The EverLearner

National Mock Exams 2024

POWERED BY ExamSimulator

Model Answers

Cambridge National in Sport Science R180:

Reducing the risk of sports injuries and dealing with common medical conditions

Summer 2024

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 (Tuesday, 7th of May 2024, 15:00-16:30), available via the Cambridge National in Sport Science Revision page:

https://pages.theeverlearner.com/2024-cnat-sport-science-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	CNAT Sport Science 2022: R180 Reducing the risk of sports injuries and dealing with common medical conditions
Time allowed	1 hour 15 minutes

First name	
Last name	
Class	
Teacher	

Title	OCR Cambridge National Sport Science R180 Reducing the risk of sports injuries and dealing with common medical conditions: National Mock Exam Summer 2024

Guidance	This is a full National Mock Exam designed to help support students taking the R180 exam in Summer 2024. The paper has been modelled on the 2022 SAMS. All questions and mark schemes are written with a thorough attention to detail by experienced exam writers. Instructions: • Answer all questions. • The final question of the paper is a synoptic assessment. • Good luck!

Total marks	70

© 2024 The EverLearner

1. Pulse raising is one component of a warm-up.
State **two** others.

Other warm up component: Dynamic stretching

Other warm up component: Skill practice

Marks: **[2]**

2. Describe the physiological impact on a tendon of **not doing** a warm-up.

The tendon will be less pliable.

Marks: **[1]**

3. Look closely at this image. State which **two** of the factors are psychological benefits of a warm-up.

- Increase in heart rate
- Increase in confidence
- Improved concentration
- Increase in the speed of muscle contraction

Factor 1: Increase confidence

Factor 2: Improve focus·

Marks: **[2]**

© 2024 The EverLearner

4. Other than imagery, identify **two** mental strategies that performers can use to reduce the risk of sports injury.

Mental strategy 1: Selective attention

Mental strategy 2: Mental rehearsal

Marks: [2]

5. Look closely at this image. State the **two** missing components of the PRICE model.

P is: Protection

I is: Ice

Marks: [2]

© 2024 The EverLearner

6. Describe **both** tennis elbow **and** golfer's elbow.

Tennis elbow is pain on the outside of the elbow as a result of repetitive elbow flexion.

Golfer's elbow is pain on the inside of the elbow as a result of repetitive elbow extension.

Marks: **[4]**

7. Describe **one** possible cause of a sprained ankle.

Cause of a sprained ankle: Foot becoming stuck in the ground and twisting at the ankle joint.

Marks: **[1]**

8. EIA is one possible cause of asthma.
Define EIA.

E: Exercise

I: Induced

A: Asthma

Marks: **[1]**

© 2024 The EverLearner

9. The L of the SALTAPS model stands for LOOK.
Describe what the first-aider might be looking for.

S	See
A	Ask
L	Look
T	Touch
A	Active
P	Passive
S	Strength

The first-aider will be looking for bleeding, disfigurement and swelling at the site of the injury.

Marks: [3]

© 2024 The EverLearner

10. Describe **two** features of an emergency action plan (EAP) that relate to emergency communications.

Feature 1: An EAP should have details of where an accessible telephone is located.

Feature 2: It should also contain a list of emergency contact numbers.

Marks: **[2]**

11. Identify **one** symptom of sudden cardiac arrest (SCA).

Breathing difficulties

Marks: **[1]**

© 2024 The EverLearner

12. Explain why age is an intrinsic factor that affects the risk of injury in sport.

Age is an intrinsic factor that can affect injury, as children's bones are not fully ossified so will break more easily than an adult's bones. However, older bones are also brittle, so this can also lead to injury for older participants. In order to reduce this risk, adults do not compete against children and children will usually play in age-group categories.

Marks: **[4]**

13. Identify **two** components of a cool-down that might be used by a rugby player.

Component 1: Pulse lowering by jogging lightly across the pitch.

Component 2: Stretching of the arm muscles used to pass the ball and tackle in the match.

Marks: **[2]**

© 2024 The EverLearner

14. Explain why a cool-down has physiological benefits to a rugby player after a match.

The cool-down will help the rugby player in lowering body temperature, which reduces the chances of dehydration. It will also prevent blood pooling from occurring as well as removing waste products such as lactic acid. This will ensure the rugby player does not suffer from DOMS in the days following the match.

Marks: [3]

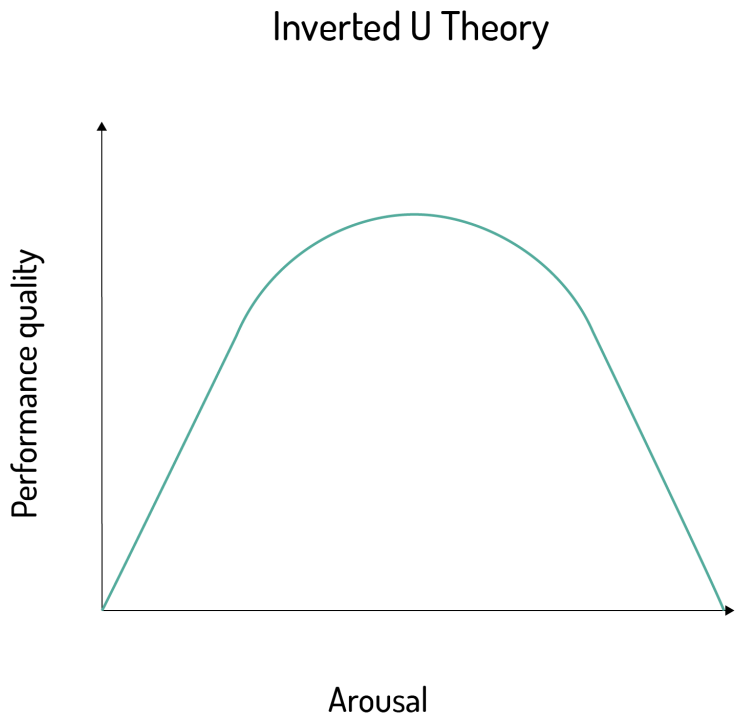
15. Explain why a rugby player may become aggressive during a match.

One reason why a rugby player may become aggressive is due to frustration at their performance. It could also be in retaliation to an aggressive or violent act being committed by an opposing player. The player may also become aggrieved at an official's decision and this perceived unfairness leads to exhibiting aggressive behaviour. Lastly, aggression may occur due to the pressure to win the match. This leads to imposing themselves on the opposition to gain a competitive advantage.

Marks: [4]

© 2024 The EverLearner

16. Using this image as reference, describe the relationship between arousal and performance levels in rugby.



The inverted U theory states that there is an optimum level of arousal for peak performance. As arousal increases, so does performance, up to an optimal point. If arousal continues to increase, performance levels will start to decline due to the performer becoming over-aroused. Due to the intense nature of rugby, the level of optimum arousal will be higher than the level of optimum arousal for a non-contact sport.

Marks: [4]

© 2024 The EverLearner

17. Identify **two** acute injuries that could occur if two players clash heads in rugby.

Acute head injury 1: Concussion

Acute head injury 2: Skull fracture

Marks: [2]

18. Explain why a rugby player might develop shin splints.

Rugby involves high levels of running and weight-bearing, both of which can cause shin splints.

Marks: [2]

© 2024 The EverLearner

19. Explain how **both** hypothermia **and** hyperthermia (heat exhaustion) might occur for participants in sport.

Hypothermia is caused by Hypothermia is caused by body temperature falling below 35 degrees Celsius. Therefore, its likely cause in sport is from prolonged activity in cold conditions or from competing in cold water.

Hyperthermia (heat exhaustion) is caused by Hyperthermia is caused by body temperature exceeding 38 degrees Celsius. A likely cause in sport is wearing too many layers of clothing when competing in hot weather.

Marks: **[4]**

20. Identify **three** possible triggers for an epileptic event.

Trigger 1: Anxiety

Trigger 2: Lack of sleep

Trigger 3: Alcohol abuse

Marks: **[3]**

© 2024 The EverLearner

21. Explain how the DR ABC model might be used for an individual experiencing an epileptic episode.

The responder would need to firstly check for danger. This might consist of checking there are no sharp objects nearby and that the patient is in a safe place to be treated. The responder would then check for a response by speaking to the patient and seeing if they reply. They would then check that the patient's airways are clear and open before checking their breathing by looking to see if their chest is rising up and down. Lastly, they would check circulation by checking the patient's pulse and for any bleeding.

Marks: [4]

22. Other than EIA, describe what causes an asthma attack.

An asthma attack can be caused by a narrowing of airways, which restrict breathing. It can also be caused by excess mucus forming in the airways. Lastly, environmental factors such as pollution or smoke can cause an asthma attack.

Marks: [3]

© 2024 The EverLearner

23. Describe ultrasound treatment.

Ultrasound treatment uses high frequency sound waves. This causes vibration of the injured tissue and results in the increase in the rate of soft-tissue recovery.

Marks: [3]

24. Describe **one** example of **each** of the following strategies to reduce risk in sport:
- Medicals
- Screening
- NGB policies

Medicals: Medicals can be in the form of medical testing, such as a blood pressure test.

Screening: Screening can be in the form of surveys to screen suitability for exercise, such as a PARQ.

NGB policies: NGB policies can be in the form of policies to keep participants safe, such as stating a minimum number of spotters required around a trampoline in competitions.

Marks: [3]

© 2024 The EverLearner

25. Analyse the extrinsic factors that can lead to injury in sport. Within your answer, give examples of when immobilisation could be used by a first-aider treating an injured sportsperson.

One extrinsic factor that can lead to injury is the nature of the sport itself. Some activities are more dangerous than others. For example, rugby has high levels of physicality, which increases the chances of injury. Therefore, the rules in rugby regarding contact and tackle technique must be adhered to in order to reduce risk of injury. A second extrinsic factor is the environment in which the sport is played. For example, if there isn't enough run-off between the boundary of the court and the sports hall wall in a game of netball, a player could easily injure themselves by running into the wall. To prevent this from occurring, the venue and team coaches both have a responsibility to ensure the court specifications meet NGB guidelines. Another extrinsic factor that could cause injury is not using correct PPE. For example, a boxer should wear a mouth guard and boxing gloves to reduce injury risk. It is important that the referee checks this PPE before the boxing bout commences and that the PPE worn by the boxers meet the safety standards set out by boxing NGBs. An injury that could occur as a result of the netballer running into the wall is a fractured wrist. A first-aider would need to immobilise this injury by putting the wrist in a cast. In the case of a rugby player injuring their shoulder in a tackle, a sling could be used to immobilise the shoulder joint.

© 2024 The EverLearner

Marks: [8]

© 2024 The EverLearner