The EverLearner

National Mock Exams 2025

POWERED BY ExamSimulator

BTEC Level 3 Sport Unit 1
(Anatomy and Physiology)

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 2025 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 potential educational experiences of students in other schools/colleges.
- Finally, please use this paper together with the mark scheme and make sure you attend the revision session in April.

This paper contains:

- Questions in the format of the BTEC Level 3 Sport Unit 1 Anatomy and Physiology exam
- 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 revision sessions offered by James Simms on **Wednesday 30th of April 2025 at 17:00** (available to all subscribing schools live and on demand; a shorter version for non-subscribers will be available on YouTube after the live session).

This paper is available to be set, answered and marked online via ExamSimulator. ExamSimulator is a premium resource available via TheEverLearner.com and provides immediate diagnostics of student writing performance after every exam answer. Get in touch with us to start a free trial.

James Simms

The EverLearner

Subject	Physical Education
Course	**BTEC** Level 3 Sport: Unit 1 Anatomy and Physiology
Time allowed	1 hour 30 minutes

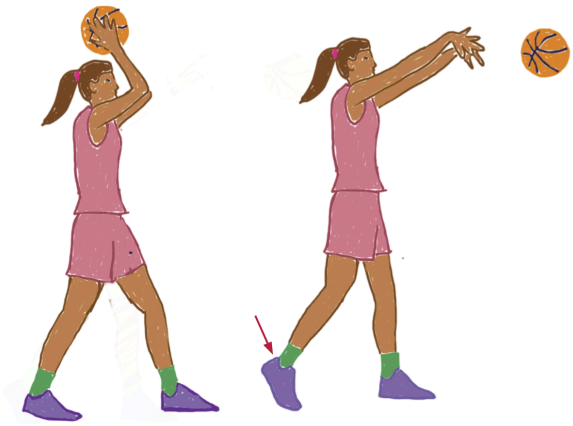
First name	
Last name	
Class	
Teacher	

Title	**BTEC** Sport Level 3: Unit 1 Anatomy and Physiology NME 2025

Guidance	• This paper is marked out of 80 marks. • You have 90 minutes (plus additional time for those who have exam access arrangements). • The marks for each question are shown in brackets (use this as a guide for how much time to spend on each question). • Answer **all** questions. • If the timer reaches zero prior to you submitting your paper, the software will automatically submit your responses. • Good luck.

Total marks	80

1. Look closely at this image. Identify the following at the ankle as the player moves from preparation to execution:
(a) Type of joint
(b) Articulating bones
(c) Movement pattern



(a) Type of joint: _____
(b) Articulating bones: _____
(c) Movement pattern: _____

Marks: [3]

2. State **two** skeletal adaptations from weight-bearing exercise such as running.

1 _____

_____

2 _____

_____

Marks: [2]

3. Describe arthritis.

_____

_____

_____

_____

_____

_____

Marks: [2]

4. Explain how a young athlete can prevent arthritis developing in later life.

Marks: [2]

5. Describe the structure **and** function of the synovial membrane.

Structure:

Function:

Marks: [4]

6. The image shows the muscles of the body. Identify the muscles labelled A, B and C.

A is: _____

B is: _____

C is: _____

Marks: [3]

7. Explain how muscle tissue adapts to a three-month weight-training programme.

_____

_____

_____

_____

_____

_____

_____

_____

_____

Marks: [3]

8. Describe **two** characteristics of slow-twitch muscle fibres.

Marks: [2]

9. Explain why type IIx muscle fibres are recruited in a tennis match.

Marks: [2]

10. State **three** short-term muscular responses to a 20-minute training run.

1

2

3

Marks: [3]

11. Peri competes in biathlon. She has recently been diagnosed with asthma. State **three** possible causes of asthma.

Marks: [3]

12. Name **two** muscles that work **actively** to cause an increase in the rate of exhalation during exercise.

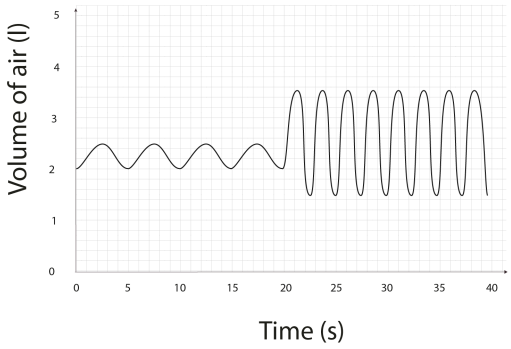
1 _____

2 _____

Marks: [2]

13. Look closely at this graph, which represents breathing before and during exercise.
Describe what happens to **both** breathing depth **and** breathing frequency at the start of exercise.

Spirometer Trace



Marks: [2]

14. Explain how neural control of breathing changes during exercise.

Marks: [3]

15. Analyse the process of **gaseous exchange** for a 5000m runner trying to sustain their level of performance throughout a race.

Marks: [6]

16. Describe the role of **both** platelets **and** plasma for a judo player.

Marks: [2]

17. Describe **three** functions of the cardiovascular system.

Marks: [3]

18. Describe the effects of hypothermia on the CV system.

Marks: [4]

19. Describe parasympathetic control of heart rate.

Marks: [2]

20. Analyse the role of the following in relation to the conduction system:
AV node
Bundle of His
Purkinje fibres

Marks: [6]

21. Look closely at this table. State what should be written in position A, B and C.

Aerobic system	
Fuel source	A
Controlling enzyme	PFK/Lipase
ATP yield	B
Site of reaction	C
Type of reaction	Aerobic

A:
B:
C:

Marks: [3]

22. Explain how **two** different long-term adaptations to the aerobic system would help to optimise a triathlete's performance.

Marks: [4]

23. Evaluate the contribution that the aerobic system makes to a competitive game of basketball.

Marks: [6]

24. Valeris is a long-distance runner specialising in half-marathon distance. Analyse how the adaptations to Valeris' cardiovascular and respiratory systems will affect their fitness when running for extended periods.

Marks: [8]