The EverLearner

National Mock Exams 2023

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
- Marking for each of the model answers in order to guide teachers and students to credit-worthy elements of the answers

How should schools use these papers?

These model answers are written to support PE teachers and students review the National Mock Exam 2023 and to prepare for the live revision sessions delivered by James in May 2023. We strongly recommend that students learn these model answers in preparation for the summer exams 2023. The questions posed and the answers provided are based on significant analysis of past papers.

Please, use these model answers in combination with the National Mock Exam paper, mark scheme and the revision session (Wednesday, 3rd May 5.00pm-6.30pm), available in the Edexcel GCSE PE Revision page: https://pages.theeverlearner.com/2023-edexcel-gcse-pe-revision..

All questions are taken from ExamSimulator. Please note, there are hundreds of additional questions on ExamSimulator covering all topics and skills. 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

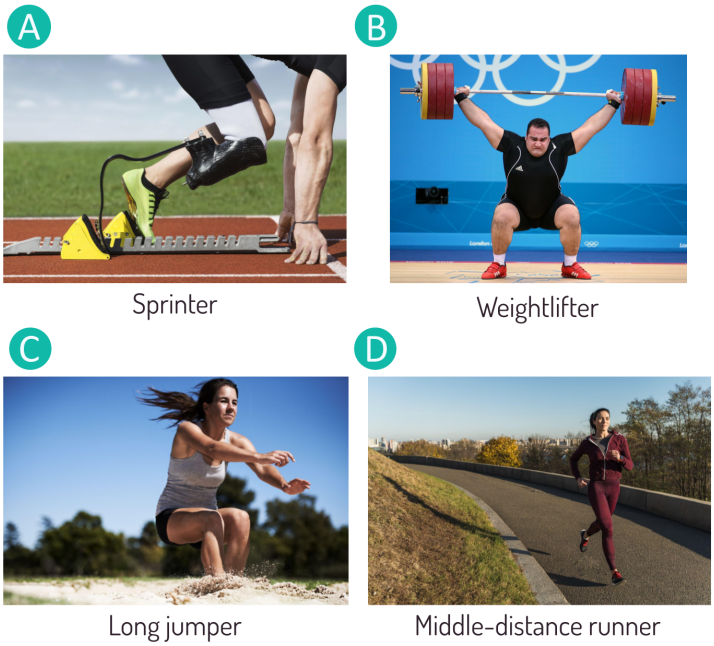
First name	
Last name	
Class	Physical Education GCSE
Teacher	

Title	Edexcel GCSE PE 9-1 Paper 1 National Mock Exam 2023

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.

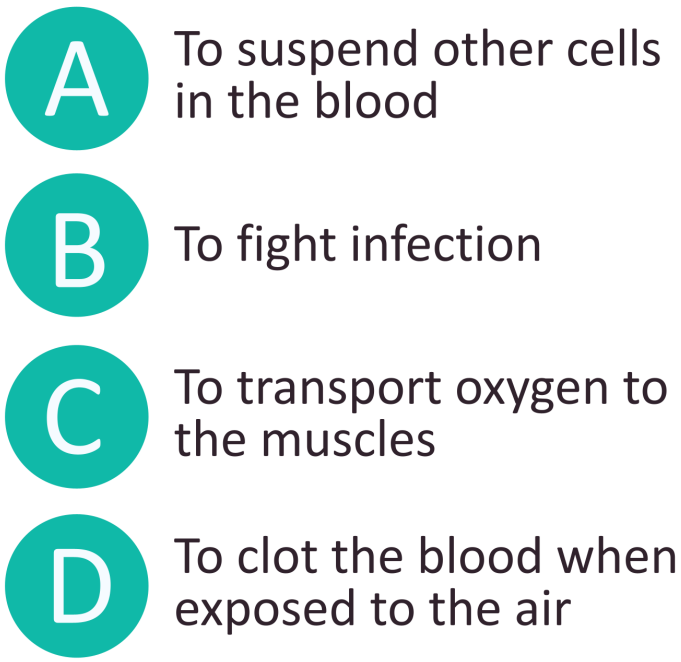
Total marks	80 / 80 (100%)

1. Which of the following sport performers relies the most on aerobic respiration?



Option D - Middle - distance runner.	No comments provided.
	Marks:[1/1]

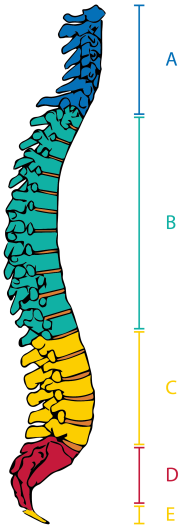
2. Which of the following is a function of platelets?



Option D - Clot the blood when exposed to the air.	No comments provided.
	Marks:[1/1]

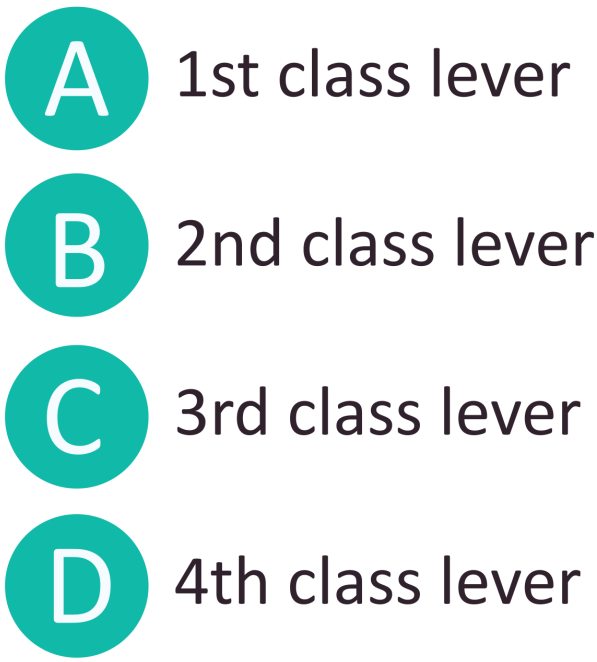
3. Which letter represents the cervical vertebrae in this image?

The vertebral column



1 **Option A.**	**No comments provided.**
	Marks:[1/1]

4. Identify the lever system operating when the elbow extends when throwing a ball.



Option A - First class lever.	No comments provided.
	Marks:[1/1]

5. Explain how arteries are able to supply greater volumes of blood to the muscles during exercise.

Arteries have elastic, muscular walls so they can resist higher pressure blood during exercise. They also have thick muscle walls which allow them to vasoconstrict and redistribute blood heading to the liver, say, to the working muscles.	No comments provided.
	Marks:[4/4]

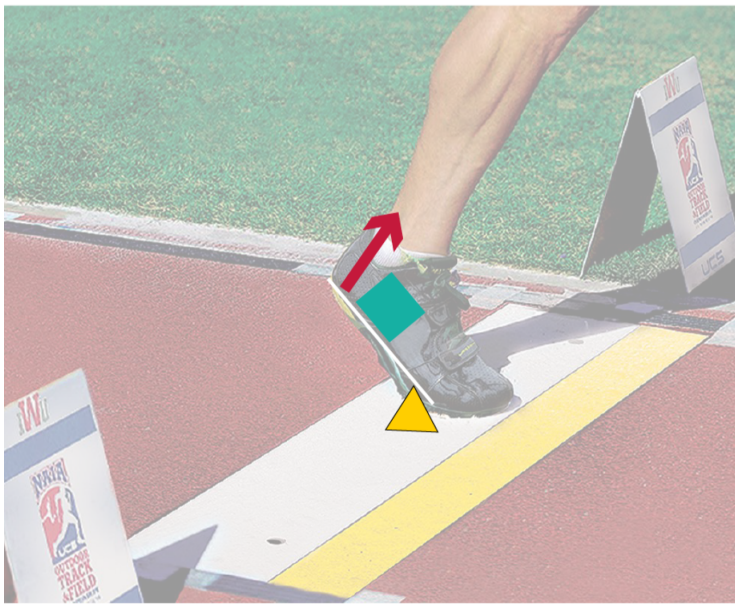
6. The image shows a vertical jump.
Analyse the movement at the knee joint when moving from position A to B.

Position A Position B

Joint type	Movement	Plane
A	B	C

1 A is a hinge joint. 2 B is extension. 3 C is the sagittal plane.	No comments provided.
	Marks:[3/3]

7. The image shows an athlete in a take-off phase for the long jump.
Analyse the lever system at the ankle during the take-off.



The ankle operates (1) a second - class lever system and (2) is plantar flexed. This allows for (3) mechanical advantage and the lever can elevate large loads (the body's weight) from relatively little effort from the gastrocnemius.	No comments provided.
	Marks:[3/3]

8. Look closely at the image.
State which types of joints or examples of joints should replace letters A, B, C and D.

Hip	Knee	C	Ankle	D
A	B	Condyloid	Hinge	Pivot

1 A is a ball - and - socket joint. 2 B is a hinge joint. 3 C is the wrist. 4 D is the neck.	No comments provided.
	Marks:[4/4]

9. Using examples, explain how a long **and** a short bone contribute to the movement of kicking a football.

An example of a long bone is the femur, which allows the kicking leg to experience leverage when kicking. An example of a short bone is a tarsal. Tarsals help to bear the weight of the body on the standing leg when kicking.	No comments provided.
	Marks:[4/4]

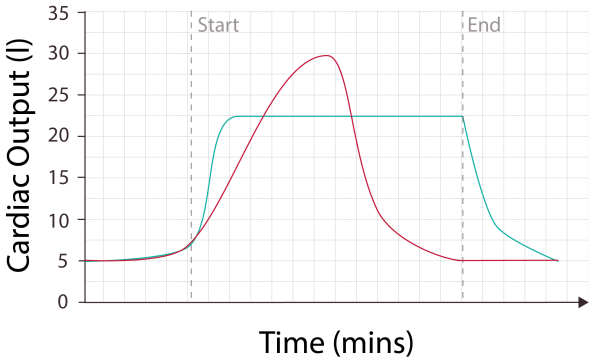
10. Look closely at the image of the rugby conversion.
Analyse the movement **and** muscle action at the ankle at position A **and** position B.

1 The ankle is plantar flexed at A. 2 The gastrocnemius is contracting and the tibialis anterior is relaxing. 3 At position B, the ankle is dorsiflexed. 4 The tibialis anterior is contracting and the gastrocnemius is relaxing.	**No comments provided.**
	Marks:[4/4]

11. Involuntary muscles are not under conscious control.
Identify **two** locations of involuntary muscles.

1 Cardiac muscle within the heart 3 and smooth muscles within the stomach wall.	**No comments provided.**
	Marks:[2/2]

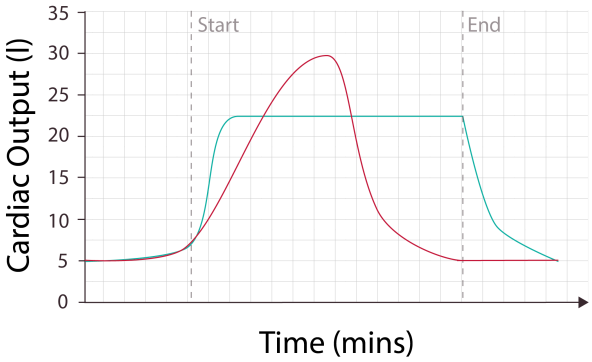
12. Look closely at this image.
Identify **both** the resting cardiac output of the performers **and** the difference in maximal cardiac output between the performers.



The resting cardiac output is 5 litres per minute. The increase up to maximal cardiac output is approximately 7.5 litres per minute.	No comments provided.
	Marks:[2/2]

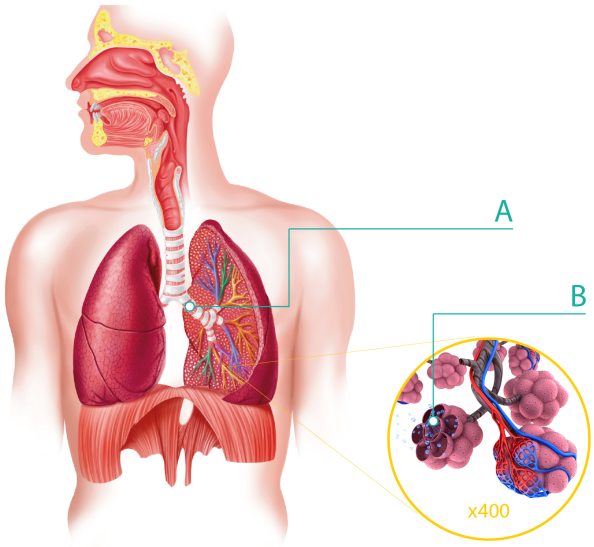
13. Look closely at this image.
State one sporting performer that could be represented by the red curve. Justify your answer.

Graphical Representation of Cardiac Output



The red curve represents a maximal, anaerobic performer such as an Olympic weightlifter because the intensity of the performance is very high but short in duration.	No comments provided.
	Marks:[2/2]

14. Look at the image closely.
Identify the respiratory components A **and** B.



1 A is a bronchus. B is an 2 alveolus.	No comments provided.
	Marks:[2/2]

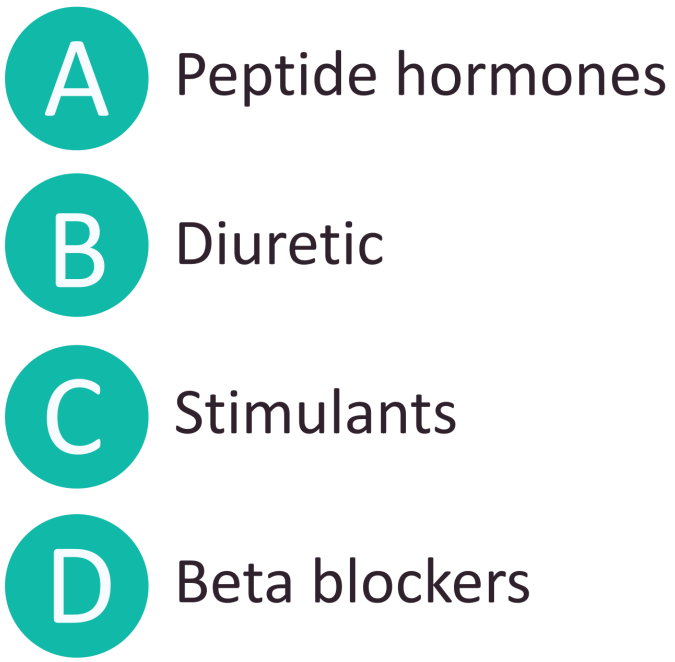
15. State **three** features of the alveoli that enable them for gas exchange.

1 Alveoli have a partially permeable membrane allowing diffusion and the net movement of gases down the concentration gradient. The alveoli are thin and create a 3 short diffusion pathway, making the rate of diffusion high. Alveoli receive a 5 continuous supply of 4 blood via a network of millions of capillaries.	No comments provided.
	Marks:[3/3]

16. Explain **one** benefit of fat as a fuel source for a triathlete.

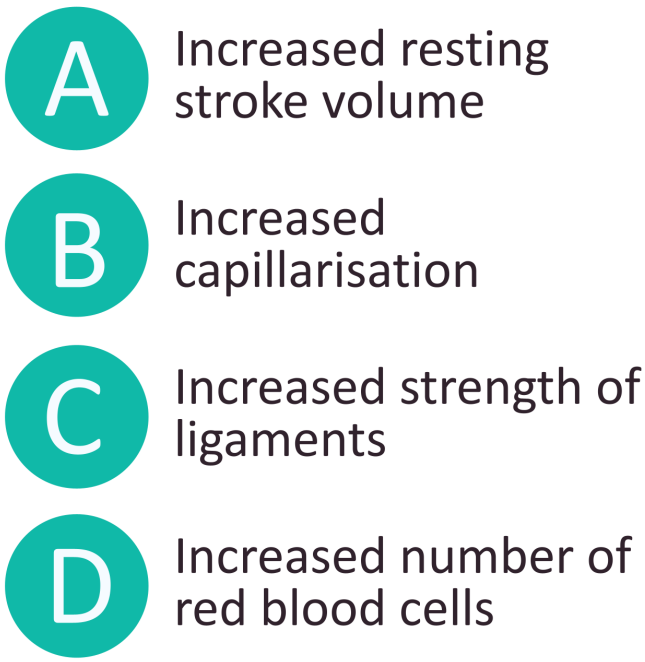
1 Triathlon is an aerobic sport and 2 fat can provide lower - intensity energy throughout the whole length of a triathlon. This helps the triathlete 3 avoid fatigue in the latter parts of races.	No comments provided.
	Marks:[3/3]

17. A boxer is trying to get lighter in order to make weight before a bout.
Which performance-enhancing drug might they be tempted to use?



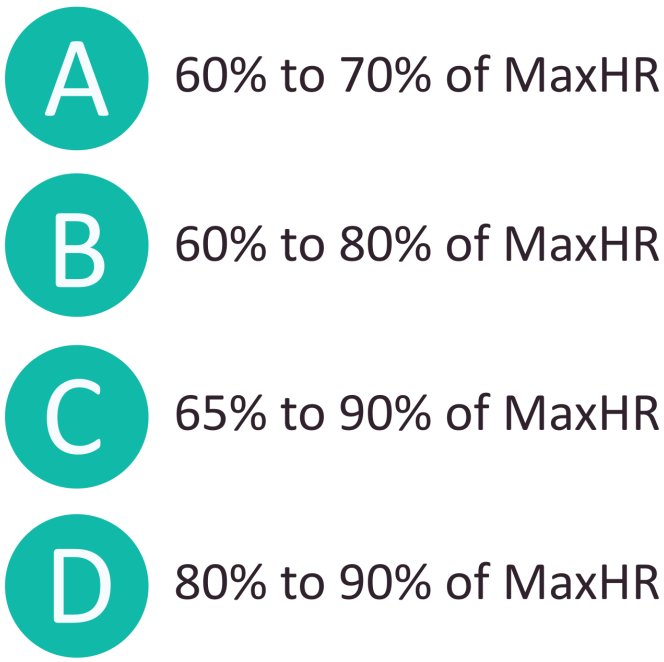
Option B - Diuretic.	No comments provided.
	Marks:[1/1]

18. Which of the following is a long-term training effect on the musculoskeletal system?



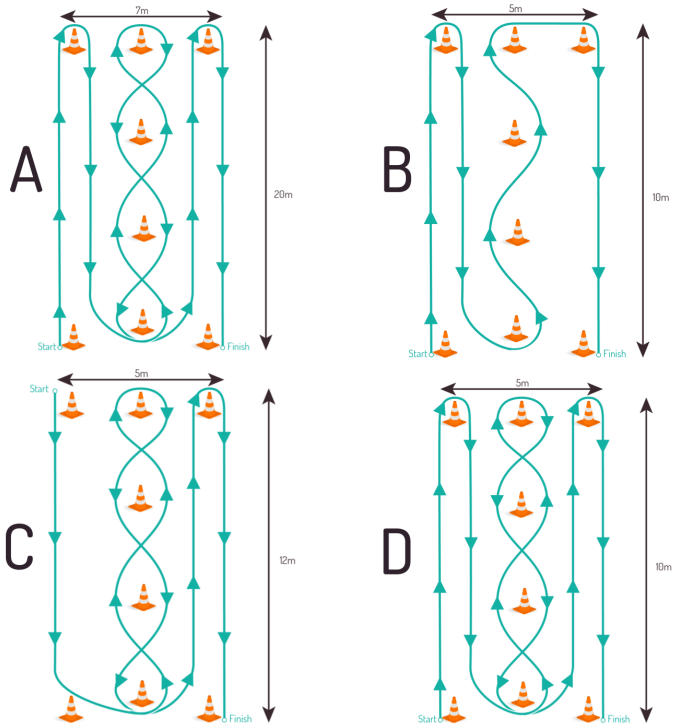
Option C - Increased strength of ligaments.	No comments provided.
	Marks:[1/1]

19. Which of the following is the correct aerobic target training zone?



1 **Option B - 60 - 80% MaxHR.**	**No comments provided.**
	Marks:[1/1]

20. Which of the following images accurately represents the course for the Illinois agility test?



1 Option D.	No comments provided.
	Marks:[1/1]

21. Assess the importance of power **and** coordination for a gymnast during a floor routine.

Power = 1 strength x speed. 2 During a floor routine, good power allows the gymnast to 3 gain more spring and height in tumbles, even including an additional rotation, leading to a 3 higher tariff score from the judges for difficulty. Coordination is the 4 ability to 5 move two or more body parts together. A gymnast needs to perform a compulsory split leap in the floor routine and good coordination allows them to combine the movement of the legs at the hip, the arms and the head to perform the movement well. In turn, this causes the split leap 6 to have aesthetic quality and to score more highly on the technical score.	2 Benefit of the doubt as the detail across the whole sentence is more than sufficient. ③ Excellent equivalent but mark already awarded.
	Marks:[6/6]

22. Define the term health.

A state of complete emotional, physical and social wellbeing, and not merely the absence of disease and infirmity.	No comments provided.
	Marks:[1/1]

23. Give **one** example of a football player demonstrating good reaction time.

Goalkeepers need to react particularly quickly when a shot travelling in one direction is deflected and the players needs to process the information rapidly and move in a different direction to that first chosen.	No comments provided.
	Marks:[1/1]

24. Describe continuous training.

Continuous training involves no rest periods and has a duration greater than 20 minutes. Continuous training is used for the improvement of cardiovascular fitness and is normally done in the form of running, cycling or swimming.	No comments provided.
	Marks:[2/2]

25. Ella has conducted a six-week plyometrics training programme and she completed fitness testing before week 1 and after week 6.
Analyse the data provided in the image in relation to all of the fitness tests.

Fitness test	Before week 1	After week 6
30m sprint	5.12 seconds	4.98 seconds
Vertical jump test	37cm	39cm
Sit and reach test	3cm	3cm

1 Ella's 30m sprint test has improved. This measures speed 2 suggesting Ella has got faster. The vertical jump test score has increased and this suggests improvement in power. However, the 3 site and reach test score has remained stable indicating no improvement or deterioration in flexibility.	No comments provided.
	Marks:[3/3]

26. Justify the importance of a warm-up for plyometric training.

3 Warm ups increase the range of motion at joints such as the hip when jumping. This is partially caused as a result in 1 the increase of temperature in the joint which, in turn, allows the joint to 2 undergo explosive movements without injury. Finally, muscle 4 elasticity and pliability increases allowing these explosive jumping movements to be powered.	No comments provided.
	Marks:[2/2]

27. Explain how a cool-down can make Ella's training sessions more effective.

A cool down helps to gradually rather than suddenly decrease heart rate meaning that higher levels of cardiac output are distributed and lactic acid can continue to be removed. A further benefit is that DOMS is less impacting in the days after training.	No comments provided.
	Marks:[3/3]

28. Using an example, explain how **one** injury prevention method could help Ella complete six weeks of plyometric training without injury.

Ella could wear the relevant protective clothing and footwear such as trainers with ankle support. These shoes can help Ella perform power and agility moves whilst her ankles remain stable and supported in order to prevent injuries such as sprains.	No comments provided.
	Marks:[3/3]

29. State **two** reasons to complete a PAR-Q.

PAR - Qs are to check the medical history of the participant. This allows the trainer to make a GP referral if necessary or to adjust the training for the individual based on their health.	No comments provided.
	Marks:[2/2]

30. The principles of training are used by athletes who want to make their training efffective. Justify the importance of **both** individual differences **and** training thresholds to improve fitness levels.

Individual differences take into account a person's age and training history. This is crucial so that the prescribed training progresses at the correct rate for the specific individual. Thresholds ensure the performer is training at the correct intensity and duration such as working at 85% maxHR for 4 sets of 6 reps with 90s recovery between sets. This threshold will develop anaerobic fitness because of it's high intensity and short duration.	**No comments provided.**
	Marks:[4/4]

31. A rugby player is using the FITT principle to improve the impact of their weight training. Analsye the use of FITT to increase muscular strength and the impact this has when playing rugby.

Frequency is how many times per week the rugby player trains. In order to overload with FITT, the player must move from two sessions per week to three and possibly even four by the end of the programme. The impact could be them be able to play more games more often but, more likely, to recover faster between games. Intensity if the % of 1RM that the player is lifting. To overload their training they may move from 80% of 1RM in week two to 85% of 1RM in week three and so on. This will train the player to be able to apply more forceful tackles or to lift a teammate in the line - out with more force. Time is the number of reps and sets the player performs as well as the recovery time between sets. To overload, the player may shift from 3 sets of 6 reps with 45s recovery to 3 sets of 6 reps with 30s recovery. Whilst this is technically "reducing the time" of training, it is overloading using the time variable. The alternative would be to increase sets from three to four and so on but the impact would be that the player could keep sprinting repeatedly in the periods when the ball remained in play. Type is the range of different lifts that the rugby player uses. They can overload by incorporating new lifts such as rebound squats and deadlifts in addition to basic squats. The impact is that the player remains motivated and excited about training and prevents tedium.	No comments provided.
	Marks:[9/9]

END OF QUESTIONS