



The EverLearner

National Mock Exams 2024

POWERED BY **ExamSimulator**

Model Answers

NCFE L1/2 Technical Award in Health and Fitness 2024 (VCERT)

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 (Thursday, 9th of May 2024, 16:30-18:00), available via the NCFE Technical Award in Health and Fitness Revision page:

<https://pages.theeverlearner.com/2024-ncfe-technical-award-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



Subject	Physical Education
Course	NCFE Level 1 & 2 (2022): Technical Award in Health and Fitness
Time allowed	1 hour 30 minutes

First name	
Last name	
Class	
Teacher	

Title	NCFE Level 1 & 2 (2022) Technical Award in Health and Fitness - National Mock Exam Summer 2024
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Guidance	<ul style="list-style-type: none">• 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 two 9-mark questions.• Good luck.
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Total marks	80
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1. Look closely at this image. Which bone is classified as a long bone?

- A Cranium
- B Pelvis
- C Carpal
- D Ulna

Answer: [Option D - Ulna](#)

[1]

2. Look closely at this image. Which is the correct definition of abduction?

- A Movement along a plane
- B Movement away from the midline
- C Rotation
- D Movement up and down

Answer: [Option B - Movement away from the midline](#)

[1]

3. Look closely at this image. Which of the muscles contracts concentrically to cause knee extension?

- A Gluteals
- B Hamstrings
- C Gastrocnemius
- D Quadriceps

Answer: [Option D - Quadriceps](#)

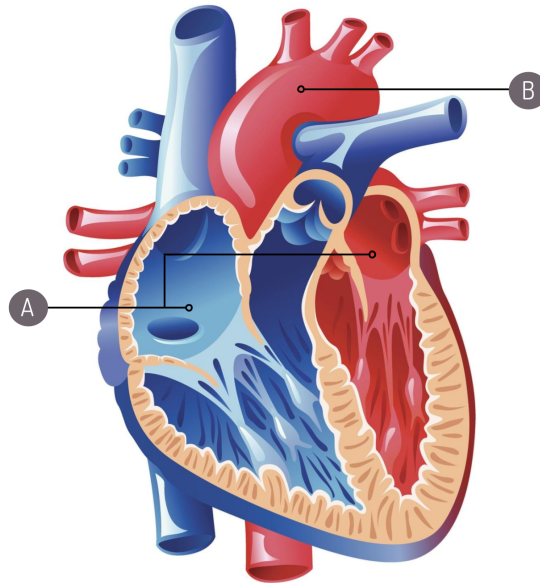
[1]

4. Other than protection of vital organs and support, state **one** function of the skeletal system.

Answer: Another function is blood-cell production.

[1]

5. Look closely at this image of the heart. Identify features A and B.



A: A are the atria

B: B is the aorta

[2]

6. Identify an activity where type 2B muscle fibres would be most important **and** describe the characteristics of this fibre type that make it so important in the activity.

Activity: A long, cut-out pass in rugby

Characteristics of 2B fibres: 2B fibres have a high contractile force for explosive movements and because the pass is short duration and 2B fibres don't have high fatigue resistance.

[3]

7. Describe the aerobic energy system **and** provide one sporting example where aerobic energy is most important.

Description: Aerobic energy release occurs in the presence of sufficient oxygen and enables long-duration, moderate-intensity exercise

Example: Triathlon race

[3]

8. Finlay is 16 years old. Calculate his maximum heart rate. Include your workings and units.

220 - age

220 - 16 = 204 bpm

[2]

9. Finlay takes part in a circuit training session. Explain how his blood is redistributed during the session.

The redistribution of blood is achieved through the vascular shunt mechanism. Blood is redistributed to areas of need, in this case the working muscles, through the vasodilation (widening) of blood vessels. Blood is redistributed away from areas of low demand, such as the liver, through the vasoconstriction (narrowing) of blood vessels.

[4]

10. Analyse the features of the alveoli that make them suited to gaseous exchange.

Alveoli are one-cell thick, which leads to a short diffusion pathway as well as having a very large surface area due to their globular shape. Finally, they have a partially permeable membrane which allows gas particles (O_2 and CO_2) to diffuse in both directions.

[4]

11. Look closely at this image. Identify the test most relevant to muscular endurance.

- A Hand-grip dynamometer test
- B Multi-stage fitness test
- C BMI test
- D Squat test

Answer: Option D - Squat test

[1]

12. Look closely at this image. Which of the options is a short-term effect of exercise?

- A** Lower blood pressure
- B** Decreased hydration levels
- C** Muscle hypertrophy
- D** Body shape change

Answer: [Option B - Decreased hydration levels](#)

[1]

13. Look closely at this image. Which is the correct format for FITT?

- A** Frequency, Intensity, Time, Type
- B** Frequency, Intensity, Train, Time
- C** Frequency, Interval, Type, Train
- D** Frequency, Interval, Time, Type

Answer: [Option A - Frequency, Intensity, Time and Type](#)

[1]

14. Both Tracey (female) and Imran (male) score exactly 19.3 seconds on the Illinois agility test. Analyse the image and provide their test ratings.

Illinois agility run test

For 16- to 19-year-olds

Gender	Excellent	Above average	Average	Below average	Poor
Male	< 15.2 secs	15.2 - 16.1 secs	16.2 - 18.1 secs	18.2 - 19.3 secs	> 19.3 secs
Female	< 17.0 secs	17.0 - 17.9 secs	18.0 - 21.7 secs	21.8 - 23.0 secs	> 23.0 secs

Data from DAVIS, B. et al. (2000) Physical fitness and fitness testing. In DAVIS, B. et al. Physical Education and the study of sport. 4th ed. London: Harcourt Publishers p. 123

Tracey is rated as Tracey scored average.

Imran is rated as Imran scored below average.

[2]

15. Other than specificity, name **two** principles of training.

Other principle of training 1: Progression

Other principle of training 2: Tedium

[2]

16. Identify **two** characteristics of good health.

Characteristic of good health 1: Mental well-being

Characteristic of good health 2: Social well-being

[2]

17. Discuss the suitability of the stork stand test for a surfer.



On the positive side, the stork test is a test of balance, which is absolutely essential in surfing. Specifically it is a test of standing balance which, once again, is how balance is expressed in surfing. However, the nature of the stork test is that it is on one leg, unlike surfing, and also is a test of static balance, whereas surfing is focussed on dynamic balance, so the stork test does not fully replicate the type of balance required.

[3]

18. Define **both** flexibility and agility **and** give an example of both from the sport of Association football.



Flexibility is: Flexibility is an adequate range of motion at a joint.

Example of flexibility in football: A defender needs flexibility when they stretch fully to their left to block a headed shot at goal when they are covering a post on a corner.

Agility is: Agility is the ability to change direction quickly without losing control.

Example of agility in football: A striker needs agility to evade defenders when dribbling in order to find space and take a shot.

[4]

19. Identify the two training methods represented in this image **and** explain why both methods are popular with triple jumpers.

Training method A



Training method B



Training method A is: Plyometric training

Training method A is good for triple jumpers because it develops the power and speed to gain height and distance off the board.

Training method B is: Free weights

Training method B is good for triple jumpers because Free weights develop strength and this is needed to apply large forces in order to sprint fast and then strike the board hard.

[4]

20. Look closely at this image. Which of the options is a negative effect of smoking?

- A** Obesity
- B** Fractures
- C** Reduced blood flow
- D** Increased vascular shunting

Answer: Option C - Reduced blood flow

[1]

21. Delayed reactions is a side effect of alcohol consumption. Which of the activities in the image would be most affected by delayed reactions?



Answer: [Option C - Sprint start](#)

[1]

22. Look closely at this image. Which of the options is the recommended daily calorific intake for women?

- A 2,000 kcal
- B 2,500 kcal
- C 1,500 kcal
- D 1,000 kcal

Answer: [Option A - 2,000 kcal](#)

[1]

23. Identify **one** recovery method from exercise **and** explain how it improves recovery rate.

Recovery method: [Massage](#)

Improves recovery rate by [Reducing muscle soreness after training or competing hard.](#)

[2]

24. Look at this image. State the missing SMART principle **and** explain how the missing principle could be applied to goal setting for a competitive swimmer.

- S** Specific
- M** Measurable
- A** ?
- R** Realistic
- T** Time-bound

A is: Attainable/Achievable

Applied to a competitive swimmer: A swimmer can apply it by aiming to achieve their personal best once only in each season.

[2]

25. Explain why a person's lifestyle would be considered sedentary.

A sedentary lifestyle is sitting and lying down for too much of one's life over a long period of time.

[2]

26. Ken has been asked to devise a warm-up for a group fitness class. Identify **two** phases Ken should include in the warm-up and explain the benefits of completing these phases.

Phase: Mobilisation activities

Benefit of this phase: To reduce the chance of joint injuries.

Phase: Pulse raiser

Benefit of this phase: To gradually raise heart rate to performance levels.

[4]

27. Ken encourages his participants to drink water throughout the warm-up and main activity. Justify Ken's approach.

Drinking water helps to prevent dehydration. This could be an issue because dehydration causes the blood to thicken (less plasma) and can cause heart rate to drift upward despite no increase in the intensity of exercise. This can lead to less blood and oxygen being delivered to the working muscles and more work being done anaerobically, leading to fatigue.

[3]

28. Identify **two** safety considerations a trainer should make when planning a session **and** explain how these actions reduce the chance of injury.

Safety consideration 1: Check the facilities and, specifically, the playing surface

Explanation: To ensure it is appropriate and free of debris.

Safety consideration 2: Check equipment such as grips on racquets

Explanation: This can cause skin damage such as blisters if worn down.

[4]

29. Justify the importance of weight training for a 100m sprinter.

Weight training involves the lifting and pulling of free weights or working on a resistance machine or device. In order to develop strength, a lifter uses heavy weights and few reps, whereas for muscular endurance they lift lighter weights but for more reps. 100m sprinters are power-based athletes and require power both at the start of the race to explode from the block but also throughout the race to maintain their velocity. 100m sprinting is predominantly an anaerobic performance, as it is very short duration and very high intensity. A power athlete such as a sprinter would use a combination of strength and power formats to their weight training. For power, they would lift approximately 70% of 1RM for between 10 and 12 repetitions but incorporating speed into the lift. This would be critical in muscle groups in legs which can be trained through squats, leg presses and curls and also in the shoulders by training the deltoids and trapezii through shoulder presses, lateral pull-downs and shoulder shrugs. But a sprinter must also develop strength by increasing their %1RM to approximately 85%-90% of 1RM and lifting for, say, four repetitions. But weight training alone is not sufficient for a sprinter. They must also consider plyometric training for power and interval training for speed. In conclusion, weight training is a feature of good sprinter training only if it is combined with other methods as mentioned. This is the Type from FITT. Finally, sprinters taking part in weight training should consider incorporating flexibility training into their sessions within the warm-up and cool-down.

30. A basketball team often use fitness tests to identify strengths and weaknesses.

Discuss the suitability of the Illinois agility test **and** the ruler-drop test to assess the fitness levels of the team.

The Illinois test includes a slalom run through a 10m by 5m course but the participant starts face down on the floor in the prone position. The result is measured by time in seconds with scores between 14 and 20 seconds being typical. The Illinois test is a measure of agility. The ruler-drop test is a measure of reaction time and involves a ruler being held above a hand with the 0 cm mark being level with the thumb and the index finger before the ruler is dropped without warning and caught. The result is a measure of distance in cm. Scores of between 5 cm and 20 cm are typical. Agility is critical in basketball, as a dribbling player can move efficiently around defenders in order to find space and take an unopposed shot or pass. Reaction time is also critical because players need to respond rapidly to the position of an attacking player when defending or to pounce on a loose ball to gain possession and then set up an attack. Without agility, a basketball team would be very ineffective and without good reaction time it would struggle to gain or maintain possession of the ball. Therefore, both of these tests can be considered relevant for the sport of basketball. Furthermore, the weaving motion of the Illinois test as well as the fact that it involves large movements of the legs and arms replicates, to a degree, the movements of basketball. However, it does not include a ball, so is much less relevant for agility when dribbling the ball. The ruler-drop test is quite generic and, whilst it does involve catching, it is a very different type of catching to that needed in basketball. Moreover, the reliability of the ruler-drop test is quite low. When the test is repeated, scores often vary and practising the test a few times does seem to improve performance. A performer's arousal levels or even what they have eaten can influence reaction time, so this needs to be considered. A basketball team should consider more specific formats of reaction tests as well as adding a 30 m sprint test to the use of the Illinois agility test in order to measure player speed. In conclusion, basketball teams should use a wider battery of fitness tests to assess the players.

