



The EverLearner

National Mock Exams 2024

POWERED BY **ExamSimulator**

Mark Scheme

AQA GCSE PE - Paper 1

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 and published within the 2024 infographics. Please, note the following:

- We believe this mark scheme has a very strong association with previous AQA GCSE PE Paper 1 exams 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 sessions in May.

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 will be available in early April and many of these questions will be discussed in the live revision show provided by James Simms (Wednesday 8th of May, 15:00-16:30 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 IGCSE PE 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



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|---------------------|--------------------|
| Subject | Physical Education |
| Course | AQA GCSE PE 9-1 |
| Time allowed | 1 hour 15 minutes |

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|--------------|---|
| Title | AQA GCSE PE 9-1 Paper 1 National Mock Exam 2024 |
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| | |
|-----------------|--|
| Guidance | <ul style="list-style-type: none">• This paper is marked out of 78 marks.• You have 75 minutes (plus additional time for those who have Exam Access Arrangements).• Answer all questions.• A calculator is permitted for this exam.• This paper contains a 6-mark question and a 9-mark question.• Good luck. |
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|--------------------|----|
| Total marks | 78 |
|--------------------|----|

1. Which of the following is a **long-term** effect of exercise on the **heart**?

Marking points **(maximum 1)**

(1) [AO 1] Option B/B/Hypertrophy

2. Which of the following would be placed **in the middle** of a 2nd class lever diagram?

Marking points **(maximum 1)**

(1) [AO 1] Option D/D/Load

3. Which one of these is the correct description of cartilage in a synovial joint?

Marking points **(maximum 1)**

(1) [AO 1] Option A/A/Prevents friction on the end of the bones

4. Which of the following athletes is **most likely** to use altitude training?

Marking points **(maximum 1)**

(1) [AO 2] Option C/C/Triathlete

5. Which training intensity is correct when developing **strength**?

Marking points **(maximum 1)**

(1) [AO 1] Option A/A/Above 70% of one-rep max

6. Which bones articulate at the hip joint?

Marking points **(maximum 1)**

(1) [AO 1] Option C/C/Pelvis and femur

7. Look closely at the image.
Identify the muscles labelled **A, B and C**.

Marking guidance

Do not accept the correct names of muscles linked to the wrong letter. For example, "B is gastrocnemius" is not correct.

Abbreviated names such as "lats" and "glutes" are not creditworthy.

However, phonetic spellings are accepted.

Marking points (maximum 3)

(1) [AO 1] A is the latissimus dorsi/A latissimus dorsi

(2) [AO 1] B are the gluteals/B gluteals/B gluteus maximus

(3) [AO 1] C is the hamstrings/C hamstrings

8. The image shows the performance of a body-weight exercise.
Identify the joint action taking place at the **ankle** as the participant moves **from position A to position B**.

Marking guidance

Do not accept 'flexion'.

Marking points (maximum 1)

(1) [AO 2] Plantar flexion

9. The image shows the performance of a body-weight exercise. Identify **both** the agonist and the **antagonist** at the **ankle** when the participant moves **from position A to position B**.

Marking guidance

Do not accept the answer linked to the wrong role. For example, "The tibialis anterior is the agonist" is wrong.

Do not accept muscles operating at other joints. This question asks specifically about the **ankle**.

Marking points (maximum 2)

(1) [AO 2] The agonist is the gastrocnemius

(2) [AO 2] The antagonist is the tibialis anterior

10. The image shows the performance of a body-weight exercise. Identify the muscle contraction of the **agonist** when the participant moves **from position A to position B**.

Marking points (maximum 1)

(1) [AO 2] The muscle contraction is isotonic concentric/Isotonic concentric/Concentric

11. Look at the image of a rugby scrum.

Define static strength.

Justify why static strength is important in a rugby scrum.

Marking guidance

Award 1 A01 mark for the correct definition.

Award 3 A03 marks for justification.

Accept A03 marking points if the definition for A01 is incorrect.

Marking points (maximum 4)

(1) [AO 1] Static strength is the ability to hold a body part in a static position/ Hold a body part in a static position

(2) [AO 1] Static strength is applying maximum force to an immovable object/ Maximal force to an immovable object

(3) [AO 3] Rugby players need static strength to push against the opposition for the scrum half to get possession of the ball

(4) [AO 3] Players in the scrum require static strength to create a force against the opponents, forcing them to collapse the scrum

(5) [AO 3] Players in the scrum require static strength to remain on their feet and not allow their knees to touch the floor

(6) [AO 3] Rugby players need static strength to be able hold their body in position in order to keep their back straight and absorb impact from the opposing scrum

(7) [AO 3] Static strength in the neck and upper body helps prevent injury when making contact in a scrum

12. Describe the test protocol for a fitness test used to measure **maximal** strength.

Marking points (**maximum 3**)

- (1) [AO 1] Select equipment of either free weights or a resistance machine/Free weights/Resistance machine
- (2) [AO 1] Using the correct technique, complete one lift of the exercise/Complete one lift
- (3) [AO 1] Named examples such as squat/deadlift/bench press
- (4) [AO 1] If successful, attempt another lift with a heavier weight/Gradually increase the weight/Increase the weight
- (5) [AO 1] Continue until the heaviest weight in one complete repetition is achieved/Stop once the heaviest weight is lifted fully
- (6) [AO 1] Divide the one-rep max weight by the body weight/Lift weight divided by body weight

13. This image shows the results from the sit-and-reach fitness test from a group of experienced dancers.
Using the data, identify the highest and lowest scoring dancer **and** the average sit-and-reach fitness test score for the group.

Marking points (**maximum 3**)

- (1) [AO 2] Highest scoring dancer is Jaz/Jaz has the highest score/Jaz scores 14cm
- (2) [AO 2] Lowest scoring dancer is Kaunain/Kaunain has the lowest score/Kaunain scores 9 cm
- (3) [AO 2] The average score is 11cm/Average is 11cm

14. State **three** limitations of using the sit-and-reach fitness test for an experienced dancer.

Marking points (**maximum 3**)

(1) [AO 1] Test is only specific to the hamstrings and lower back/Test is not sport-specific/Test is too general

(2) [AO 1] Dancers are flexible in more areas of the body

(3) [AO 1] Test does not replicate all the movements in dance/Does not replicate movements

(4) [AO 1] Test reading can be inaccurate/Human error is high/Test is unreliable

(5) [AO 1] A warm-up can alter the test results/Requires motivation

(6) [AO 1] Other fitness components required in dance

15. Explain how a dancer is able to remain injury-free through the use of **three** different injury prevention methods.

Marking guidance

The command is explain and the marking points are for AO2. Please accept injury prevention methods that have been developed and linked to a **purpose or reason**. The marks are not just for **stating** injury prevention methods.

Marking points (maximum 3)

(1) [AO 2] Complete a warm-up before every training session to ensure muscles are warm/Increase temperature of the muscles through a warm-up

(2) [AO 2] Avoid overtraining by making overload progressive

(3) [AO 2] Wear appropriate footwear to protect the feet and ankles

(4) [AO 2] Brace or tape knees and ankles if doing jumps

(5) [AO 2] Hydrate at all times/Avoid dehydration to remain focussed in training

(6) [AO 2] Don't overstretch, especially the legs/Keep stretches within the normal range of movement

(7) [AO 2] Use good technique during lifts and landings/Focus on lifting technique when working with a partner/Correct technique at all times

(8) [AO 2] Include rest days in the schedule/Rest in the afternoon if training early mornings/Rest days

16. Describe the pathway that air follows during inhalation.

Marking guidance

Please do not accept parts of the pathway in the incorrect order.

Marking points (maximum 5)

- (1) [AO 1] Air is inhaled through the nose and mouth/Nose and mouth
- (2) [AO 1] After inhalation, air travels down the trachea/Air travels down the trachea/Trachea
- (3) [AO 1] The trachea splits in the bronchi/Air travels into two bronchi/Bronchi
- (4) [AO 1] From the bronchi, air moves into the bronchioles/Air travels into the bronchioles/Bronchioles
- (5) [AO 1] At the end of the bronchioles are alveoli/Air travels to the alveoli/Alveoli

17. Explain how both preseason **and** postseason training can benefit a football player.

Marking guidance

Award two A02 marks for the benefits of preseason.

Award two A02 marks for the benefits of postseason.

The answers **must** include linked purpose or reasoning and be specific to football to be credited.

Marking points (maximum 4)

- (1) [AO 2] Preseason builds specific fitness in preparation for football
- (2) [AO 2] Football players need cardiovascular endurance to be able to cope with the demands of 90 minutes/Sustain energy levels for the duration of the game
- (3) [AO 2] Football players need muscular endurance specifically in the legs, as muscles contract repeatedly whilst running
- (4) [AO 2] Speed and agility are vital for the skills needed in football
- (5) [AO 2] Postseason is for rest and recovery
- (6) [AO 2] Aerobic fitness can be maintained for the next season
- (7) [AO 2] Important the player is able to rest the body
- (8) [AO 2] Have a mental break from the pressures of playing football
- (9) [AO 2] Set goals for the next season

18. Define eccentric muscle contraction.

Use an example of a sporting action in your answer.

Marking guidance

One AO1 mark for the definition and an additional AO2 mark for an accurate sporting example. AO2 can be awarded if the definition is incorrect.

Please accept any other suitable examples of eccentric muscle contraction. The answer must be clear that muscle is lengthening to be creditworthy. For example, "press-up" would not be credited as this is too vague. "downwards phase of the press-up" is credited, as this is when the triceps muscle group will be lengthening to lower the body to the floor.

Marking points (maximum 2)

(1) [AO 1] Eccentric muscle contraction is when limb movement occurs and the muscle lengthens/Lengthening of the muscle during contraction/Muscle lengthening

(2) [AO 2] Downwards phase of a press-up in the upper arm/Triceps in a downwards phase of a press-up

(3) [AO 2] Downwards phase of a squat in the front of the thigh/Quadriceps in a downwards phase of a squat

19. Name the tissue which transmits force from the muscles to the bones.

Marking points (maximum 1)

(1) [AO 1] Tendons

20. Discuss the effectiveness of plyometric training for a basketball player.

Marking guidance

Sub max 3 marks for positive effects of plyometrics and sub max 3 marks for negative effects.

A "discuss" answer must have a balance of positives and negatives to achieve full marks.

The balance can be 3 and 1.

Each positive and negative must be **linked** to a basketball player and not just advantages and disadvantages of plyometrics.

Marking points (maximum 4)

(1) [AO 3] Plyometrics are good because it develops leg power to be able to jump higher for rebounds/Develops leg power to be able to sprint quickly up the court/Develops leg power to be able to jump high on a jump shot

(2) [AO 3] Develops upper-body power to be able to exert enough force to score a three-point shot/Develops upper-body power when blocking an opponent/Develops upper-body power to be able to generate a long pass when the fast break is available

(3) [AO 3] Bounding movements of plyometrics replicate basketball jumping movements/Plyometrics is specific and realistic to basketball

(4) [AO 3] Plyometrics can be done on a basketball court/Plyometrics is convenient for basketball spaces/Works well on a basketball court surface

(5) [AO 3] Plyometrics is specific to basketball as it develops the same muscles/Develops leg muscles required in basketball/Lots of leg exercises

(6) [AO 3] However, there is a high risk of injury/Only used by trained athletes/Can be contraindicated for some

(7) [AO 3] Plyometrics doesn't develop other components of fitness required in basketball/Doesn't develop reaction time needed to make an interception

(8) [AO 3] Plyometrics is maximal, so requires very high motivation levels/Athletes need to be motivated/Unmotivated players will struggle

21. The image shows a basketball player performing an overhead pass. Identify the class of lever used at the **elbow** when performing the pass and **moving from position A to position B.**

Marking points **(maximum 1)**

(1) [AO 2] First class lever system/First class lever/1st class

22. The image shows the components of a lever. Identify how you would arrange the components to show the lever named in the previous question.

Marking points **(maximum 3)**

(1) [AO 2] The arrow and effort would be at one of the lever arms and pointing upward

(2) [AO 2] The triangle and fulcrum would be close to the effort but between the other two components

(3) [AO 2] The square and load at the other end and on top of the line

23. Describe the position of the effort **and** resistance arms for the lever in the previous question.

Marking points **(maximum 2)**

(1) [AO 1] Effort arm is the distance between the fulcrum and effort

(2) [AO 1] Resistance arm is the distance between the fulcrum and the load

24. This image shows a tucked-back somersault. Identify **both** the plane of movement **and** the axis of rotation during the rotation.

Marking points **(maximum 2)**

(1) [AO 2] Sagittal plane/Sagittal

(2) [AO 2] Transverse axis/Transverse

25. Evaluate the importance of **power** when performing a tucked somersault.

Marking guidance

An "evaluate" answer include 'judgement' and be specifically linked to the question context to achieve full marks.

Each judgement point is therefore worth A03 and must be **linked** to power specifically when performing a tucked somersault.

Marking points (maximum 4)

(1) [AO 3] Power causes higher jumps, which leads to more time in the air to rotate/More time in the air/More rotations

(2) [AO 3] A higher rotation results in more time to spot a landing/Increased chance of landing the somersault

(3) [AO 3] Increase in points scored/More aesthetically pleasing

(4) [AO 3] Athlete uses both strength and speed in the upper body to achieve a quick rotation/Forceful arms to be able to maximise rotation/Forceful arms

(5) [AO 3] Trampolinist uses both strength and speed in the legs to achieve tucked position/Forceful legs to raise the legs/Forceful legs to make the tucked shape

(6) [AO 3] Trampolinist needs power in their core to keep rotation efficient/Powerful core can keep the body tense/Powerful core to maintain shape throughout the air

(7) [AO 3] However, the somersault requires other fitness components such as flexibility of the hip to achieve the tuck position/Balance is also required when landing the somersault

26. Define health **and** fitness.

Marking points (maximum 2)

(1) [AO 1] Health is a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity/A state of complete physical, mental and social well-being

(2) [AO 1] Fitness is the ability to meet the demands of the environment/Cope with the demands of the environment

27. Describe the likely impact of a person with ill health on their levels of fitness.

Marking points (**maximum 2**)

(1) [AO 1] Physical fitness will be lower/Reduced fitness/Less fitness

(2) [AO 1] Inability to train/No training/Unable to train

(3) [AO 1] Reversibility occurs/Fitness levels are lost quicker than gained

28. Review the image closely.

Complete the equation for cardiac output.

Marking points (**maximum 2**)

(1) [AO 1] Heart rate/HR

(2) [AO 1] Stroke volume/SV

29. Justify the importance of both aerobic and anaerobic energy release within a team game.

Marking guidance

[6-Mark Guidance](#)



Accept any suitable justification points relating to aerobic and anaerobic respiration in a team game.

Justification is characterised by **supporting a case with evidence**.

Only accept examples from team games.

Students should state why aspects of their chosen team game need to be aerobic and anaerobic

.The suggestions in the marking points for AO2 are merely team examples. The student is not bound to these only. Likewise, the AO3 points here are generalised but it would be advisable for the student to keep them specific to the team game they select.

For example, if they had chosen netball, the developed AO3 credit for anaerobic energy release could read "Therefore, anaerobic respiration is needed to perform a rebound with maximal effort so the player is able to jump high enough to retain the ball".

Marking points (**maximum 6**)

(1) [AO 1] Equation for aerobic respiration is Glucose + Oxygen = Carbon dioxide + Water and energy release/Glucose + Oxygen + Carbon dioxide + Water/In the presence of oxygen

(2) [AO 2] A football match is 90 minutes long/Rugby match is 80 minutes in duration/Netball player is working for four quarters of 15 minutes

(3) [AO 3] Therefore, aerobic respiration is needed to sustain maximum performance for the entire game

(4) [AO 3] Ensures fatigue is delayed so that the skill level does not deteriorate

(5) [AO 3] Aerobic respiration is important during periods of recovery to disperse lactic acid

(6) [AO 3] Removal of lactic acid prevents a build up of muscle fatigue

(7) [AO 1] Equation for anaerobic respiration is Glucose = Lactic acid and energy release/Glucose goes to lactic acid and energy/Presence of insufficient oxygen

(8) [AO 2] Necessary in a football sprint back to make a tackle/Powerful rugby tackle/Make an interception in netball

(9) [AO 3] These are all explosive movements/Take place at high intensity/Occur over a short duration

(10) [AO 3] Therefore, anaerobic respiration is needed to perform these skills with maximal effort

(11) [AO 3] Without it, it is difficult to outwit the opponent

(12) [AO 3] The period of intense effort is often followed by a period of recovery

30. Analyse the benefits of interval **and** weight training for a sprinter.
Include reference to FITT in your answer.

Marking guidance

[9 Mark Guidance](#)



Marking points (**maximum 9**)

- (1) [AO 1] FITT is Frequency, Intensity, Time and Type
- (2) [AO 1] Frequency is how often training takes place
- (3) [AO 1] Intensity is how hard the training sessions are
- (4) [AO 1] Time is the length of time the training is undertaken
- (5) [AO 1] Type is the training method used
- (6) [AO 1] Interval training is periods of high-intensity exercise followed by periods of low-intensity exercise/High-intensity exercise followed by low-intensity periods
- (7) [AO 1] The intensity of interval training can be altered to meet specific fitness aims/Intensity can be altered to suit different sports/Interval training intensity can be altered
- (8) [AO 2] Interval training replicates the demands and intensity of sprinting
- (9) [AO 2] High intensity work is suitable for short sprints/High intensity is suitable for maximal effort when sprinting
- (10) [AO 2] Lower intensity replicates the recovery periods between sprints/Lower intensity at the end of a sprint race
- (11) [AO 3] Interval training uses both anaerobic and aerobic respiration
- (12) [AO 3] Interval training does not require specific equipment and a track will be sufficient/Can be completed on a track which is specific
- (13) [AO 3] Interval training can include specific sprint-related drills/Include skills such as high knees and sprint starts
- (14) [AO 3] Relevance of interval training means the FITT principle can be applied effectively
- (15) [AO 3] Timing of an interval training sessions can be adjusted to match the sprint distance and recovery required
- (16) [AO 3] Components of fitness may be more important/Reaction time is crucial to a sprint start/Flexibility of the hip required for an efficient leg drive

(17) [AO 3] Intensity of interval training is high and, therefore, a sprinter will need to consider effective recovery methods if completing more than one interval session per week/Frequency of sessions is determined by effective recovery methods such as massages

(18) [AO 3] Interval training can be combined with other types of training methods such as static stretching/Combined with static stretching to improve flexibility of the hip

(19) [AO 1] Weight training is a method with free weights or resistance machines/Free weights or machines

(20) [AO 1] High weight and low repetitions for muscular strength and power/High weight low reps

(21) [AO 2] A sprinter requires power to run fast/Fast sprinting time relies on power/More power equals a faster sprint time

(22) [AO 2] Sprinters require power in the sprint start/Sprint start is based on power/Sprint start needs power

(23) [AO 2] Sprinter uses mostly anaerobic respiration/Sprinters release most energy through anaerobic respiration/Sprinting is mostly anaerobic

(24) [AO 3] Weight training causes muscle hypertrophy of the sprinter

(25) [AO 3] Hypertrophy increases leg power for a more powerful start/Develop leg power for a more powerful leg drive to increase speed

(26) [AO 3] Increased power leads to more force applied to the track for a faster sprint technique/More power means more force applied/More power causes more speed

(27) [AO 3] Weight training intensity for a sprinter would be 70% of one-rep max to develop power/Power requires 70% 1RM/70% 1RM for power

(28) [AO 3] Sprinter can isolate specific muscle groups during a weight-training session/Isolate the quadriceps and hamstrings/Isolate the deltoids

(29) [AO 3] Weight training can be combined with interval training/Sprinter may use both weight and interval training together in one week

(30) [AO 3] Powerful sprint start leads to a quicker drive phase/Good sprint start improves drive phase/Sprint start is linked to drive phase

(31) [AO 3] Faster start leads to a quicker time/Good sprint start improves time/Faster time after a faster start

(32) [AO 3] Sprint performance and weight training can also be impacted by sufficient diet/Eating sufficient carbohydrates for energy/Eating sufficient amounts of protein for muscle growth and repair