The EverLearner

Model Answers

Edexcel GCSE PE - Paper 1

(Revision session on Wednesday 4th May 2022, 4.00-5.30pm)

This document contains:

- Model answers for the Practice Questions answered during the 2022 Revision series
- Questions in AEI order
- Where possible, examples of extended writing
- No one-mark or multiple-choice questions

How should schools use these papers?

This paper has been constructed specifically for use in preparation for and during the live revision shows provided by James Simms in May 2022. I encourage students to attempt the questions in advance of the revision shows.

Please, use these model answers in combination with the mark scheme and the revision session, available in the Edexcel GCSE PE Revision page (https://pages.theeverlearner.com/2022-edexcel-gcse-pe-revision).

All questions are taken from ExamSimulator. Please note, there are hundreds of additional questions on ExamSimulator covering the AEI topics. ExamSimulator is a premium resource available via TheEverLearner.com.

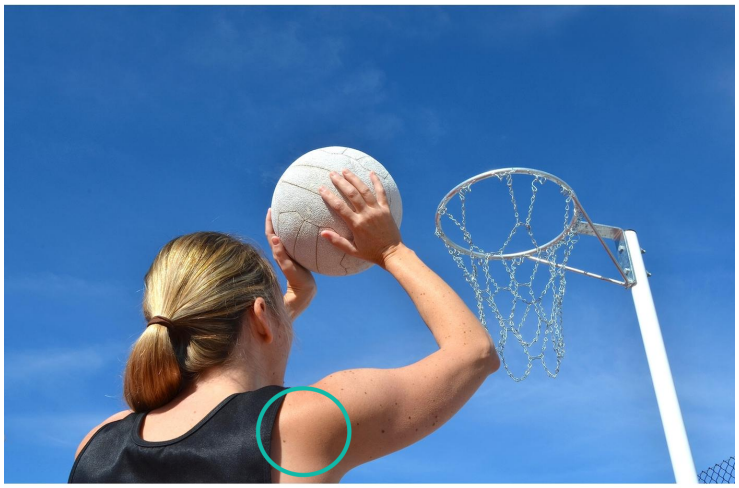
I hope this helps both students and teachers in their exam preparations.

James Simms

1. The atlas and axis joint in the neck is used when taking a breath in swimming. Identify the **type** of joint and the **range of movement** possible at the neck.

It s a pivot joint and it allows rotation such as turning the head from side to side.	No comments provided.
	Marks:[2/2]

2. The shoulder joint is used during shooting in netball.
Identify the **type** of joint and **two** possible ranges of movement at the shoulder.



1 The shoulder is a ball and socket joint. 2 It allows flexion and extension along the sagittal plane and 3 adduction and abduction along the frontal plane.	No comments provided.
	Marks:[3/3]

3. Describe the role of tendons during movement.

Tendons (1) connect muscle to bone and force is applied (2) via the tendon to move the bone and (3) case movement to occur.	No comments provided.
	Marks:[2/2]

4. Describe the role of ligaments during movement.

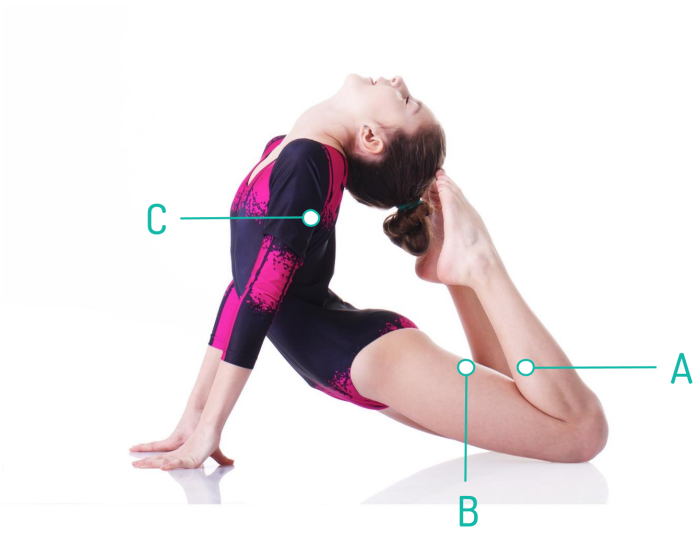
Ligaments (1) connect bone to bone and aid (2) joint stabilisation (3) and prevent dislocation.	No comments provided.
	Marks:[2/2]

5. The table shows muscle classification and characteristics.
Identify A, B, C and D.

Image	Muscle classification	Characteristic (voluntary / involuntary)
	A	Voluntary
	B	Involuntary
	C	D

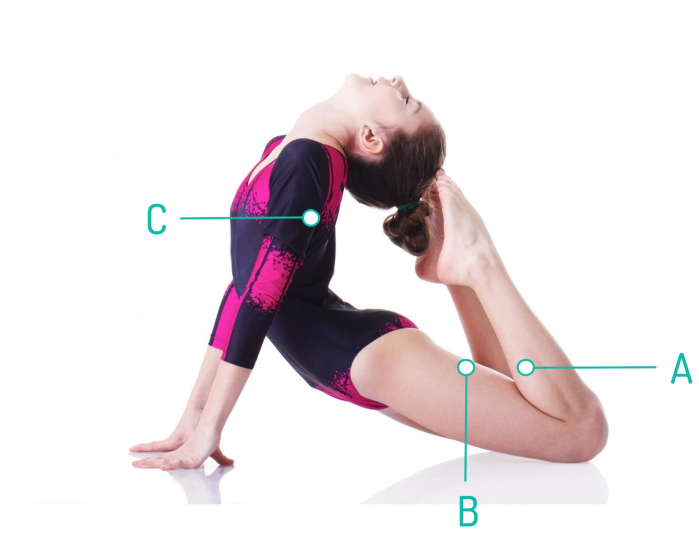
1 A is skeletal. 2 B is smooth. 3 C is cardiac. 4 D is voluntary.	**No comments provided.**
	Marks:[4/4]

6. Name the muscle labelled **A** and identify the role it is playing in this movement.



1 **A is the gastrocnemius** and it causes 2 **plantar flexion at the ankle**.	**No comments provided.**
	Marks:[2/2]

7. Name the muscle labelled **C** and identify the role it is playing in this movement.



1 C is the triceps and causes 2 elbow extension.	No comments provided.
	Marks:[2/2]

8. During the summer season, Gurjosh represents his athletics club in the 3000m. Gurjosh relies on his cardiovascular system to remove carbon dioxide.
Evaluate the importance of other functions of the cardiovascular system to improve his performance.

The CV systems allows for the (1) transport of oxygen (2) to working muscles in the form of oxyhaemoglobin (5). This is so Gurjosh can respire aerobically and maintain his pace (8) throughout the run. This is particularly important for the slower release of energy. However, (9) transport of oxygen cannot directly help with anaerobic respiration for higher intensity moments such as a sprint finish. The CV system includes the role of platelets to (3) clot the blood when required (6). If Gurjosh was to fall and cut his leg, he could continue running. However, clotting is not particularly important to Gurjosh as (10) falling is not likely in his performance. The CV system helps (4) to regulate temperature and maintain it at 37 degrees Celsius. This is very important (11) if Gurjosh is running on a hot day. This happened for marathon runners and race walkers in the Tokyo 2020 Olympics. Racers like Gurjosh can run without feeling ill and will (7) not overheat. Furthermore, their glycolytic enzymes will not denature and can work optimally. In conclusion,

No comments provided.

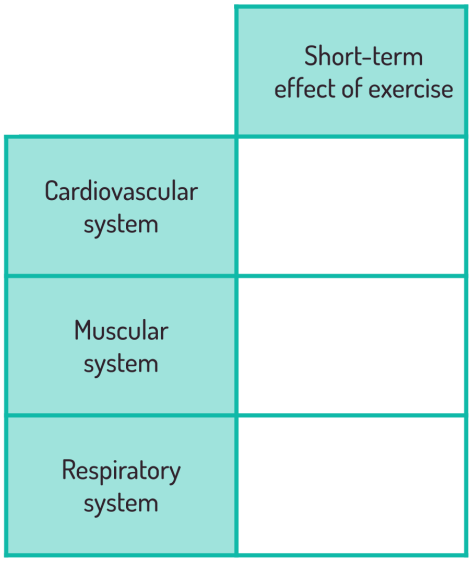
8.	During the summer season, Gurjosh represents his athletics club in the 3000m. Gurjosh relies on his cardiovascular system to remove carbon dioxide. Evaluate the importance of other functions of the cardiovascular system to improve his performance.	
	12 all functions are important but the delivery of oxygen and thermoregulation are critical for Gurjosh.	
		Marks:[9/9]

9. Both the aerobic and anaerobic equations of respiration are shown in the table.
Justify why equation **A** shows aerobic energy release.

System	Energy release
Aerobic respiration	Glucose + Oxygen → Carbon dioxide + Water + Energy
Anaerobic respiration	Glucose → Lactic acid + Energy

A references oxygen and oxygen is a reactant for aerobic respiration. B does not include oxygen because no oxygen is involved in the release of energy anaerobically. For A, the products are carbon dioxide and water and this is the case for aerobic respiration.	No comments provided.
	Marks:[2/2]

10. The table shows three of the body systems.
State **one** short-term effect of exercise on each of these and explain how these would benefit a **rugby player** whilst competing.



2 Increased stroke volume which leads to a 15 greater delivery of oxygen to the working muscles 6. Increased muscle temperature which causes 18 an increased muscle elasticity 13. Increased tidal volume 17 which leads to increased gaseous exchange at the alveoli.	No comments provided.
	Marks:[6/6]

11.	Weight training for a rugby player will help to cause long-term adaptations in the musculoskeletal system. State **two** musculoskeletal adaptations that a rugby player would experience after regular training.

1 **Increased bone density** and and the capacity for 2 **ligaments to resist greater force**.	**No comments provided.**
	Marks:[2/2]

12. As well as a stronger diaphragm, regular endurance training will cause other adaptions to the respiratory system.
State **two other** long-term adaptations.

3 **Increased vital capacity** due to a 4 **greater strength of respiratory muscles such as the diaphragm and intercostal** muscles.	**No comments provided.**
	Marks:[2/2]

13. State the definitions A and B, missing from the table.

Key term	Definition
Health	A state of complete emotional, physical and social well-being, and not merely the absence of disease and infirmity.
Fitness	A
Exercise	B

Fitness is (1) the ability to meet the demands of the environment. Exercise is done as a (2) physical activity to maintain health and fitness but is not competitive sport.	No comments provided.
	Marks:[2/2]

14. The **sit-and-reach test** is used to measure flexibility.
Identify **three** ways in which a participant could invalidate sit-and-reach test results.

Sit and Reach Test

The participant might (1) leave their shoes on. They might not fully (2) extend their knees and they might (5) not hold the stretch for two seconds.	No comments provided.
	Marks:[3/3]

15. Describe the Cooper 12 minute run test for cardiovascular endurance.

1 Run for exactly 12 minutes along a measured course that has 2 cones every 50 metres. 3 Total distance covered is then used to predict VO2max. These results can be 4 compared to normative data.	No comments provided.
	Marks:[3/3]

16. The table shows fitness tests that were completed by a year-11 male student.
Analyse the results that were collected.

Fitness test	Score	Class average (males)
Cooper 12-minute run	1950 metres	2200 metres
One-minute press-up test	22 press-ups	32 press-ups
Sit-and-reach test	11cm	7cm
30m sprint test	4.60 seconds	4.30 seconds
Hand-grip strength test	41kg	48kg

His Cooper run score was 250m less than the class average but his sit and reach test is 4cm above the class average and was his only score above the class average meaning he must be quite flexible. His hand grip strength was 7kg below the class average. Overall 4 out of 5 tests were below average suggesting this person would benefit from a well - structured training programme.

No comments provided.

Marks:[4/4]

17. Compare continuous and fartlek training by providing **three** differences between them.

Continuous is steady state, whereas fartlek involves changes in intensity. Continuous is more aerobic in nature than fartlek. Continuous is typically done on solid terrain like concrete, whereas fartlek can be done cross country or on sand.	No comments provided.
	Marks:[3/3]

18. The table shows one week of **training** from a first-team player at Wiggleton-by-sea FC. Justify the use of this **training method** for the player.

Day of the week	Activity	Length of session
Monday	Cycle online at 60% maximum heart rate	60 minutes
Tuesday	Rest	
Wednesday	Club cycle 25km with no breaks	90 minutes
Thursday	Rest	
Friday	Cycle with a friend at 65% maximum heart rate	2 hours
Saturday	Rest	
Sunday	Local club race	

1 This type of training is interval. It develops 2 anaerobic fitness which is crucial in football. 3 It involves rest periods similar to the recovery in football when the ball goes out of play. It is 4 less tedious than co continuous training.	No comments provided.
	Marks:[3/3]

19. Describe the effect stimulants have upon the body and give an example of a performer who may benefit.

Stimulants like caffeine and amphetamines (1) increase alertness making a performer like a table tennis player have (2) faster reactions.	**No comments provided.**
	Marks:[2/2]

20. The table shows information about a performance-enhancing drug.
Complete the table looking at the use of these in sport.

Performance-enhancing drug (PED)	Positive effect of the PED	Negative effect of the PED	Sport where taking the PED would be advantageous
A	B	Tiredness and nausea	Archer

1 A is beta blockers. 2 B is a reduction in heart rate and a steady hand.	No comments provided.
	Marks:[2/2]

Feedback:

No feedback provided.