



The EverLearner

National Mock Exams 2025

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Mark Scheme IGCSE 0413 PE Paper

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 2025 infographics. Please, note the following:

- We believe this mark scheme has a very strong association with previous IGCSE PE 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 potential educational experiences of students in other schools/colleges.
- Finally, please make sure you attend the associated revision session 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 2025. Many of these questions will be discussed in the live revision show provided by James Simms on Wednesday 7th of May 2025 at 12:00 BST (available to all subscribing schools live and on demand; a shorter version for non-subscribers will be available on YouTube after the live session).

The 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.

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

James Simms



Subject	Physical Education
Course	IGCSE PE 0413
Time allowed	1 hour 45 minutes

Title	IGCSE PE 0413 NME 2025
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Guidance	<ul style="list-style-type: none">• This paper is marked out of 100 marks.• You have 1 hour 45 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.• You may use a calculator.• Good luck!
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Total marks	100
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1. Identify **two** reasons why a coach would carry out fitness tests on a performer.

Marking points (**maximum 2**)

- (1) [AO 1] Identify strengths and weaknesses
- (2) [AO 1] Monitor improvement
- (3) [AO 1] Comparison to others
- (4) [AO 1] Inform the design of a training programme
- (5) [AO 1] Motivation

2. One function of the skeleton is **protection**.

Describe **two** ways the skeleton can protect a performer in a hockey match.

Marking points (**maximum 2**)

- (1) [AO 1] Pelvis protects reproductive organs if the player collides with an opponent
- (2) [AO 1] Cranium protects the brain if the player is hit in the head by a stick
- (3) [AO 1] Ribs protect the lungs if hit in the chest by a high ball
- (4) [AO 1] Sternum protects the heart if hit in the chest by a stick
- (5) [AO 1] Vertebrae protect the spinal cord if a player falls over onto their back

3. Complete the table to show aerobic and anaerobic respiration and their characteristics.

Marking points (**maximum 5**)

- (1) [AO 1] A: Aerobic respiration/Aerobic
- (2) [AO 1] B: Anaerobic respiration/Anaerobic
- (3) [AO 1] C: Glucose + oxygen = carbon dioxide + water + energy/Glucose + oxygen = CO₂ + H₂O + energy
- (4) [AO 1] D: Low to moderate intensity/Low intensity/Moderate intensity
- (5) [AO 1] E: High intensity

4. Describe how a performer repays oxygen debt after anaerobic exercise.

Marking points (**maximum 2**)

(1) [AO 2] Maintain breathing rate after exercise to ensure enough oxygen is consumed

(2) [AO 2] Maintain working heart rate after exercise to pump the oxygen to the required muscles

5. Describe the function of each of the following components of the shoulder joint:

Synovial fluid

Ligament

Cartilage

Marking points (**maximum 3**)

(1) [AO 2] Synovial fluid lubricates the joint

(2) [AO 2] Ligaments hold the bones together/Keep bones in place/Increase joint stability

(3) [AO 2] Cartilage acts as a cushion/Acts as a shock absorber/Prevents friction

6. Describe **one** function for each of the following components of blood:

Red blood cells

Platelets

Plasma

Marking points (**maximum 3**)

(1) [AO 2] Red blood cells carry oxygen/Carry haemoglobin/Carry carbon dioxide

(2) [AO 2] Platelets help blood to clot/Prevent blood loss

(3) [AO 2] Plasma helps to transport nutrients/Suspends cells

7. Suggest features of the alveoli that benefit a triathlete during the process of gas exchange.

Marking points (maximum 4)

- (1) [AO 2] Large surface area of the alveoli
- (2) [AO 2] Capillarisation as a long-term effect of training/Lots of capillaries around the muscle tissue/Lots of capillaries around the muscle alveoli
- (3) [AO 2] Diffusion moves the gases from high to low concentration/Movement of gas down the concentration gradient
- (4) [AO 2] Large blood supply that is continuously in motion
- (5) [AO 2] Deeper breathing causes deeper alveoli to be utilised

8. Skills can be classified using different continua.

Classify a basketball lay-up on the three continua **and** justify each of your answers.

Marking guidance

1 mark for naming each continuum, 3 marks max.

1 mark for the justification of the placement on the continuum, 3 marks max.

Marking points (maximum 6)

- (1) [AO 1] Fine-gross continuum
- (2) [AO 2] Gross: The player is using major muscle groups/Large muscle movements
- (3) [AO 1] Basic-complex continuum
- (4) [AO 2] Complex skill coordinating arms and legs/High levels of concentration required to carry out the complex skill/Complex skill requires lots of decision-making
- (5) [AO 1] Open-closed continuum
- (6) [AO 2] Open: The environment is constantly changing/The players around are unpredictable and an open skill is adaptable to environment

9. Describe an eccentric muscle contraction **and** give an example from athletics.

Marking guidance

Accept other suitable examples.

Marking points (maximum 2)

(1) [AO 1] Muscle lengthens under tension

(2) [AO 2] Controlling body weight when landing after a hurdle/Braking force when landing after jumping steeplechase barrier

10. Which of the following nutrients is crucial for muscle repair and growth?

Marking points (maximum 1)

(1) [AO 1] C - Protein/Protein/C

11. Complete the table for the climber moving from position **A** to position **B**.

Marking points (maximum 4)

(1) [AO 1] A:Triceps

(2) [AO 1] B:Biceps

(3) [AO 1] C: Abduction

(4) [AO 1] D: Deltoid

12. Cian plays in rugby matches every weekend for his local club.
Identify **one** injury that Cian might sustain when playing rugby.

Marking points (maximum 1)

(1) [AO 1] Bruise/Graze/Cut

13. What is the C of RICE?

Marking points (maximum 1)

(1) [AO 1] Compression

14. The photograph shows a performer playing padel which requires a high level of speed and coordination to be successful.

Explain how **two other** named components of fitness may benefit someone playing padel.

Marking guidance

Award up to two marks for correctly naming components of fitness and up to two marks for explanation

Marking points (maximum 4)

(1) [AO 1] Agility

(2) [AO 2] Agility is required in padel to quickly change direction in order to get into the right position to play the ball

(3) [AO 1] Balance

(4) [AO 2] Can maintain balance when following through on a shot/Smashing a ball

(5) [AO 1] Cardiovascular endurance/Stamina

(6) [AO 2] Cardiovascular endurance is required in long games to delay fatigue and a drop in performance

(7) [AO 1] Muscular endurance

(8) [AO 2] Muscular endurance is required for repeated hitting actions with the correct technique/Continuous running and moving in order to reach the ball

(9) [AO 1] Power

(10) [AO 2] Power is needed to hit the ball hard so the opponent cannot reach it

(11) [AO 1] Reaction time

(12) [AO 2] Reaction time is needed to quickly adjust the body in order to hit the ball with the correct technique/Respond to a ball hit hard and fast by an opponent

(13) [AO 1] Strength

(14) [AO 2] Strength is required to hit the ball hard so the opponent cannot return it

15. Identify one physiological **and** one psychological reason for warming up.

Marking guidance

Students must have the reasons the correct way around to be awarded the mark.

Marking points (maximum 2)

(1) [AO 1] Physiological: Increase muscle elasticity/Increase muscle pliability/Increase muscle temperature

(2) [AO 1] Psychological: Increased focus/Increased concentration

16. Mental rehearsal is a key relaxation technique used by many elite performers. Identify **one other** relaxation technique and state **two** benefits to using this technique.

Marking guidance

Award one mark for identifying a relaxation technique and award up to two marks for stating different benefits of the relaxation technique.

Marking points (maximum 3)

(1) [AO 1] Visualisation/Deep breathing

(2) [AO 1] Reduces heart rate

(3) [AO 1] Increased concentration

(4) [AO 1] Controlled breathing

(5) [AO 1] Improved confidence

17. The characteristics of sport development are often shown in a pyramid. Identify the **four** levels of the sports development pyramid.

Marking points (maximum 4)

(1) [AO 1] A: Elite

(2) [AO 1] B: Performance

(3) [AO 1] C: Participation

(4) [AO 1] D: Foundation

18. The image shows a performer completing the upward phase of a biceps curl. Identify the class of lever acting at the elbow.

Marking points (maximum 1)

(1) [AO 1] Third-class lever/3rd class lever/Third

19. Explain how **gravity** affects the following performances:

A track cyclist

A golf ball being lifted

Marking points (maximum 2)

(1) [AO 2] Keeps the cyclist and their bicycle in contact with the ground

(2) [AO 2] Pulls the ball back down towards the ground

20. Identify the different structures of the blood vessels **and** describe how these structures help each blood vessel with its primary function.

Arteries

Capillaries

Marking guidance

Award up to two marks for identifying a structure, and award up to two marks for linking the structure to the function.

Marking points (maximum 4)

- (1) [AO 1] Arteries have thick, smooth muscular walls/Arteries have smaller lumen than veins
- (2) [AO 2] Thick walls to cope with the high pressure when transporting oxygenated blood
- (3) [AO 1] Arteries have elastic walls
- (4) [AO 2] Elastic walls allow arteries to vasoconstrict and vasodilate to distribute blood to areas of most need
- (5) [AO 1] Capillaries have one-cell thick walls
- (6) [AO 2] Thin walls allow efficient gaseous exchange/Thin walls allow oxygen and carbon dioxide to easily pass through via diffusion
- (7) [AO 2] Capillaries are numerous and surround the tissues
- (8) [AO 2] Numerous capillaries allow for efficient gaseous exchange at the tissues

21. Explain how a performer's stage of learning affects the type of feedback used by a coach.

Marking points (maximum 2)

- (1) [AO 2] Cognitive stage of learning requires extrinsic feedback, for example coach's guidance or coaching points
- (2) [AO 2] Performers in the autonomous stage can rely on intrinsic feedback and kinaesthetic awareness/Coach might ask how the skill felt with autonomous performers
- (3) [AO 2] Associative stage of learning is a combination of both intrinsic and extrinsic, for example a coach may ask how the skill felt, whilst giving them specific coaching points.

22. Describe **two** different ways television and broadcasting can **negatively** affect a sport.

Marking points (**maximum 2**)

- (1) [AO 2] Change of timings to suit media companies and TV schedules
- (2) [AO 2] Loss of tradition in the sport to appeal to TV audiences, for example The Hundred in cricket
- (3) [AO 2] Negative behaviours are highlighted more frequently impacting grassroots players, for example gamesmanship and deviance

23. Describe a named test that a coach would use to assess a player's coordination.

Marking guidance

Award one mark for the name of the test, and three marks for the description.

Marking points (**maximum 4**)

- (1) [AO 1] Anderson wall-toss coordination test
- (2) [AO 2] Stand 2m from a plain wall
- (3) [AO 2] Tennis ball is thrown underarm
- (4) [AO 2] Ball is thrown with right hand and caught in the left hand, repeated with left hand throw to right hand catch
- (5) [AO 2] Repeated as many times as possible in 30 seconds
- (6) [AO 2] Count the number of catches/Record the score/Compare to normative data

24. Describe, using **two** examples, how taking part in regular physical activity can improve a person's mental health and well-being.

Marking points **(maximum 2)**

- (1) [AO 1] Physical activity releases chemicals in the brain making a performer feel good/Release of serotonin in the brain, the feel-good drug/Endorphins are released during sport giving a feel-good factor
- (2) [AO 1] Overcoming difficult skills can lead to improved self-esteem/Overcoming challenges increases confidence
- (3) [AO 1] Sport can be cathartic helping to control emotions
- (4) [AO 1] Improves resilience by learning to persevere during skill learning
- (5) [AO 1] Able to cope with stress due to competitive nature of sport

25. Identify the muscles A, B and C.

Marking guidance

Do not accept individual names for the quadriceps.

Marking points **(maximum 3)**

- (1) [AO 1] A: Pectoralis major/Pectorals
- (2) [AO 1] B: Abdominals
- (3) [AO 1] C: Quadriceps

26. Identify **one named feature of fast-twitch muscle fibres **and** explain how it would benefit the following performers:**

Marathon runner

100m sprinter

High jumper

Marking guidance

Award one mark for identifying a feature of fast-twitch muscle fibres and award one mark for each explanation, up to a total of three marks.

Marking points (maximum 4)

(1) [AO 1] High force production

(2) [AO 2] 100m sprinter: Required for an explosive push out the blocks/Powerful running action

(3) [AO 2] High jumper: Powerful run-up/Strong take-off to create height

(4) [AO 2] Marathon runner: Sprint finish at the end of the marathon/Explosive speed required to get a good start at the beginning of the race/Allows a powerful burst of speed to overtake

(5) [AO 1] Low fatigue resistance

(6) [AO 2] 100m sprinter: Short event and doesn't require fatigue resistance

(7) [AO 2] High jumper: Needed due to the quick, explosive nature of the event

(8) [AO 2] Marathon runner: Used in combination with slow twitch fibres types to delay fatigue over the longer distance

(9) [AO 1] Predominantly anaerobic

(10) [AO 2] 100m sprinter: Event takes place without the need for oxygen due to it's short nature

(11) [AO 2] High jumper: Short event, explosive contractions needed for less than 10 seconds

(12) [AO 2] Marathon runner: Only used in a short part of the race for a sudden burst of speed, slow twitch fibres will be predominant throughout

27. Suggest how **two** named principles of training can be applied to an interval training programme.

Marking guidance

One mark for each principle of training named (two marks max).

One mark for each appropriate example (two marks max).

Marking points (maximum 4)

- (1) [AO 1] Specificity
- (2) [AO 2] Intervals can be long to develop endurance or shorter to develop speed, depending on the sport
- (3) [AO 1] Progression
- (4) [AO 2] Increase the distance of interval covered/Increase the number of repetitions
- (5) [AO 1] Overload
- (6) [AO 2] Use of the FITT principle/Increase frequency of sessions/Increase intensity of sessions
- (7) [AO 1] Reversibility
- (8) [AO 2] Stop doing the interval training programme/Overtraining can lead to injury
- (9) [AO 1] Tedium
- (10) [AO 2] Regularly change the intervals to prevent the performers from becoming bored

28. Describe **three features of Fartlek training that are different to continuous training.**

Marking guidance

Do not accept any response that could be applied to continuous training, such as changes of terrain.

Marking points (maximum 3)

- (1) [AO 1] Change of pace/Running, walking and sprinting
- (2) [AO 1] Improve speed
- (3) [AO 1] Improves muscular endurance
- (4) [AO 1] Less monotonous than continuous training

29. Suggest two advantages **and one disadvantage of plyometric training.**

Marking guidance

Award two marks for advantages and award one mark for a disadvantage.

Marking points (maximum 3)

- (1) [AO 2] Advantage is that little equipment is required
- (2) [AO 2] Develops power
- (3) [AO 2] Develops speed
- (4) [AO 2] Disadvantage is that is not suitable for all/Only for training athletes/Exclusive to experienced performers
- (5) [AO 2] Disadvantage is that it is high impact and can be contraindicating
- (6) [AO 2] Technicality of the skills can be a disadvantage

30. An increase in heart rate is a short-term effect of exercise.
State **two other** short-term effects of exercise.

Marking guidance

Do not accept "increase in heart rate". Accept any other appropriate responses.

Marking points (maximum 2)

- (1) [AO 1] Breathing rate increases
- (2) [AO 1] Breathing depth increases
- (3) [AO 1] Fatigue/Feeling tired
- (4) [AO 2] Nausea/Light-headed
- (5) [AO 2] Red skin/Heat control/Sweating

31. Suggest **two** reasons for the difference in heart rate between performer A and performer B.

Marking guidance

Accept the converse of each marking point for A.

Marking points (maximum 2)

- (1) [AO 2] B has heart size may be smaller/Have thinner walls
- (2) [AO 2] B has weaker heart contractions
- (3) [AO 2] B has a higher resting heart rate
- (4) [AO 2] B has a lower stroke volume/Lower cardiac output/Lower volume of blood pumped in a single beat
- (5) [AO 2] B has a build-up of lactic acid is greater, so the heart rate stays elevated to pump more oxygenated blood to muscles
- (6) [AO 2] B's heart rate remains higher for longer to remove carbon dioxide
- (7) [AO 2] Working at different intensities

32. Explain, using different examples from a named team game, how each of the following levels of arousal may affect performance:

Underarousal

Optimal arousal

Overarousal

Marking guidance

Accept any other appropriate examples in one appropriately named team sport. Examples, from the same sport, must be different.

Marking points (maximum 3)

(1) [AO 2] Underarousal may lead a rugby player not being psyched up and not putting the required energy into a tackle/Basketballer may not be focused on their shot and miss a free throw/Footballer may not make the effort to run onto a loose ball

(2) [AO 2] Optimal arousal can lead to fast reactions when intercepting a pass in netball/Handball players having high awareness of where teammates are positioned to make a pass/Softball player will make the correct decision when fielding the ball to get an opponent out

(3) [AO 2] Overarousal leads to a flag football player being overly physical as they are too excited/Basketball player arguing with the officials due to heightened emotions/Hockey defender sprints out too early on a short corner as they are anxious to stop the shot

33. Describe, using a named physical activity, an example of sportsmanship and gamesmanship.

Marking points (maximum 2)

(1) [AO 2] Sportsmanship is calling a ball out of play in hockey when the umpire hasn't seen it/Sportsmanship is shaking hands with the opposition after the match/Sportsmanship is helping to pick up an opponent on the floor in football

(2) [AO 2] Gamesmanship is faking an injury to delay play/Gamesmanship is sledging in cricket/Gamesmanship is distracting the player when they are taking a shot

34. The image shows a performer in the take-off phase of the long jump. When sketching the lever system at the ankle, which component will be in the middle?

Marking points **(maximum 1)**

(1) [AO 1] Load/Resistance

35. Explain how a named force, other than gravity, acts on the performer when moving from position A to position B.

Marking guidance

Award one mark for the force, and one mark for the linked explanation.

Marking points **(maximum 2)**

(1) [AO 1] Muscular force

(2) [AO 2] Muscular force is applied downwards through to the group prior to the jump

(3) [AO 1] Ground reaction force

(4) [AO 2] Feet push downwards, the ground pushes the performer upwards so they leave the ground

(5) [AO 1] Air resistance

(6) [AO 2] Slows down the upward movement of the performer

36. Describe **two** lifestyle choices that can impact physical health.

Marking points **(maximum 2)**

(1) [AO 1] Sedentary lifestyle decreases fitness levels/Activity levels impact fitness levels

(2) [AO 1] Diet can affect weight management/Poor diet can lead to obesity/Diet high in fat can lead to CHD

(3) [AO 1] Smoking can lead to respiratory illnesses/Cancer

37. Gianni is a 100m sprinter who is contemplating using a performance-enhancing drug.

State **one** performance-enhancing drug that might benefit Gianni's performance and justify your choice.

Marking guidance

One mark for naming a PED, two marks for justifying the PED.

Do not accept HGH, as not on the specification.

Marking points (maximum 3)

(1) [AO 1] Anabolic steroid

(2) [AO 2] Anabolic steroids increase muscle mass

(3) [AO 2] Anabolic steroids build power when pushing out the blocks/Strong and powerful running technique

(4) [AO 2] Stimulants

(5) [AO 2] Stimulants increase alertness

(6) [AO 2] Increased alertness can improve reaction time to the starter gun