The EverLearner

# National Mock Exams 2024

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# CTEC Sport Unit 1 Body Systems and the Effects of Physical Activity

## Please read before distributing to students.

### Purpose of this document

The questions contained within this document and the associated mark scheme are based on the data analysis performed by The EverLearner Ltd. Please note the following:

- We believe this paper has a very strong association with the actual external exam in 2024 in relation to command terms, skills, AO distribution, extended writing requirements and topics.
- However, this is categorically NOT a predicted paper. No one can accurately predict an exam paper and we make no claim to this end.
- It is vital that you only use this document internally in your school/college. Publishing the document online or sharing it in any other way is strictly prohibited as this will undermine the potentially educational experiences of students in other schools/colleges.
- Finally, please check the publication dates of the mark scheme and model answers for this paper as well as the associated revision session in May.

**This paper contains:**

- Questions in the format of the CTEC Sport Unit 1 Body Systems and the Effects of Physical Activity exam
- Multiple choice questions
- Short-answer questions
- Extended writing

**How should schools use these papers?**

This paper has been constructed specifically for use as a mock exam but can be used less formally as a practice paper or model paper. The content and skills of the paper will be developed within the free-to-air revision sessions offered by James Simms on **Wednesday 1st of May 2024 at 16:30**.

All questions are available on **ExamSimulator**, where they can be practised multiple times in both online and printable format. **ExamSimulator** is a premium resource available via TheEverLearner.com and provides immediate diagnostics of student writing performance after every exam answer.

*James Simms*

The EverLearner

| | |
|---|---|
| **Subject** | Physical Education |
| **Course** | Cambridge Technical (CTEC) - Sport Level 3 - Unit 1 - Body systems and the effects of physical activity |
| **Time allowed** | 1 hour 30 minutes |

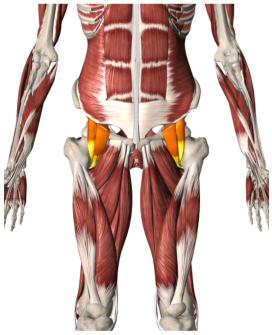
| | |
|---|---|
| **First name** | |
| **Last name** | |
| **Class** | |
| **Teacher** | |

| | |
|---|---|
| **Title** | Cambridge Technical (CTEC) - Sport Level 3 - Unit 1 - Body systems and the effects of physical activity - National Mock Exam Summer 2024 |

| | |
|---|---|
| **Guidance** | • This paper is marked out of 70 marks.<br>• You have 90 minutes (plus additional time for those who have Exam Access Arrangements).<br>• Answer all questions.<br>• A calculator is permitted for this exam.<br>• This paper contains one 10-mark question.<br>• Good luck. |

| | |
|---|---|
| **Total marks** | 70 |

**1.** Which one of the following muscles is highlighted?



A Gluteus medius

B Iliopsoas

C Erector spinae

D Adductor magnus

My answer is: _____

Marks: [1]

**2.** Which one of the following bones is highlighted?

A Tarsals

B Patella

C Metatarsals

D Talus

My answer is: _____

Marks: [1]

**3.** The picture shows a gymnast holding the crucifix position on the rings. Which one of the following types of contraction is being used?

A Isometric contraction

B Isotonic contraction

C Eccentric contraction

D Concentric contraction

My answer is: _____

**4.** Which one of the following is the antagonist at the ankle when a gymnast points their toes **during the take-off** for their somersault?

A Latissimus dorsi

B Soleus

C Gastrocnemius

D Tibialis anterior

My answer is: _____

Marks: [1]

**5.** Which of the following short-term cardiovascular responses to exercise does **not** increase during exercise?

A Heart rate

B Inspiratory reserve volume

C Stroke volume

D Cardiac output

My answer is: _____

Marks: [1]

**6.** Which one of the following is a short-term respiratory response to exercise?

A. Minute ventilation increases.
B. Tidal volume decreases.
C. Residual volume decreases.
D. Resting heart rate increases.

My answer is: _____

Marks: [1]

**7.** Which one of the following is a short-term muscular response to exercise?

A. Muscular hypertrophy
B. Muscular atrophy
C. Muscle fatigue
D. Increase in muscle fibres

My answer is: _____

Marks: [1]

**8.** State the typical value and unit of the cardiac output of an untrained individual during exercise.

Value: _____
Unit: _____

Marks: [1]

**9.** Define the term **vascular shunting**.

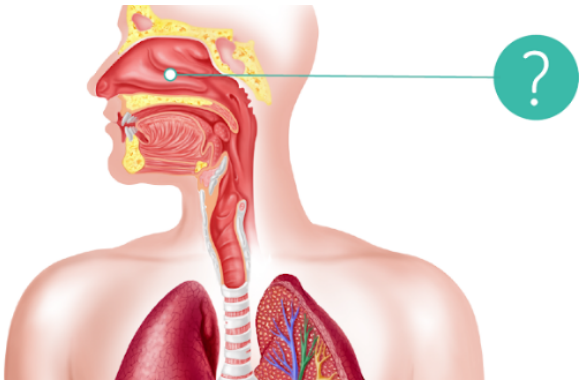
Marks: [1]

**10.** State the long-term effect of regular exercise on tidal volume.

During exercise, tidal volume:

Marks: [1]

**11.** Look at the image, identify this structure in the respiratory system and describe its role.




The structure is:
Its role is:

Marks: [3]

**12.** Complete the paragraph below, which describes the mechanics of breathing.

A is the process of moving air into the lungs. The B needs to be C in the lungs than in the atmosphere. The diaphragm moves upwards and outwards, D .. the volume of the thoracic cavity.

A: _____

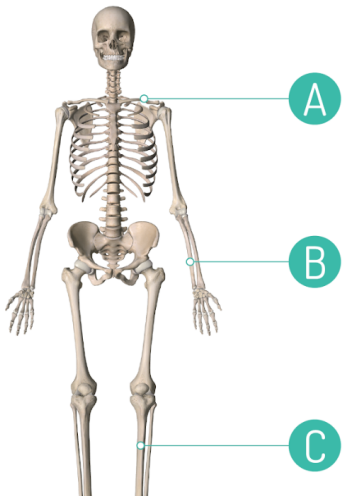
B: _____

C: _____

D: _____

Marks: [4]

**13.** The image below shows a skeleton. Identify the bones labelled **A, B** and **C**.




A: _____

B: _____

C: _____

Marks: [3]

**14.** Identify **three** functions of the skeleton **other than** protection and movement.

1: _____
2: _____
3: _____

Marks: **[3]**

**15.** Using the descriptions, identify the **types of bones** in the table.

| Description | Type of bone |
|---|---|
| These bones provide protection and allow for movement. | A |
| These bones are found in tendons and reduce friction across a joint. | B |
| These bones allow fine or small movements and can provide stability. | C |

A is: _____
B is: _____
C is: _____

Marks: **[3]**

**16.** Identify the process of movement of oxygen from the air into the blood, and of carbon dioxide from the blood into the air.

_____
_____
_____

Marks: **[1]**

**17.** Describe how the structure of alveoli aids the movement of oxygen into the blood and carbon dioxide into the air.

Marks: [3]

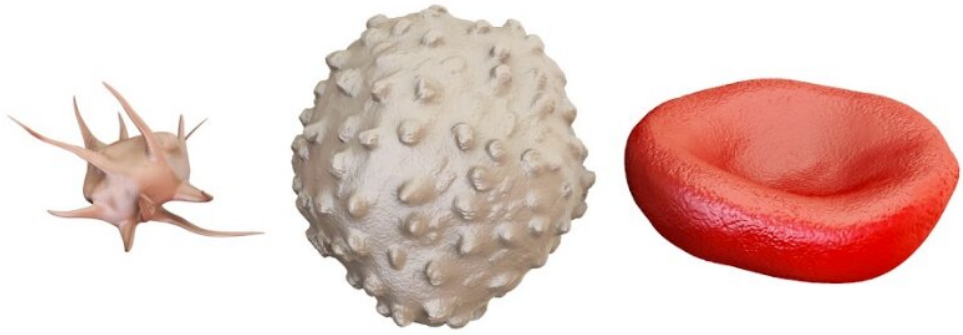
**18.** Describe the difference in minute ventilation between someone completing a 40-minute yoga session and someone competing in a basketball match.

Marks: [3]

**19.** Explain how the mix of muscle fibre types will affect a netball player.

Marks: [6]

**20.** The image shows three components of blood.
Select **two** components from the image and complete the information below.



Component 1:
Function:

Component 2:
Function:

Marks: [4]

**21.** Explain the specific roles of the vena cava and the aorta in the transport of blood.

Marks: [4]

**22.** Describe **two** effects of a warm-up on the cardiovascular system.

Effect 1:

Effect 2:

Marks: [2]

**23.** Describe **two** effects of a cool-down on the respiratory system.

Effect 1:

Effect 2:

Marks: [2]

**24.** Complete the information in the table below about different types of contraction.

| Type of contraction | Description | Example |
|---|---|---|
| Isometric | Muscle contracts but stays the same length, so no movement takes place. | Holding a plank |
| Concentric | A | B |
| Eccentric | C | D |

A: _____

B: _____

_____

C: _____

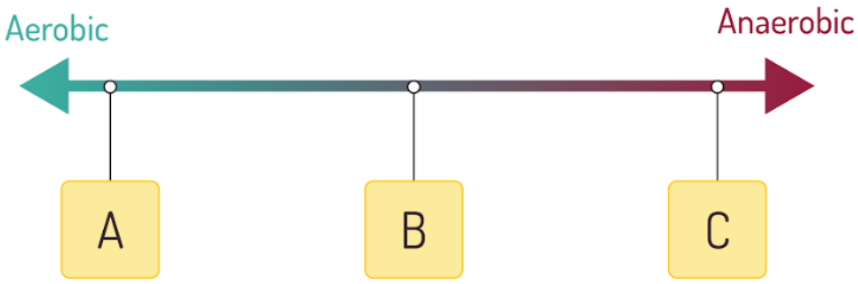
D: _____

_____

Marks: [4]

**25.** The image shows an energy continuum.
Using your knowledge of energy systems, place the named activities in the appropriate place on the continuum.

- Badminton smash
- Triathlon
- 400m hurdles




A: _____
B: _____
C: _____

Marks: [3]

**26.** For **two** of the named activities, justify your answer in relation to the energy continuum.

_____
_____
_____
_____
_____
_____

Marks: [2]

**27.** Explain the long-term adaptations to the cardiovascular and muscular systems as a result of physical activity.

Marks: **[10]**