



The EverLearner

National Mock Exams 2024

POWERED BY ExamSimulator

Mark Scheme

BTEC Tech Award in Sport – Component 3

Please read before distributing to students.

Purpose of this document

This document and the associated question paper are based on the data analysis performed by The EverLearner Ltd. Please note that:

- 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 mark scheme for 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 model answers for this paper as well as the associated revision session in January.

This mark scheme contains:

- Copy of each question for reference
- Marking guidance where appropriate
- Marking points containing alternative acceptable responses plus relevant assessment objective

How should schools use this mark scheme?

The mark scheme has been constructed specifically for the exam paper used in The EverLearner's National Mock Exams from 2024. The model answers are also available and some of these questions will be discussed in the live revision show provided by James Simms (Tuesday, 2nd of January 2024, 15:45-16:45 on [youtube.com/TheEverLearner](https://www.youtube.com/TheEverLearner)).

All questions/mark schemes are available on ExamSimulator. Please note, there are hundreds of additional questions and mark schemes on ExamSimulator covering the BTEC Tech Award in Sport topics and skills. Within the platform, the teacher is assisted with the marking and full diagnostic feedback is also provided. ExamSimulator is a premium resource available via TheEverLearner.com.

I hope this helps both students and teachers in their exam preparations.

James Simms



Subject	Physical Education
Course	BTEC Tech Award in Sport (2022) Component 3: Developing Fitness to Improve Other Participants' Performance in Sport and Physical Activity
Time allowed	1 hour 30 minutes

Title	BTEC Tech Award in Sport Component 3: National Mock Exam January 2024
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Guidance	<p>This is a full National Mock Exam designed to help support students taking the Component 3 exam in January 2024. The paper has been modelled on the 2022 SAMS but contains brand-new content. All questions and mark schemes are written with a thorough attention to detail by experienced exam writers.</p> <p>Instructions:</p> <ul style="list-style-type: none">• Answer all questions.• The final question of the paper is a synoptic assessment.• Good luck!
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Total marks	60
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1. Lauren needs to move her head to avoid being punched during a match. Which of the following components of fitness is being described here?
-

Marking points (maximum 1)

(1) [AO 1] Option B/B/Reaction time

2. In order to monitor how hard she is training, Lauren uses a the scale numbered **from 6 to 20**. Name this scale.
-

Marking guidance

"Borg" must be mentioned. RPE alone does not receive the mark, as the student was asked to name it.

Marking points (maximum 1)

(1) [AO 1] Borg RPE Scale/Borg Rating of Perceived Exertion scale/Borg scale

3. Lauren uses the **anaerobic training** zone to increase muscular strength and power. Which of the following is correct for the anaerobic training zone?
-

Marking points (maximum 1)

(1) [AO 1] Option C/C/85% to 100% of HR max

4. Lauren uses free weights to develop her muscular strength. State **two** advantages **and** two disadvantages of Lauren using free weights.
-

Marking guidance

To achieve the full two marks, there must be **two** advantages and **two** disadvantages stated.

Marking points (maximum 4)

- (1) [AO 1] Free weights are good, as they target specific muscle groups/Specific muscle groups are targeted
- (2) [AO 1] The exercises can vary, which avoids tedium/Tedium is avoided/Lots of variation possible
- (3) [AO 1] Lauren can complete boxing movements using a free weight/Able to complete boxing movements
- (4) [AO 1] Free weights include lots of options such as dumbbells and barbells/Lots of different types of free weights/Accept named examples of free weights
- (5) [AO 1] However, free weights have a high risk of injury/Poor lifting technique can lead to injury
- (6) [AO 1] Free weights are more suited to experienced performers/Not suitable for beginners/Not suitable for younger athletes

5. Lauren completes the vertical-jump test to assess her leg power. She scores **49cm**. Identify the correct category for this test score.
-

Marking points (maximum 1)

- (1) [AO 3] Lauren is above average/Above average

6. Explain why Lauren would use **plyometric exercises** such as **incline press ups** in her training.
-

Marking guidance

Points must be successfully linked to boxing to be awarded a mark. For example, "plyometrics improves arm power" is only awarded the first marking point. The second marking point needs to mention why this will help Lauren in boxing. "To exert more force" is too vague. It would need to show an understanding of why this increased force is beneficial to Lauren.

Marking points (maximum 2)

(1) [AO 2] Incline press-ups develop arm power/Develop power in the arms/Increased arm power

(2) [AO 2] Lauren is able to punch with more force/Increased force of her punch/Score more points

7. Sonaya swims **three** times a week for health reasons.
Identify the basic principle of training that is being described.
-

Marking points (maximum 1)

(1) [AO 1] Frequency/Frequent

8. Sonaya has decided to write herself a two-week swimming training programme.
Identify **two** additional principles of training and explain how Sonaya has applied them.
-

Marking guidance

Only award two marks for naming additional principles of training. Marks three and four must come from application.

Accept other examples of additional principles in the schedule.

Do not accept adaptation or individual differences as correct. There is no evidence of these principles in the programme.

8. Sonaya has decided to write herself a two-week swimming training programme. Identify **two** additional principles of training and explain how Sonaya has applied them.
-

Marking points (maximum 4)

- (1) [AO 1] Progressive overload
- (2) [AO 2] Sonaya is increasing resistance gradually/Decreasing recovery time gradually
- (3) [AO 1] Specificity
- (4) [AO 2] Sonaya is doing the majority of training in the pool
- (5) [AO 1] Reversibility
- (6) [AO 2] Sonaya is ensuring no more than two consecutive rest days
- (7) [AO 1] Variation
- (8) [AO 2] Sonaya is using both interval and weight training
- (9) [AO 1] Rest and recovery
- (10) [AO 1] Sonaya is scheduling rest days
- (11) [AO 2] 3 rest days across 14 days is achievable

9. Sonaya is a swimmer and she wants to get faster. Describe the 30m flying sprint test.
-

Marking points (maximum 2)

- (1) [AO 1] Cones set up at 0m, 30m and 60m
- (2) [AO 1] First 30m is an acceleration zone
- (3) [AO 1] 30-60m is a maximal sprint zone
- (4) [AO 1] Does not measure acceleration/Measures top speed/Terminal velocity

10. Sonaya is a member of both a private and a public swimming pool. Identify one advantage of **both** private and public sector provision and a benefit to Sonaya of **both**.
-

Marking guidance

Award two marks for advantages only. The other two marks must come from the benefits to Sonaya and must be applied to swimming.

Marking points (maximum 4)

- (1) [AO 1] Private sector has modern facilities/Better equipment/Better changing facilities
- (2) [AO 1] Private sector is more exclusive
- (3) [AO 2] Private sector benefits Sonaya because she feels more motivated/Less chance the pool will be full/Gets changed in better facilities
- (4) [AO 1] Public sector is cheaper/More affordable/Less expensive
- (5) [AO 1] Public sector is more accessible/Less likely to have to travel far
- (6) [AO 2] Sonaya can afford to go to the public pool more
- (7) [AO 2] Sonaya doesn't need to drive or travel to the public pool

11. Sonaya swims for health and to make herself feel good. Name the type of motivation that Sonaya has.
-

Marking points (maximum 1)

- (1) [AO 1] Intrinsic motivation/Intrinsic

12. John uses ongoing fitness testing specific to volleyball.
State **two** reasons for fitness testing.
-

Marking points (maximum 2)

- (1) [AO 1] Provides baseline data/Baseline data/Base fitness assessment
- (2) [AO 1] Informs planning/Part of the training planning process
- (3) [AO 1] Monitor progress/Mid-training assessment/Establish whether progress has been made
- (4) [AO 1] Identify strengths and weaknesses/RAG rating/Strengths and weaknesses
- (5) [AO 1] Motivational/Provides focus
- (6) [AO 1] Provides a clear goal/Helps with short-term goal/Makes goals measurable

13. John uses fitness tests of all kinds.
Explain why John should give informed consent before completing a battery of fitness tests.
-

Marking points (maximum 2)

- (1) [AO 2] Protects the administrator/Provides legal coverage/Legal protection for those involved
- (2) [AO 2] So John knows what is to come/John is fully informed
- (3) [AO 2] So that John can say no if he wishes/Right to refuse

14. John's coach uses the vertical jump test to measure John's power.
Describe **two** factors that could lead to the test results being unreliable.
-

Marking points (maximum 2)

- (1) [AO 1] May not use calibrated equipment/Measuring technique may vary from attempt to attempt
- (2) [AO 1] John may not be always motivated/Test is maximal which can affect motivation/Motivational issues
- (3) [AO 1] Conditions may change from attempt to attempt/Different surfaces/Inside and then outside
- (4) [AO 1] Coach might be inexperienced with the test/Coach has never administered the vertical jump before/Lack of experience
- (5) [AO 1] If they don't follow the protocol/Don't comply with the standardised test procedure

15. John's coach uses the stork stand test to measure John's balance.
Name **one** other fitness test for balance.
-

Marking points (maximum 1)

(1) [AO 1] Y-balance/Y

16. John and John's coach have decided that John needs to improve his power, speed and flexibility.
Identify which **three** of the training methods from the image would be most suitable.
-

Marking guidance

Only accept PNF, plyometrics and interval.

Marking points (maximum 3)

- (1) [AO 1] PNF training/PNF/Proprioceptive neuromuscular facilitation
- (2) [AO 1] Interval training/Interval
- (3) [AO 1] Plyometrics training/Plyometrics

17.

John is a club volleyball player and is trying to break through into the first team this season. Evaluate the importance of agility **and** flexibility for John as he tries to achieve his volleyball goal.

Marking guidance

6-Mark Level Descriptors

Marking points (maximum 6)

- (1) [AO 1] Agility is the ability to change direction quickly and precisely without losing balance or time
- (2) [AO 2] Essential in volleyball in order to change direction on court
- (3) [AO 2] Essential when John has to move forward and back and side to side on court
- (4) [AO 2] Essential when John has to dive to block a smash
- (5) [AO 2] Essential when John has to get to the net to make a smash or block
- (6) [AO 2] Without agility, John would miss a lot of balls and the team would lose points
- (7) [AO 2] Without agility, John would not be in a position to hit winning shots
- (8) [AO 1] Flexibility is an adequate range of motion in all joints
- (9) [AO 2] Essential in volleyball to extend the shoulders during a set
- (10) [AO 2] Essential in volleyball to have hip flexibility to get low and block shots
- (11) [AO 2] Essential in volleyball when reaching or diving to prevent the ball hitting the court
- (12) [AO 2] Essential in volleyball when reaching high to get a good angle to smash the ball
- (13) [AO 2] Good flexibility can help prevent injury
- (14) [AO 3] Overall, both components are highly important
- (15) [AO 3] A lack of flexibility could be made up with excellent agility
- (16) [AO 3] A lack of agility could be made up with excellent flexibility

18. Eilish is a road cyclist and regularly completes long rides at the weekend.
If Eilish requires her cardiorespiratory system to deliver oxygen to her muscles, which component of fitness is she using?
-

Marking points (maximum 1)

(1) [AO 1] Aerobic endurance/Cardiovascular endurance/Cardiorespiratory endurance

19. Eilish relies heavily on good levels of muscular endurance.
Explain why muscular endurance is important to a road cyclist.
-

Marking points (maximum 2)

- (1) [AO 2] Eilish needs muscular endurance for repetitive turns of the pedals
(2) [AO 2] Eilish needs muscular endurance when going up longer climbs/Long hill climbs/Shallow inclines
(3) [AO 2] Eilish needs muscular endurance when maintaining pace on the flat
(4) [AO 2] Eilish needs muscular endurance when she is at the front of a group/Leading a group/Drafting others
(5) [AO 2] Eilish needs muscular endurance to avoid fatigue and slow down her pace/To maintain higher average pace over a distance

20. Eilish needs to test her aerobic endurance in order to train appropriately.
Explain why Eilish would choose **not** to use a 12-minute Cooper test despite it being a test of aerobic endurance.
-

Marking points (maximum 2)

- (1) [AO 3] Cooper test is running-based/Eilish is not a runner/Cyclist, not runner
(2) [AO 3] Because it is maximal/Maximal effort
(3) [AO 3] Because it requires a large area and Eilish may not have this available/Too much space/Large area

21. As a cyclist, Eilish uses BMI testing.
Suggest **two** reasons why BMI testing is appropriate for Eilish.
-

Marking points (maximum 2)

- (1) [AO 2] Cycling performance is based on power-to-weight ratio/The heavier Eilish is, the more power she needs/Being lighter helps Eilish
- (2) [AO 2] BMI testing is easy to conduct/Practical test/Little equipment required
- (3) [AO 2] Eilish can repeat BMI test on a regular basis/Monitor changes

22. Other than BMI, name **two** other fitness tests Eilish could use to assess her body composition.
-

Marking guidance

Please accept underwater weighing. This is not added to the marking points, as it is not on the specification, however it is the correct answer to the question.

Marking points (maximum 2)

- (1) [AO 1] BIA/Bioelectrical impedance analysis/Bioelectrical impedance spectroscopy
- (2) [AO 1] Waist-to-hip ratio

23. Eilish has set a goal stating: "After 12 weeks of training, I will compete in a charity road race." State **two** elements of SMARTER that Eilish **has** considered when creating this goal.
-

Marking points (maximum 2)

- (1) [AO 1] This goal is specific/Specific
- (2) [AO 1] This goal is measurable/Measurable
- (3) [AO 1] This goal is time-related/Time-related
- (4) [AO 1] This goal is exciting/Exciting

24. Eilish mixes continuous training with aerobic interval training. Describe aerobic interval training for a road cyclist.
-

Marking points (maximum 2)

- (1) [AO 1] Work period up to 5 minutes
- (2) [AO 1] Low work intensity/60-80% maxHR
- (3) [AO 1] Rest period with ratio of 1 to 1
- (4) [AO 1] Use of active recovery such as pedalling or stretching/Active recovery

25. Eilish completes static stretches during her cool-downs from cycling. Suggest **three** long-term adaptations that Eilish could experience from flexibility training.
-

Marking points (maximum 3)

- (1) [AO 1] Increased range of movement at joints/Increased RoM
- (2) [AO 1] Increased extensibility of ligaments/Ligaments lengthen
- (3) [AO 1] Increased extensibility of tendons/Tendons lengthen
- (4) [AO 1] Increased extensibility of muscle tissue/Muscles lengthen

Marking guidance

This is a synoptic question using content from Component 1. Responses are credited for demonstration of the knowledge and understanding using the level descriptions.

Level descriptors

Marking points (maximum 6)

- (1) [AO 3] Equipment-specific training has evolved such as bungee ropes and power bags, which make the circuit training more varied and exciting/Tedium is avoided through the use of varying sports-specific equipment
- (2) [AO 3] Equipment is expensive and not accesible to all/Expensive/Exclusive
- (3) [AO 3] Users do not feel confident using the equipment/Too complicated/Confusion
- (4) [AO 3] Mat technology is better, meaning participants are safer when completing floor-based exercises/Injury is reduced for exercises that involved landing/More absorption
- (5) [AO 3] Better design of dumb-bells and kettlebells leads to a lower rate of bruising when using them
- (6) [AO 3] Additional time to set up the vareity of equipment available/Takes a longer
- (7) [AO 3] Assistive technology allows wheelchair users to access circuit training sessions/More inclusive/Training for all
- (8) [AO 3] Wheelchair user may not feel that the circuit training sessions are inclusive/Lack of advertising that the sessions are inclusive
- (9) [AO 3] Sprung floor in an indoor facility can improve performance/Better flooring leads to a greater range of stations
- (10) [AO 3] Modern machines and equipment can be wall mounted to allow for extra safety
- (11) [AO 3] Facility updates are expensive/Private facilities have better circuit training sessions than public provision/May feel elitist
- (12) [AO 3] Individuals can analyse their participation and performance through wearable technology/Share through social media/Collaboration of performance available through wearable technology
- (13) [AO 3] Digital timers enhance the flow of the work and rest ratio at each station
- (14) [AO 3] Enhanced music systems make the training environment more enjoyable
- (15) [AO 3] Video and screens are available to observe performance and provide feedback on technique
- (16) [AO 3] Set-up of performance analysis technology is time-consuming/Wearable technology can fail and represent inaccurate data
- (17) [AO 3] In conclusion, technology can lead to an enhanced environment for participants
- (18) [AO 3] However, the barriers of expense and accessibility need to be overcome