The EverLearner

National Mock Exams 2024

POWERED BY ExamSimulator

Mark Scheme
OCR 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 OCR 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 (**Thursday 9th of May, 15:00-16:30** on 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

The EverLearner

Subject	Physical Education
Course	OCR GCSE PE 9-1
Time allowed	1 hour 0 minutes

Title	OCR GCSE PE 9-1 Paper 1 National Mock Exam 2024

Guidance	• This paper is marked out of 60 marks. • You have 60 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. • Good luck.

Total marks	60

1. Define tidal volume.

Marking points **(maximum 1)**

(1) [AO 1] Amount of air which enters the lungs during normal inhalation at rest/Air which enters during normal inhalation at rest/Normal inhalation at rest

2. What type of joint is the shoulder?

Marking points **(maximum 1)**

(1) [AO 1] Ball-and-socket joint/Ball and socket

3. Identify the movement pattern that has occurred at the **right shoulder** in the image.

Marking points **(maximum 1)**

(1) [AO 2] Shoulder flexion/Flexion

4. Identify which of the following describes a capillary.

Marking points **(maximum 1)**

(1) [AO 1] Option B, site of gaseous exchange/Option B/Site of gaseous exchange

5. Red-blood-cell production and storage of minerals are two functions of the skeleton.
Explain how **two other** functions of the skeleton benefit a high diver.

Marking guidance

Answers must relate to a high diver. No application, no mark.

No marks for only naming the other functions.

Marking points **(maximum 2)**

(1) [AO 2] Ribs protect the chest during entry/Cranium protects the brain during entry/Sternum protects the heart in case of an error

(2) [AO 2] Skeleton supports the body in its extended, diving position/Support of the arms to be outstretched/Support of the fingers to be pointed

(3) [AO 2] Provides the correct diving posture when tucked/Correct posture when opening out before the water/Correct posture when extended

(4) [AO 2] Triceps attaches to the ulna to extend the elbow/Triceps creates a lever with the elbow to cause extension

6. Identify the joint component responsible for the transmission of force from the **muscle onto a bone.**

Marking points **(maximum 1)**

(1) [AO 1] Tendons

7. Define muscular endurance.

Marking points **(maximum 1)**

(1) [AO 1] Ability of the muscles to repeatedly contract without rest

8. The intercostals are a muscle group involved in breathing.
Describe the role of **one other** breathing muscle.

Marking points **(maximum 2)**

(1) [AO 1] Diaphragm contracts when breathing in/The diaphragm flattens when breathing in

(2) [AO 1] Diaphragm relaxes when breathing out/Diaphragm domes when breathing out

9. Look at the following image.
State the correct plane of movement **and** axis of rotation for the leg action of the runner.

Marking guidance

Accept the first two answers only. Do not accept "sagittal" or "transverse" without reference to a plane and axis respectively.

Marking points **(maximum 2)**

(1) [AO 2] Sagittal plane

(2) [AO 2] Transverse axis

10. Identify a role of red blood cells from the following options.

Marking points **(maximum 1)**

(1) [AO 1] Option D, to bind with oxygen/Bind with oxygen/Option D

11. Name the valve that prevents backflow of blood between the left ventricle to the left atrium.

Marking points **(maximum 1)**

(1) [AO 1] Bicuspid valve/Bicuspid/Mitral valve

12. State where in the body you would expect to find the phalanges.

Marking points **(maximum 1)**

(1) [AO 1] Ends of the fingers/Ends of the toes/Fingers and toes

13. Identify **one** potential hazard of an outdoor artificial sporting environment.

Marking guidance

Accept other alternative hazards as long as they are linked specifically to artificial, outdoor spaces.

Marking points **(maximum 1)**

(1) [AO 1] Lack of run-off area/Colliding with the fence

(2) [AO 1] Falling and burning the skin/Skin burns

(3) [AO 1] Hard surface when falling/High impact on landing

(4) [AO 1] Non-maintained pitch may have tears/Too little or too much sand/Underwatered

14. The components of an effective warm-up are listed alongside the impact of each component.
Which component of the warm-up has not been included?

Marking points **(maximum 1)**

(1) [AO 1] Skill rehearsal/Skill practice/Skill-related practice

15. Describe the role of the triceps during **both** the upwards **and** downwards phases of a biceps curl.

Marking guidance

Only accept antagonist in both cases. The triceps is the antagonist throughout the movement. "The triceps is the antagonist throughout both phases" = two marks.

Marking points **(maximum 2)**

(1) [AO 3] During the upwards phase, the triceps is the antagonist

(2) [AO 3] During the downwards phase, the triceps is still the antagonist

16. Look closely at this image. Which respiratory feature is labelled D?

Marking guidance

Only accept bronchus or bronchi. Do not accept any other respiratory feature.

Marking points **(maximum 1)**

(1) [AO 1] D is a bronchus/Bronchus/Bronchi

17. A warm-up and cool-down can be used to minimise the risk of injury.
State another way in which the **batsman** could minimise the risk of injury.

Marking guidance

No marks for naming other factors such as PPE or lifting equipment. The answer must be linked to batting in cricket. No application, no mark.

Please note that, at the time of writing, the ICB retains the term "batsman" rather than "batter" or "batsperson".

Marking points **(maximum 1)**

(1) [AO 2] PPE such as pads/Helmet to protect the head and neck/Padded gloves to protect the fingers

(2) [AO 2] Batting shoes to prevent slipping/Well-fitting shoes to prevent blisters/Wicking clothing to prevent overheating

(3) [AO 2] Compete against same-age opponents/Play at the correct ability level

(4) [AO 2] Correct batting posture to prevent back pain

18. Other than a decreased likelihood of injury, state **one** benefit to the **batsman** of completing a warm-up.

Marking guidance

Please note that, at the time of writing, the ICB retains the term "batsman" rather than "batter" or "batsperson".

Marking points **(maximum 1)**

(1) [AO 2] Decreased production of lactic acid

(2) [AO 2] Increased muscle temperature/Increased muscle pliability

(3) [AO 2] Increased heart rate

(4) [AO 2] Increased flexibility at joints/Increased muscle extensibility

(5) [AO 2] Increased pliability of tendons/Increased pliability of ligaments

(6) [AO 2] Increased blood flow to muscles

(7) [AO 2] Increased speed of muscle contraction/Increased strength of muscle contraction

19. Describe the role of an agonist muscle.

Marking guidance

Do not accept prime mover as an answer to this question. as it specifically asks for a description of the role.

Marking points **(maximum 1)**

(1) [AO 1] Produces the movement/Creates the force to cause the movement

20. Which is the correct option for the acronym **FITT**?

Marking points **(maximum 1)**

(1) [AO 1] Option B/B/Frequency, Intensity,Time,Type

21. Define stroke volume.

Marking points **(maximum 1)**

(1) [AO 1] Stroke volume is the amount of blood pumped out of the heart per contraction/Amount of blood pumped out of the left ventricle per contraction/Amount of blood pumped out of the heart per beat

22. Define coordination.

Marking points **(maximum 1)**

(1) [AO 1] Ability to repeat a pattern or sequence with fluency and accuracy/Ability for two or more body parts to work together smoothly and accurately

23. Give **one** practical example of a sporting movement that occurs around the longitudinal axis.

Marking guidance

Answer must be linked to a performance. For example, award no marks to "half-twist" but "half-twist in trampolining" should be awarded one mark.

Marking points **(maximum 1)**

(1) [AO 3] Pivot in basketball or netball/Turning a gate when slalom skiing/Half-twist in trampolining

24. Identify the type of lever operating at the ankle when a gymnast balances on their tiptoes.

Marking points **(maximum 1)**

(1) [AO 3] Second-class lever/2nd class lever/2nd class

25. Which type of training would be most suitable for an outfield hockey player?

Marking points **(maximum 1)**

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

26. Describe the term overload.

Marking points **(maximum 1)**

(1) [AO 1] When an athlete works harder than normal/Puts the body under stress

(2) [AO 1] Causes physiological adaptations

(3) [AO 1] Use of FITT to make training harder

27. Using the information provided in the graph, analyse what is happening to the participant's heart rate between points A and B **and** between points C and D.

Marking guidance

Answer must state what is happening between the two points. Between A & B, just stating "increased HR" is not accurate. It also levels off. Between C and D, the decrease is rapid or steep.

Marking points **(maximum 2)**

(1) [AO 3] Between A and B, HR reaches a steady state/Rises and then plateaus/Oxygen supply equals oxygen demand

(2) [AO 3] Between C and D, HR rapidly decreases/Steep drop in HR

28. Name a long-term effect of exercise on the cardiovascular system.

Marking guidance

Do not accept "decreased heart rate" or "increased cardiac output". They require the terms "resting" and "maximal", respectively.

Marking points **(maximum 1)**

(1) [AO 3] Hypertrophy of the heart

(2) [AO 3] Decreased resting heart rate

(3) [AO 3] Increased stroke volume

(4) [AO 3] Increased maximal cardiac output

29. "Training with no breaks at a heart-rate range of 60%-80% maximum heart rate." What type of training is this referring to?

Marking points **(maximum 1)**

(1) [AO 1] Continuous training/Continuous

30. Explain how gaseous exchange occurs when exercising.

Marking points **(maximum 2)**

(1) [AO 3] Greater rate of diffusion than at rest

(2) [AO 3] Greater concentration gradient of oxygen between the alveolus and the blood/Oxygen diffuses down the steeper concentration gradient into the blood

(3) [AO 3] Greater concentration gradient of carbon dioxide between the blood and the alveolus/Carbon dioxide diffuses down the steeper concentration gradient into the alveolus

31. Using examples from sport, describe **both** aerobic and anaerobic exercise.

Marking points **(maximum 4)**

(1) [AO 1] Glucose + Oxygen ---> Carbon dioxide + Water and energy release/In the presence of sufficient oxygen/Long duration and low intensity

(2) [AO 2] Open play in a football match/Triathlon/Open-water swimming

(3) [AO 1] Glucose ---> Lactic acid and energy release/In the absence of sufficient oxygen/Short duration and high intensity

(4) [AO 2] Jumping as high as possible to head a football/Throwing a javelin/Sprinting

32. Explain how blood flow is redistributed during exercise.

Marking points **(maximum 4)**

(1) [AO 3] Vasodilation of blood vessels to the working muscles/Vasodilation of blood vessels to the gastrocnemius/Vasodilation of blood vessels to the quadriceps

(2) [AO 3] Decreased resistance to blood flow towards the muscle/Greater proportion of blood travels to the muscles

(3) [AO 3] Vasoconstriction of blood vessels to other organs/Vasoconstriction of blood vessels to liver/Vasoconstriction of blood vessels to the kidney

(4) [AO 3] Increased resistance to blood flow to the other organs/Smaller proportion of blood flows in this direction

33. A 50m freestyle swimmer completes a cool-down after a race.
Describe the benefits of completing this cool-down.

Marking points **(maximum 3)**

(1) [AO 2] Swimmer transitions back to resting state after the race

(2) [AO 2] Swimmer's heart rate falls more gradually

(3) [AO 2] Swimmer's muscle temperature falls more gradually

(4) [AO 2] Swimmer's blood continues to circulate/Capillaries are flushed with blood

(5) [AO 2] Swimmer's breathing rate gradually decreases

(6) [AO 2] Waste products continue to be removed

(7) [AO 2] Reduced DOMS in the days after/Swim again sooner

34. Give **three** examples of potential hazards in and around the swimming pool that could cause injury to the swimmer.

Marking guidance

Reference should be made to the danger posed to the swimmer.

Marking points **(maximum 3)**

(1) [AO 1] Slippery surfaces could cause falls/Wet surfaces/Damaged surfaces

(2) [AO 1] Loose fittings could cause collisions/Equipment left out could cause trips

(3) [AO 1] Too much chlorine in the pool may cause pain to the eyes or skin/Too many chemicals in the pool

(4) [AO 1] Overcrowded pool could cause collisions/Too many people in the pool

(5) [AO 1] Depth of water could lead to swimmers out of depth/Deep water/Shallow water

(6) [AO 1] Dirty water could cause infection/Poor water quality

35. Name **two** suitable fitness tests for strength.

Marking points **(maximum 2)**

(1) [AO 1] Hand-grip dynamometer

(2) [AO 1] One repetition maximum/One-rep max

36. Describe the importance of muscular strength to a rugby player.

Marking guidance

Accept other relevant examples of strength in rugby.

Marking points **(maximum 2)**

(1) [AO 2] Strength to make tackles and not be pushed backwards

(2) [AO 2] Strength to play longer passes

(3) [AO 2] Strength to kick the ball longer distances

(4) [AO 2] Strength to apply lots of force to the ground and run faster

37. Using practical examples, evaluate the importance of flexibility for an elite rower.
Explain why an elite rower might be tempted to take a stimulant prior to performing.

Marking guidance

Marking points **(maximum 6)**

(1) [AO 1] Flexibility is the range of movement at joints

(2) [AO 2] Rowers need good flexibility in the upper and lower body

(3) [AO 2] Flexibility is important, as range of movement at the shoulder helps to apply more force to the water

(4) [AO 2] Increased range of movement in the hips helps to make the stroke longer

(5) [AO 3] Efficient rowing technique requires high levels of flexibility across the whole body

(6) [AO 3] However, flexibility is arguably not as important as power

(7) [AO 1] Stimulants increase alertness/Alertness

(8) [AO 1] Improves reaction time/Reaction time

(9) [AO 1] Stimulates the central nervous system/Central nervous system

(10) [AO 2] Rower could get a faster start

(11) [AO 2] Rower could stay alert during the race and prevent moving out of the lane or colliding with an opponent

(12) [AO 2] Rower could focus more on the cox's calls