



# Cambridge International AS & A Level

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**PHYSICAL EDUCATION**

**9396/11**

Paper 1

**May/June 2022**

**2 hours 30 minutes**



You must answer on the enclosed answer booklet.

You will need: Answer booklet (enclosed)

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## INSTRUCTIONS

- Answer **all** questions.
- Follow the instructions on the front cover of the answer booklet. If you need additional answer paper, ask the invigilator for a continuation booklet.
- You may use a calculator.
- You should show all your working and use appropriate units.

## INFORMATION

- The total mark for this paper is 90.
- The number of marks for each question or part question is shown in brackets [ ].

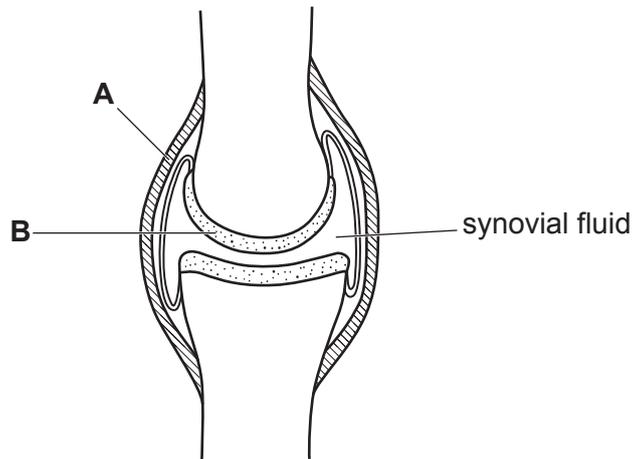
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This document has **8** pages. Any blank pages are indicated.

Answer **all** questions.

**Section A: Applied anatomy and physiology**

- 1 (a) The diagram shows a typical synovial joint.



Identify the features labelled **A** and **B**.

[2]

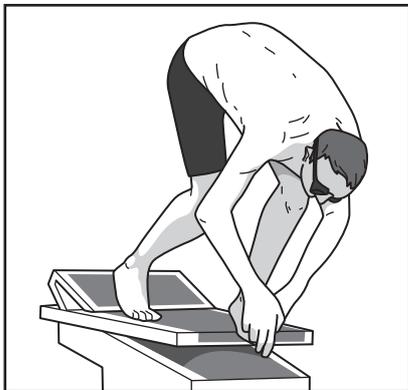
- (b) (i) State the type of synovial joint at the wrist.

[1]

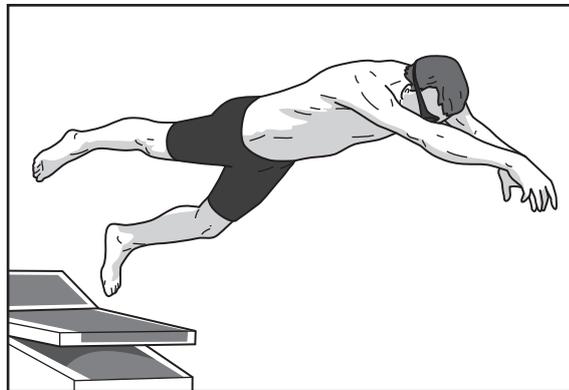
- (ii) Identify the bones that articulate at the wrist joint.

[2]

- (c) The diagrams show a swimming start.



**A**



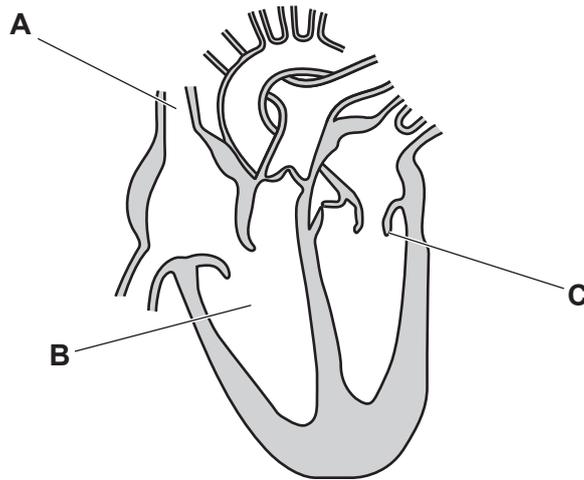
**B**

Identify the items 1–5 in the table to describe a movement analysis of the performer's right shoulder joint and the performer's right knee joint from position **A** to position **B**. Your analysis should include the type of movement occurring, the main agonist, and the type of muscle contraction.

	type of movement occurring	main agonist	type of muscle contraction
performer's right shoulder joint from <b>A</b> to <b>B</b>	1	2	3
performer's right knee joint from <b>A</b> to <b>B</b>	4	5	

[5]

(d) The diagram shows a cross-section of the heart.



- (i) Identify the structures labelled **A**, **B** and **C** in the diagram. [3]
- (ii) Describe how the cardiac cycle changes when heart rate increases during exercise. [3]
- (e) (i) A performer's blood pressure was measured as 120/80.  
Explain why there are **two** values for blood pressure. [2]
- (ii) Explain the effects of exercise on blood pressure. [5]
- (f) The table shows some respiratory volumes for a performer.

respiratory volume	value at rest/ml	value during exercise/ml
tidal volume	500	<b>A</b>
inspiratory reserve volume	3000	<b>B</b>
residual volume	1200	<b>C</b>
total lung capacity	6000	6000

- Suggest a value for each of **A**, **B** and **C**. [3]
- (g) Describe neural control of ventilation at rest. [4]

[Total: 30]

### Section B: Acquiring, developing and performing movement skills

- 2 (a) Skilful performances are learned, fluent and goal directed.

Identify **three** other characteristics of skilful performances. [3]

- (b) The skill of a goalkeeper saving a penalty in a team sport may be classified as:

- an open skill
- a high-organisation skill
- a complex skill.

Justify each of these classifications. [3]

- (c) One theory about learning skills involves the strengthening of the S/R bond.

(i) Explain, using a practical example, what is meant by the S/R bond. [2]

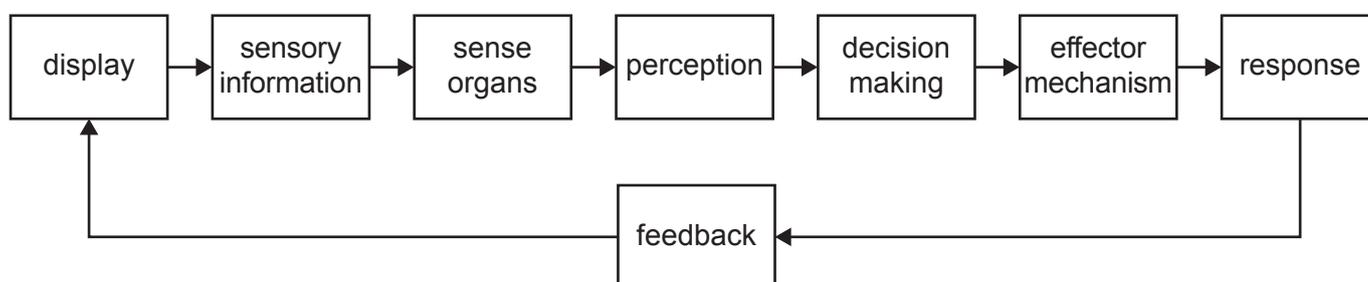
(ii) Suggest how the S/R bond can be strengthened when learning a skill. [4]

- (d) Explain, using a practical example, what is meant by closed-loop control of motor programmes. [4]

- (e) The two sources of information in Schmidt's schema theory are recall schema and recognition schema.

Explain the rules of recognition schema. [4]

- (f) The diagram shows stages in an information-processing model.



- (i) One type of sensory information is visual.

Suggest **three** other types of sensory information used during physical activity. [3]

(ii) Describe the role of the effector mechanism in producing a response. [2]

- (g) When learning movement skills, a performer may progress through various phases of learning.

(i) State the name of the second phase of learning. [1]

(ii) Suggest strategies that a coach could use to help a performer progress from the second phase of learning to the third phase of learning. [4]

[Total: 30]

**Section C: Contemporary studies in physical education and sport**

- 3 (a) (i) Sport is competitive and involves physical effort and skills.  
Identify **three** other characteristics of sport. [3]
- (ii) Describe the following in relation to sports participation:
- equal opportunity
  - esteem. [2]
- (b) Countries approach the development of excellence in sport in different ways.
- (i) Suggest the benefits for a country of deciding to invest heavily in developing excellence in sport. [4]
- (ii) Describe, using a country of your choice, named policies and initiatives that are in place to develop excellence in sport. [4]
- (c) Explain the benefits for an individual of regular participation in sport. [5]
- (d) Describe the characteristics of public sector provision of leisure facilities. [4]
- (e) Suggest how family may affect an individual's opportunity to participate in sport. [3]
- (f) Discuss the suggestion that an increase in commercialism has been beneficial for sport. [5]
- [Total: 30]





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