The EverLearner

National Mock Exams 2024

POWERED BY ExamSimulator

Model Answers
Edexcel GCSE PE - Paper 1

This document contains:

- Model answers for the National Mock Exam questions
- Model examples of extended writing

How should schools use these papers?

These model answers are written to support PE teachers and students review the National Mock Exam 2024 and to prepare for the live revision session delivered by James in May 2024. We strongly recommend that students learn these model answers in preparation for the summer exams 2024. The questions posed and the answers provided are based on significant analysis and model BOTH content and skills.

Please, use these model answers in combination with the National Mock Exam paper, mark scheme and the revision session (Wednesday, 8th of May 2024, 16:30-18:00), available via the Edexcel GCSE Revision page:

https://pages.theeverlearner.com/2024-edexcel-gcse-pe-revision

All questions are taken from ExamSimulator. 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	Edexcel GCSE PE 9-1
Time allowed	1 hour 30 minutes

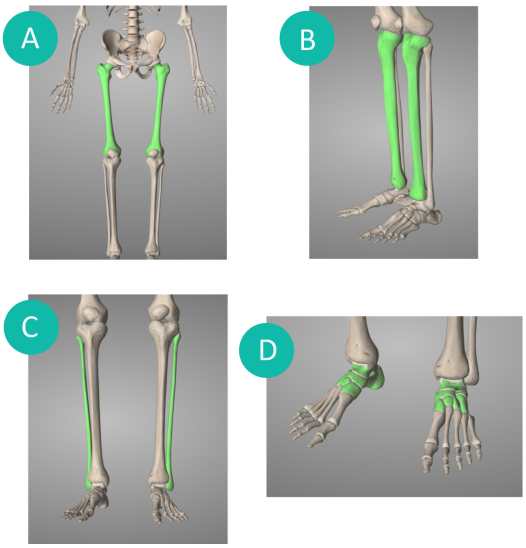
First name	
Last name	
Class	
Teacher	

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

Guidance	• This paper is marked out of 80 marks. • You have 90 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 9-mark question. • Good luck.

Total marks	80

1. Which of the following images shows the fibula as the highlighted bones?



C - Fibula

Marks: [1]

2. Which of the following is the correct function of white blood cells?

A To suspend other cells in the blood

B To fight infection

C To transport oxygen to the muscles

D To clot the blood when exposed to the air

B - To fight infection

Marks: [1]

3. Which of the following is a by-product of anaerobic respiration?

A Carbon dioxide

B Water

C Glucose

D Lactic acid

D - Lactic acid

Marks: [1]

4. Look at the image. Along which plane of movement is the cartwheel performed?

Options:

A Sagittal plane

B Frontal plane

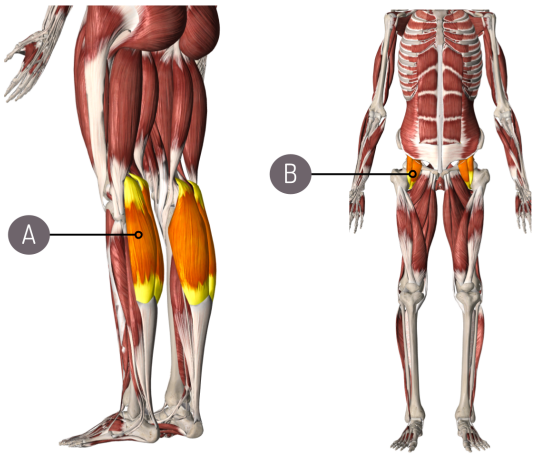
C Transverse plane

D Vertical plane

B - Frontal plane

Marks: [1]

5. Look at the images closely.
Identify the voluntary muscles labelled A and B.

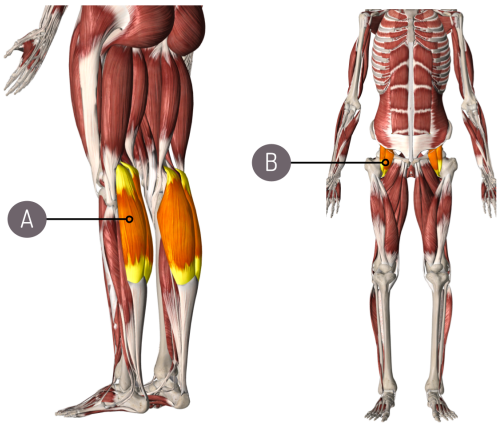


Muscle A: Gastrocnemius

Muscle B: Hip flexors

Marks: [2]

6. Give a sporting example in which the muscles labelled A and B are the the **agonist** muscle

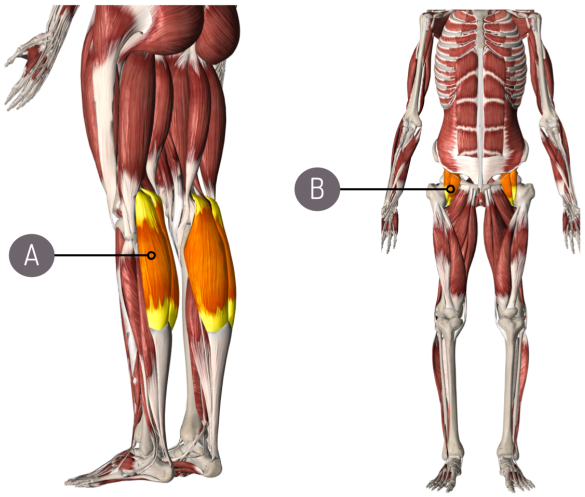


Muscle A agonist: Muscle A is the agonist in a calf raise

Muscle B agonist: Muscle B is the agonist in bringing the leg of a long jumper forwards when landing.

Marks: [2]

7. State **two** long-term training effects on the muscles identified in the image.



Tendons and ligaments become stronger and muscular hypertrophy occurs.

Marks: [2]

8. Look closely at the statement about the movement at a joint. Complete the statement by writing the words that could replace the letters for A, B and C.

The quadriceps [A] the knee joint. The knee joint is classified as a [B] joint. For example, in football, a player will use this movement when [C].

A Extends

B Hinge

C Striking the ball

Marks: [3]

9. State the movement occurring at the knee joint when the knee bends in preparation for kicking a football.

Flexion

Marks: [1]

10. George is a long-distance road cyclist.
Explain why the arteries **and** veins are important when completing a road race.

Arteries

The arteries carry blood away from the heart under pressure and the oxygenated blood is then taken to the working muscles to provide oxygen for aerobic respiration during the cycling race. This means that the cyclist will be able to delay fatigue for longer and also delay anaerobic respiration.

Veins

The veins carry blood back towards the heart under low pressure and the deoxygenated blood is returned to the right side of the heart to recycle blood.

Marks: [6]

11. This table shows values for tidal volumes of tennis players at rest and during performance.
Identify the performers with the least **and** greatest changes in tidal volume **and** calculate these changes.

Tennis player	Tidal volume at rest (litres per minute)	Tidal volume during a long rally (litres per minute)
Player A	0.4	2.8
Player B	0.6	3.4
Player C	0.5	3.1
Player D	0.4	2.4

Performer with least change in tidal volume: Tennis player D

Calculated least change in tidal volume: 2 litres

Performer with greatest change in tidal volume: Tennis player B

Calculated greatest change in tidal volume: 2.8 litres

Marks: [4]

12. The image shows a shot-put action.
Analyse the movement at the **elbow** of the throwing arm when the athlete moves from position 1 to position 2.

Position 1 Position 2

Antagonistic pair Biceps and triceps

Joint movement Extension

Agonist muscle Triceps

Marks: [3]

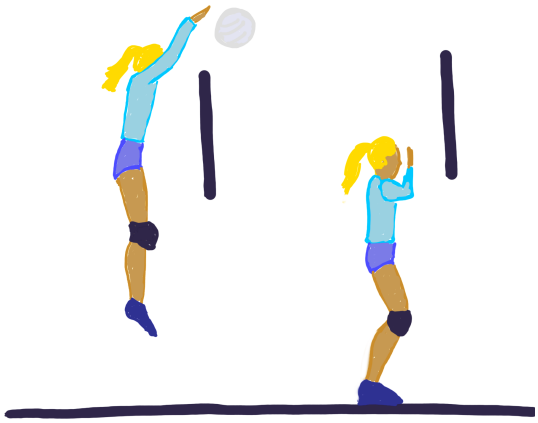
13. Identify the lever system operating at the **elbow** of the throwing arm during the shot-put.

Position 1 Position 2

Lever system The first-class lever system is operating at the elbow of the throwing arm.

Marks: [1]

14. Look closely at the image.
Analyse the movement at the **ankle** when the volleyball player moves from position 1 to 2.



Position 1 Position 2

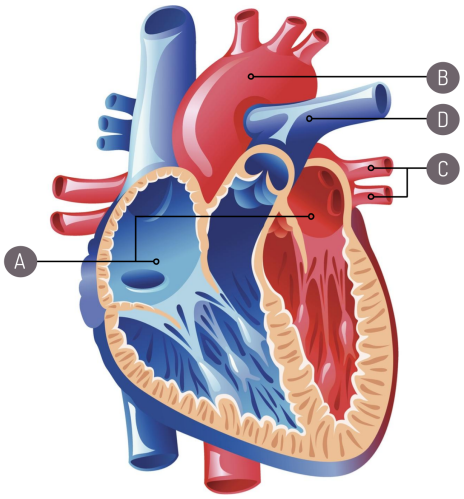
Type of joint Hinge joint

Joint movement Dorsiflexion

Agonist muscle Tibialis anterior

Marks: [3]

15. Look at the image closely.
Identify the components of the heart labelled A, B and C.



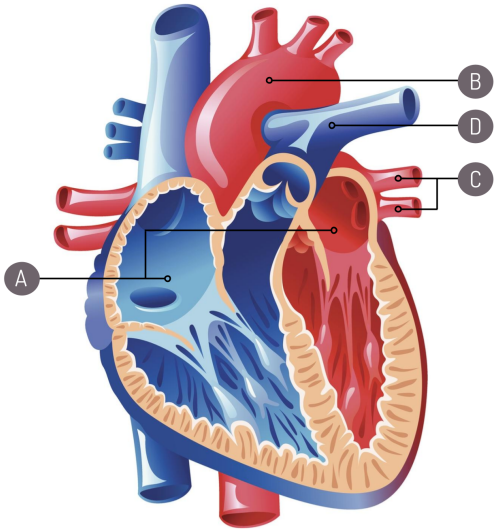
A Atria

B Aorta

C Pulmonary vein

Marks: [3]

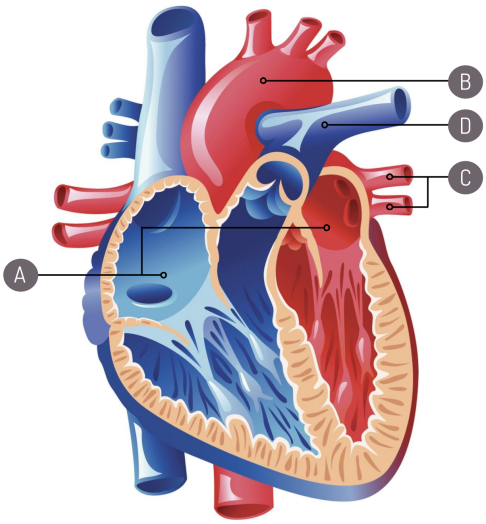
16. Look at the image closely.
Which of the blood vessels carries deoxygenated blood to the lungs?



D - pulmonary artery

Marks: [1]

17. Explain why the blood vessel identified in the previous question carries deoxygenated blood to the lungs.



The pulmonary artery carries blood circulated from the right side of the heart. The blood is deoxygenated because it is returning from the working muscles after respiration to be reoxygenated.

Marks: [2]

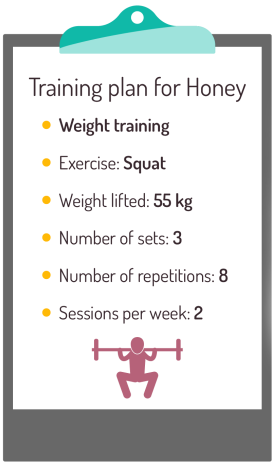
18. Identify the **main** muscle fibre type used by a marathon runner. Explain how it impacts performance.

Main muscle fibre type: The main muscle fibre type used is type 1 (slow twitch)

Impact on performance: They are highly resistant to fatigue and this enables them to work aerobically for a long duration.

Marks: [3]

19. Look at the training data for Honey.
Which of the following principles of training is correct for the number of sessions completec



A Frequency

B Intensity

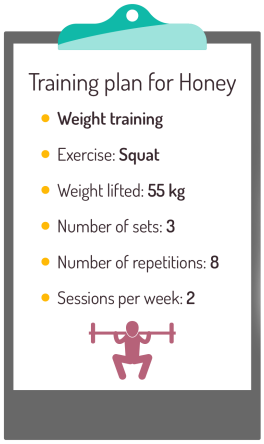
C Time

D Type

A - frequency

Marks: [1]

20. Honey decides to accompany the weight training with continuous training. Which of the following principles of training has Honey used?



A Frequency

B Intensity

C Time

D Type

D - Type

Marks: [1]

21. Which training method typically involves bounding and leaping and is an excellent way of improving power?

A Circuit training

B Plyometrics training

C Fartlek training

D Interval training

B - Plyometrics training

Marks: [1]

22. Which of the following will be the **most likely** long-term benefit for Honey if she completes the weight-training sessions for six-weeks?

A Increased strength of ligaments

B Increased capillarisation

C Increased number of red blood cells

D Increased number of alveoli

A - Increased strength of ligaments

Marks: [1]

23. Weller is an 18-year-old netball player.
Look at the data showing her heart rate range during each quarter of a netball game.
Using your knowledge of training zones, justify which quarter of the game was most demanding for Weller.

Heart-rate ranges during a netball game

Quarter	Heart-rate
1	143 - 148 bpm
2	151 - 152 bpm
3	165 - 174 bpm
4	156 - 160 bpm

Weller was working in the anaerobic training zone during the third quarter. Her maximum heart rate (220 - age) is 220 - 18 = 202 beats per minute (bpm). 80% of 202 is 161 bpm, which is the anaerobic training threshold, and 90% of 202 is 182 bpm, which is the upper anaerobic training threshold. Therefore, the third quarter was the most demanding part of the game for Weller.

Marks: **[3]**

24. Weller is an 18-year-old netball player and she is developing a training programme to develop her cardiovascular fitness.
State two factors to consider when planning her training.

Factor 1: The fitness requirements for her position in netball will need to be considered, as well as her current fitness level.

Factor 2: Weller or her coach could also consider the facilities available to her for training

Marks: **[2]**

25. Name **one** fitness test Weller could use to assess her current levels of cardiovascular fitness.
Describe **one** advantage of this test.

Name of fitness test: 12-minute Cooper run to asses her cardiovascular fitness

Advantage: The test is very easy to set up and does not require specialist equipment to be completed

Marks: **[2]**

26. Chester is a para athlete and trains three times per week, including one circuit training session for **cardiovascular fitness**.
State **three** ways in which Chester can use circuit training to develop cardiovascular fitness.

Chester

1: Chester needs to ensure that he works at 60-80% of his maximum heart rate, which means he will be working in his aerobic training zone

2: He also needs to vary the muscle groups being worked in each exercise, as the focus is on cardiovascular fitness, not muscular endurance.

3: When designing the circuit, he needs to work out an appropriate work-to-rest ratio to develop his cardiovascular system. He will complete a number of different exercise stations with a minimal rest period between each station.

Marks: **[3]**

27. Before wheelchair-tennis training, Chester completes a warm-up to prepare his body for exercise.
State **three** phases of his warm-up.

Chester

Phase 1: His warm-up would start with movements to increase his heart rate.

Phase 2: This would be followed by mobilisation exercises such as dynamic stretching.

Phase 3: He would then move onto skill-related exercises such as hitting the ball

Marks: **[3]**

28. Chester completes a hand-grip dynamometer fitness test for strength. Using the table below, state Chester's rating for the test if he scores **41**.

Excellent	Good	Average	Below average
>56	51-56	45-50	38-44

Below average

Marks: [1]

29. Describe **two** examples where strength is used in wheelchair tennis.

Chester

Example 1: Strength is used in wheelchair tennis to hit the ball with force when returning a shot.

Example 2: It could also be used when serving to try and hit an ace, or to push the wheelchair with more force when moving across the court.

Marks: [2]

30. Coordination is important in wheelchair tennis.
Define coordination and give **one** example of using coordination in tennis.

Chester

Definition: Coordination is the ability to use two or more body parts smoothly and effectively.

Tennis example: Coordination is needed in tennis to move backwards and reach up when returning the lob.

Marks: [2]

31. Using examples, explain how Chester can apply specificity **and** progressive overload to a tennis-training programme.

Chester

Progressive overload example: Chester could apply progressive overload by gradually increasing the number of sessions completed each week.

Progressive overload explanation: Chester will be able to improve fitness levels without becoming injured.

Specificity example: Specificity can be applied by using training methods associated with fitness components relevant to tennis.

Specificity explanation: This will ensure Chester is focusing on training methods that will improve his performance levels in a match.

Marks: [4]

32. The image shows a basketball player.
Identify **one** type of injury that could occur at the basketball player's ankle after landing from a jump.

Fracture

Marks: [1]

33. A basketball player might be treated using the RICE method following an injury.
State what C stands for within RICE.

Compression

Marks: [1]

34. Other than warming up or cooling down, explain **one** other injury-prevention method for a basketball game.

Injury prevention method One injury prevention method that can be used is checking the equipment before the match. For example checking the hoops are secure and don't collapse when a player performs a dunk shot. This will reduce the risk of an injury occurring.

Marks: **[2]**

35. Identify **one** way to assess an individual's personal readiness for training.

PARQ

Marks: **[1]**

36. Shelley is an elite sprinter. She has been feeling disappointed with racing much slower than her personal best (PB).
Shelley has been considering performance enhancement.
Evaluate the use of stimulants, anabolic steroids and narcotic analgesics for Shelley's sprint performance.

Stimulants can be used to increase a performer's alertness. They are useful in a sprint race to assist in reacting quickly at the start. This will be advantageous to Shelley in getting ahead of her opponents in the early stages. However, stimulants can lead to insomnia. This could affect Shelley's pre-race preparations and lead to a decrease in performance levels. Anabolic steroids are used to increase muscle mass and strength. Having good levels of muscle strength will assist Shelley in the drive phase of the race, allowing her to push powerfully out of the blocks. This will increase her chances of running a personal-best time in the race. However, taking anabolic steroids could have serious health risks, such as a stroke. Narcotic analgesics are used to mask pain. Taking these would allow Shelley to continue training and competing whilst injured. This would be beneficial, as it will mean her training programme is not disturbed. However, masking pain may lead to worsening an injury and Shelley would then be unable to compete.

Marks: [9]

END OF PAPER