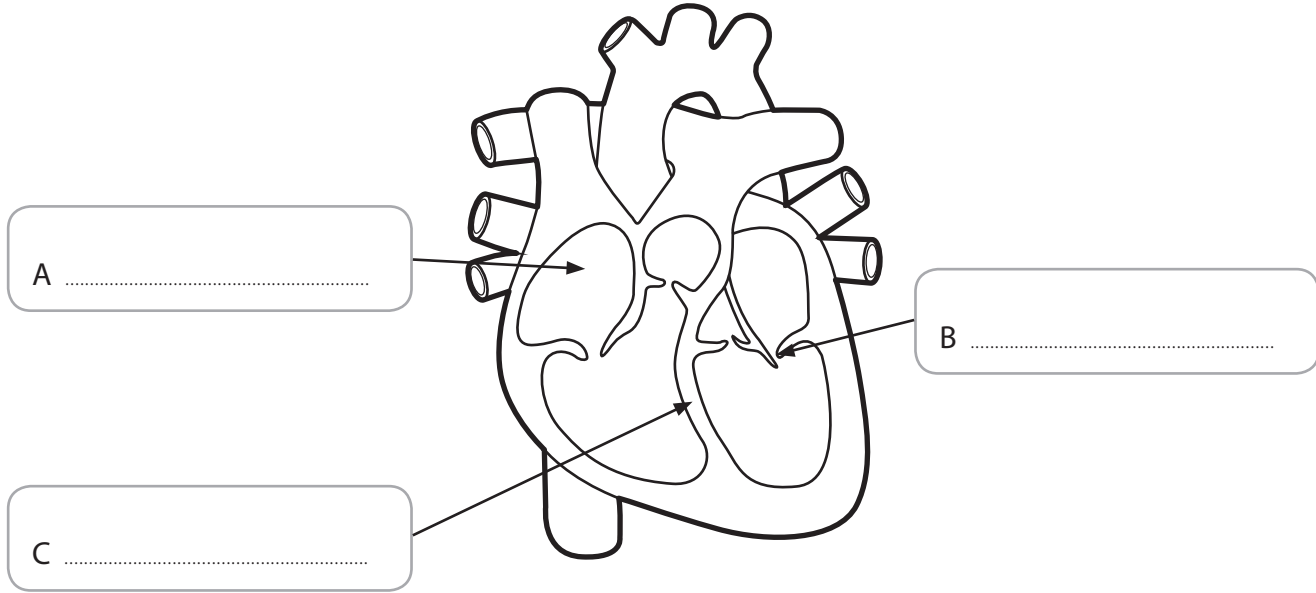


Figure 2

(b) Describe the function of the semilunar valves located in the heart.

(2)

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(Total for Question 6 = 5 marks)

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7 (a) Identify a type of joint in the thumb.

(1)

Figure 3 shows a swimmer taking a breath when swimming the front crawl.

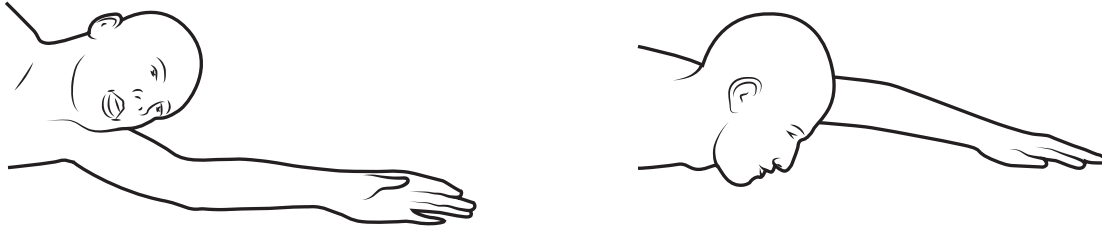


Figure 3

(b) Explain why the type of joint in the neck allows the swimmer to move their head, as shown in Figure 3.

(3)

(Total for Question 7 = 4 marks)

8 Describe the function of the external intercostal muscles during inspiration.

(Total for Question 8 = 4 marks)



9 Describe the function of the lymphatic system.

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(Total for Question 9 = 4 marks)

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Control of blood flow through vasoconstriction and vasodilation is **one** of the functions of the cardiovascular system. This function allows an athlete to take part in exercise.

10 Analyse **three other** functions of the cardiovascular system that allow an athlete to take part in exercise.

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(Total for Question 10 = 8 marks)



Figure 4 shows a gymnast performing a stretch. The left leg has been shaded.

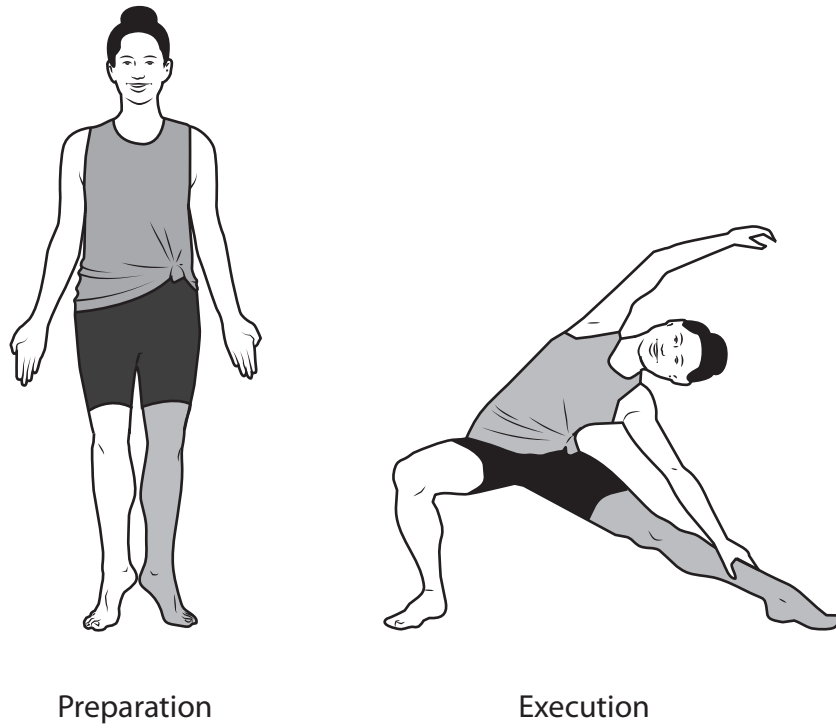


Figure 4

11 Analyse how the axial and appendicular **skeletons** allow the movement necessary at the

- trunk
- left hip
- left ankle

to move from **preparation to execution**.

(8)

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(Total for Question 11 = 8 marks)



Figure 5 shows a rock climber going up an indoor climbing wall. The right arm and right leg have been shaded.

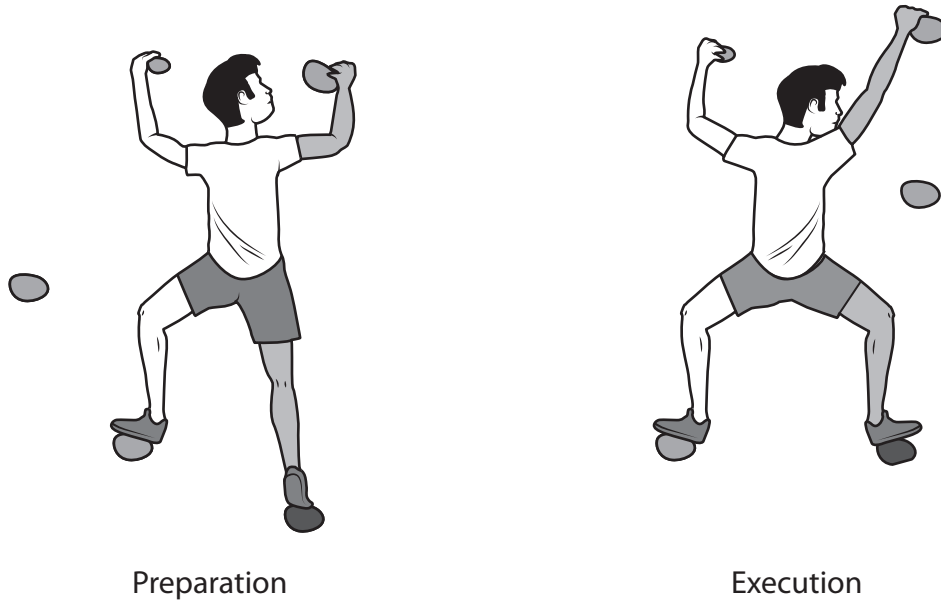


Figure 5

12 Analyse the required movement at the

- right knee
- right shoulder
- right elbow

to move from **preparation to execution**.

(14)

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(Total for Question 12 = 14 marks)

TOTAL FOR PAPER = 60 MARKS

