Questions

Q1.

As part of a school's focus on healthy living, Year 10 students were asked to keep a log of all the food they ate over a one-week period.
Figure 2 is an extract from a student's log.

	Breakfast	Lunch	Dinner	Snacks	Drinks
Monday	None	Burger and chips	Egg and chips	Chocolate bars × 2	1 litre water 1 litre coke
Tuesday	Cereal	Tuna sandwich from home	Chicken, potatoes, peas	Crisps	1 litre water

Figure 2

Which of the two days, Monday or Tuesday, provided a more balanced diet?

(1)

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Q2.

Why do you need to consider what you eat if you exercise regularly?

(1)

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Q3.

Explain the requirements of a balanced diet.

(4)

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Q4.

Diet is an important consideration in a healthy, active lifestyle.

The table below lists six of the seven nutrients required for a balanced diet.

Fats	Water	Vitamins
Fibre	Minerals	Protein

(a) Identify the nutrient missing from the table.

(1)

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(b) State the importance of the missing nutrient in maintaining an active lifestyle.

(1)

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Q5.

Diet is an important consideration in a healthy, active lifestyle.

The table below lists six of the seven nutrients required for a balanced diet.

Fats	Water	Vitamins
Fibre	Minerals	Protein

State the importance of the missing nutrient in maintaining an active lifestyle.

(1)

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Q6.

Which **one** of the following statements is **true**?

(1)

- ☒ **A** There is no need to wait to exercise after eating a large meal
- ☒ **B** During exercise blood is redistributed away from the muscles being used
- ☒ **C** The amount of exercise, work and rest has no impact on personal health
- ☒ **D** Blood shunting is the term used to describe the redistribution of blood during exercise

Q7.

Planning what and when you eat is an important part of leading a healthy, active lifestyle. Which of the following would be the most appropriate amount of time to leave before exercising after a large meal?

(1)

- ☒ **A** No need to wait as the food will provide essential energy
- ☒ **B** Five minutes
- ☒ **C** Half an hour
- ☒ **D** Two hours

Q8.

To maintain a healthy lifestyle it is important to balance work, exercise and rest.

Describe the link between exercise and rest.

(2)

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(Total for question = 2 marks)

Q9.

Explain the importance of micronutrients in maintaining a healthy, active lifestyle.

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Q10.

Diet and rest are two important factors to consider when planning for a healthy, active lifestyle. How may diet and rest influence personal health?

(i) Diet

(1)

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(ii) Rest

(1)

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Q11.

Adrianna is a basketball player. Due to a lack of time she often eats her dinner just before playing basketball.

Explain why eating a large meal just before exercise might have a negative effect on performance.

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(Total for question = 3 marks)

Q12.

Elite sports performers make sure they eat a balanced diet.

Briefly explain the importance of carbohydrates and protein to an elite sports performer.

(i) Carbohydrates

(2)

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(ii) Protein

(2)

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(Total for question = 4 marks)

Q13.

* Discuss why an elite sports performer will make sure they eat a balanced diet.

(6)

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(Total for question = 6 marks)

Examiner's Report

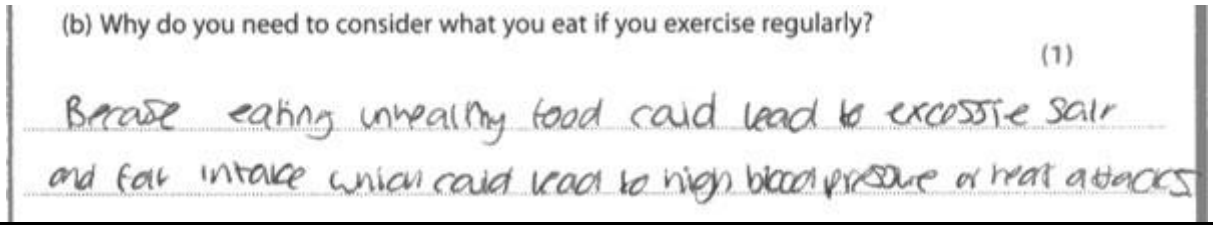
Q1.

This proved to be a very accessible question, with the vast majority of candidates correctly identifying Tuesday as the day containing the 'more balanced diet'.

Q2.

Valid responses were given by the majority of candidates the most popular correct response linking carbohydrates as a source of energy or the need for an energy balance between input and output.

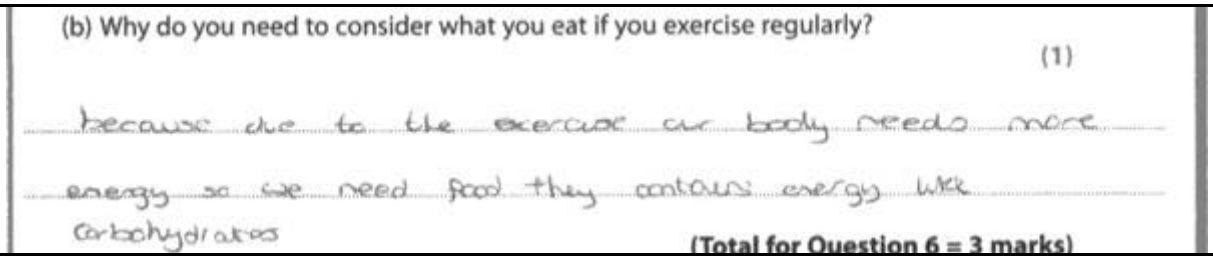
Unsuccessful candidates gave vague responses about the need for a balanced diet/good diet or responses that would have been better placed in (ai).


(b) Why do you need to consider what you eat if you exercise regularly?

(1)

Because eating unhealthy food could lead to excessive salt and fat intake which could lead to high blood pressure or heart attacks

Results Plus: Examiner Comments
This was an incorrect response for this question however, would have been a good answer to part 6(ai). Here the emphasis should have been on exercising regularly rather than personal health.


(b) Why do you need to consider what you eat if you exercise regularly?

(1)

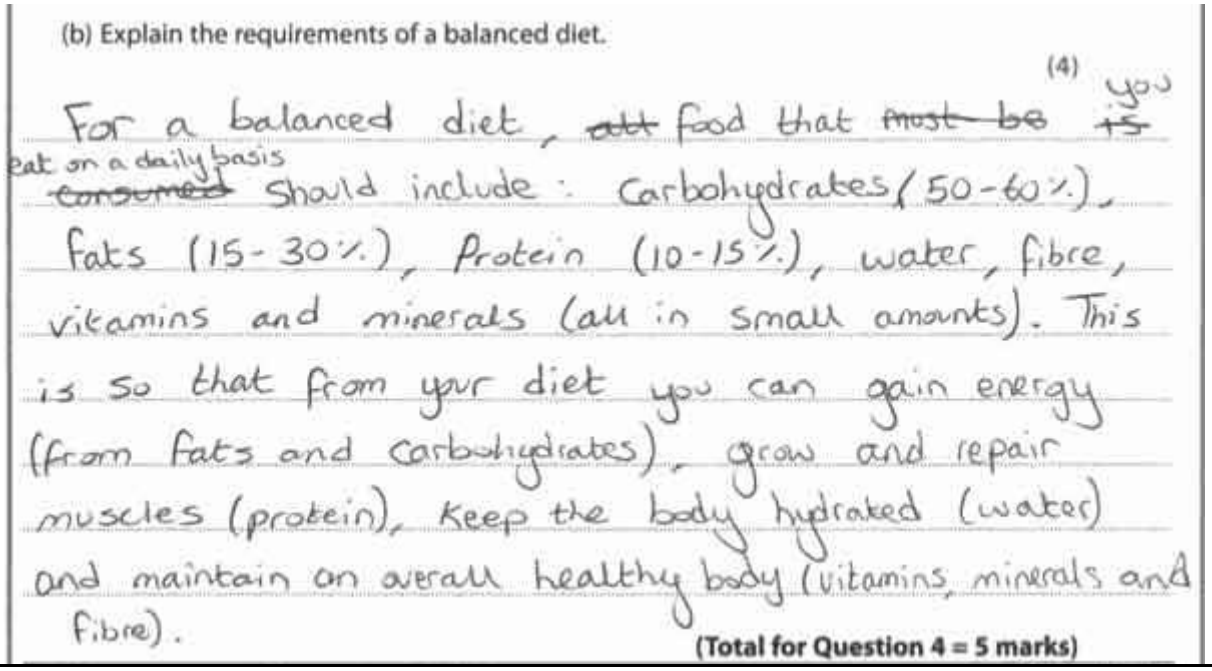
because due to the exercise our body needs more energy so we need food they contains energy like carbohydrates

(Total for Question 6 = 3 marks)

Results Plus: Examiner Comments
This is a good answer and gains the available mark. The candidate recognises that more energy will be required and this can be sourced through carbohydrates

Q3.

Rather than asking for a simple list of food groups or nutrients required in a balanced diet this question asked candidates to explain the requirements of a balanced diet. The command word 'explain' requires more of an in-depth response from candidates in order to achieve maximum marks and evidence of increased knowledge or application will increase marks achieved. This was designed as a differentiated question and candidate responses did vary in terms of quality and depth of response. There were five possible areas where candidates could achieve marks. Correct popular responses included: correct identification of all seven food groups; eat carbohydrates for energy; drink water for hydration; eating the correct ratio of each group. Candidates should be dissuaded from using abbreviations in their example, for example carbs and from using question words to explain a term. In this case saying a balanced diet was a balance of food groups is insufficient to demonstrate understanding. The majority of candidates attempted to give a list of requirements for a balanced diet, and where there were omissions, fibre, water or vitamins tended to be the missing items.



(b) Explain the requirements of a balanced diet.

(4)

For a balanced diet, ~~ddt~~ food that ~~most be~~ you ~~is~~ eat on a daily basis ~~consumed~~ should include: carbohydrates (50-60%), fats (15-30%), protein (10-15%), water, fibre, vitamins and minerals (all in small amounts). This is so that from your diet you can gain energy (from fats and carbohydrates), grow and repair muscles (protein), keep the body hydrated (water) and maintain an overall healthy body (vitamins, minerals and fibre).

(Total for Question 4 = 5 marks)

Results Plus: Examiner Comments

This response achieved four marks. The candidate has identified all seven 'groups' that should be included in a balanced diet; they have identified that there should be a greater percentage of carbohydrates to fats in the diet; linked energy to fats and carbohydrates and water to hydration. A good response.

(b) Explain the requirements of a balanced diet.

(4)

for a balanced diet you ~~and~~ need carbohydrates, fats, proteins, vitamins, minerals, ~~or~~ fibre and water you need carbohydrates for energy, you need fats for energy and insulation, you need proteins for growth and repair you need ~~minerals~~ vitamins for growth of bones, minerals like iron for haemoglobin and water to replace water lost from sweating and respiring and you need fibre to keep the digestive system healthy

Results Plus: Examiner Comments

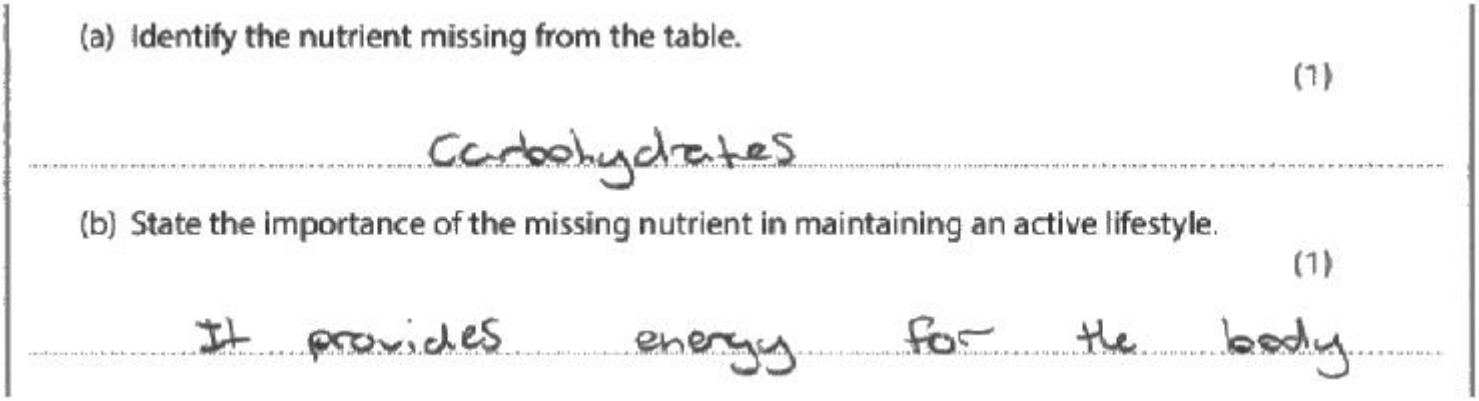
This response also gains full marks. The items required in a balanced diet are identified and then a reason for each is given. Sufficient of these are correct to gain maximum credit (carbohydrates; minerals, with specific reference to the role of iron and water).

Q4.

Q (a) was very well answered with the majority of candidates recognising that carbohydrate was the missing nutrient from the table. Q (b) was also well answered by the majority of candidates but fewer candidates gained credit for this part of the question than in Q (a).

Incorrect responses in (a) included named vitamins or minerals, eg vitamin C or iron or occasionally the question was omitted. As the question in (b) asked for the importance of the missing nutrient (rather than the importance of the candidate response in (a) reference to energy was the only acceptable answer.

Energy was a popular response, with almost three-quarters of the candidature achieving the mark for the question. Some candidates referred to slow release energy, which was not credited because this would be a characteristic of fats rather than carbohydrates.



(a) Identify the nutrient missing from the table.

(1)

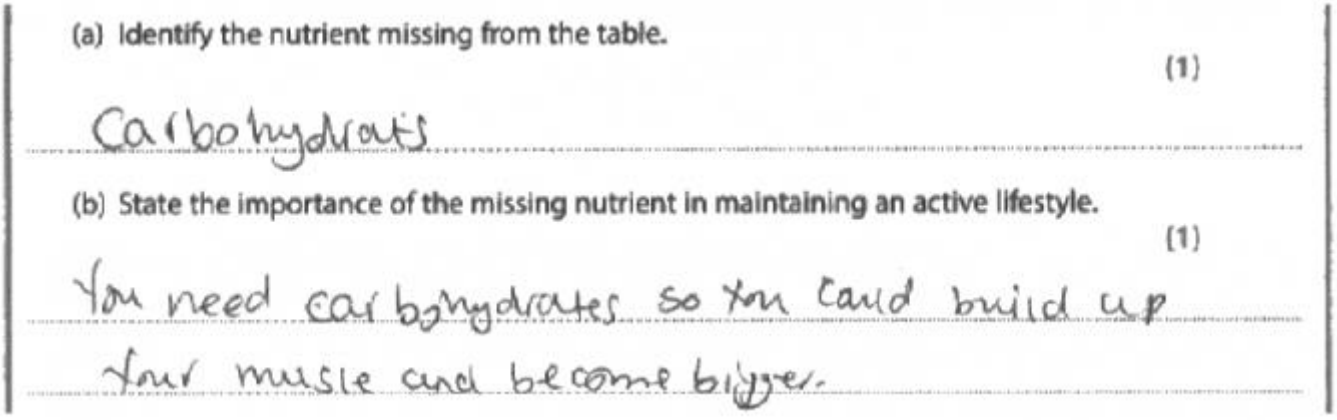
Carbohydrates

(b) State the importance of the missing nutrient in maintaining an active lifestyle.

(1)

It provides energy for the body

Results Plus: Examiner Comments
This response identifies carbohydrates correctly in (a) and energy in (b) and therefore gains both available marks.
2 marks



(a) Identify the nutrient missing from the table.

(1)

Carbohydrats

(b) State the importance of the missing nutrient in maintaining an active lifestyle.

(1)

You need carbohydrates so you could build up your muscle and become bigger.

Results Plus: Examiner Comments
Whilst many candidates identified correctly the importance of carbohydrates in the diet, not all were able to. This candidate gains credit in (a) but has not identified the importance of carbohydrates for credit in (b).
1 mark

Q5.
No Examiner's Report available for this question

Q6.
No Examiner's Report available for this question

Q7.
No Examiner's Report available for this question

Q8.

The majority of candidates achieved one mark for this question. The question asked candidates to describe the link between exercise and rest.

Many candidates were able to make the link accurately between the two concepts, identifying that rest was needed for time to repair damage to the body as a result of the exercise session. Other popular correct responses make reference to the fact that rest was needed to give time for the body to adapt and become stronger.

Some candidates linked an incorrect cause and effect, ie linked rest for repair with adaptation, rather than injury prevention. Those that achieved both marks tended to do so for identifying the need for rest to repair muscle damage caused during exercise. This would prevent injury so that exercise could continue, although some candidates did also make the link between rest and time for adaptations to take place, to increase strength.

To maintain a healthy lifestyle it is important to balance work, exercise and rest.

Describe the link between exercise and rest.

You must have rest periods when exercising to allow the body to repair any mild injuries or strains before exercising again. If you did not have rest, your injury would get worse.

(Total for Question = 2 marks)

Results Plus: Examiner Comments
This example shows a popular correct response, gaining both available marks.
The link is made between requiring rest to repair and mild injuries (after exercise) to prevent the injury from getting worse.
2 marks

To maintain a healthy lifestyle it is important to balance work, exercise and rest.

Describe the link between exercise and rest.

When you exercise you break down muscle and the body, So when you rest it gives time for the body to adapt and rebuild, but this time you will be stronger. This is called rest and recovery.

(Total for Question = 2 marks)

Results Plus: Examiner Comments

This response gains both available marks for making the link between needing rest after exercise for adaptation to take place, so that the body can gain strength.

2 marks

Q9.

This question uses the command word 'explain', as a two mark question it was expected that candidates would provide a developed or 'linked' response. As the question stated 'Explain the importance' it was accepted that candidates might explain the importance from either a 'negative' or 'positive' viewpoint, either approach was catered for by the mark scheme, although the majority of candidates explained why we should have micronutrients in a diet from a positive point of view. Explanations were credited for an overarching reason of importance in relation to health, with development being demonstrated through use of a specific example, e.g. calcium for strong bones.

Popular incorrect responses identified fibre and water as micronutrients and/or carbohydrates and fats.

8 Explain the importance of micronutrients in maintaining a healthy, active lifestyle.

Micronutrients include vitamins and minerals. These two components are essential to the body to be healthy and stay active. Vitamin D allows calcium to be absorbed and bone structure to be strong. This allows us to exercise at

Results Plus: Examiner Comments
This response gains the 2 marks available. Vitamins and minerals are correctly identified and linked to being 'healthy' and a specific example of the importance of vitamin D is given.

8 Explain the importance of micronutrients in maintaining a healthy, active lifestyle.

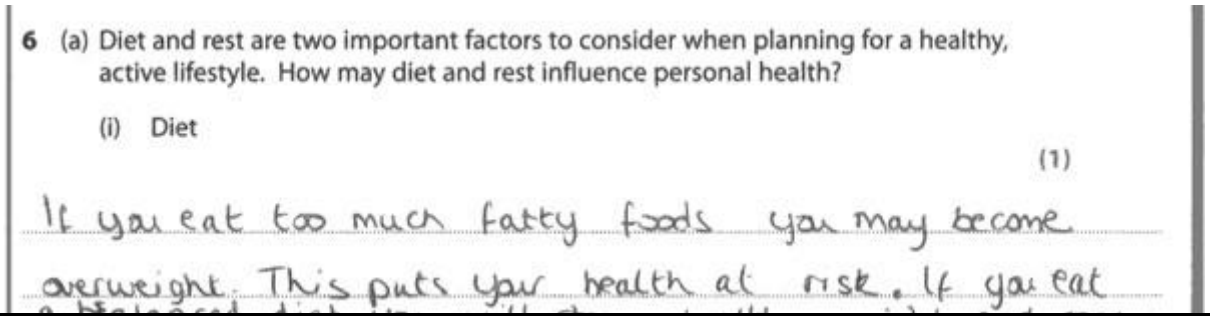
Micronutrients (minerals, vitamins) are important for maintaining health as vitamins and minerals increase or maintain your bodys overall level of health e.g. Calcium (mineral) is absorbed by the body to increase/maintain bone strength. They also help the body to defend against disease/illness by making a strong immune system.

Results Plus: Examiner Comments
This is another example of a 2 mark response. Vitamins and minerals are identified as micronutrients and their importance stated as 'increase or maintain your body's health'. This is developed through the use of an example.

Q10.

(i)

Whilst the previous specification did have content relating to diet the focus was not on a healthy active lifestyle nor applied to personal health. Unsuccessful candidates tended to focus on the emphasis from the previous specification, i.e. fitness and performance rather than the more general health focus required. Where answers related to weight gain these were not credited unless candidate response also identified that this was as a result of eating too much.



6 (a) Diet and rest are two important factors to consider when planning for a healthy, active lifestyle. How may diet and rest influence personal health?

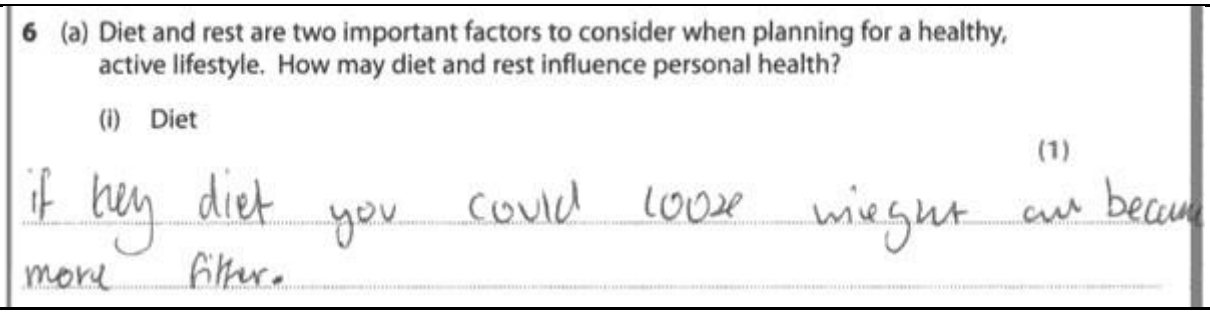
(i) Diet

(1)

If you eat too much fatty foods you may become overweight. This puts your health at risk. If you eat

Results Plus: Examiner Comments
Candidates should be advised to look for the clues in the question. The last part of the question states 'influence personal health' therefore this is not a question on fitness.

Results Plus: Examiner Tip
This candidate successfully identified the potential link between overeating/eating too much fat and becoming overweight



6 (a) Diet and rest are two important factors to consider when planning for a healthy, active lifestyle. How may diet and rest influence personal health?

(i) Diet

(1)

if they diet you could loose wieght an becam more fitter.

Results Plus: Examiner Comments
An example of an unsuccessful response. This candidate has misinterpreted the use of 'diet'. Their response refers to dieting rather than what you eat.

(ii)

Rest and recovery is a new addition to the specification therefore it was pleasing to see so many candidates making the link between rest and recovery in their responses. Unsuccessful candidates identified repair of the body, rather than repair of the muscle and did not gain credit. Other incorrect responses included rest being described as a problem, which would lead to reversibility, or the need to keep exercising to prevent atrophy rather than the need for appropriate rest for recovery.

(ii) Rest

(1)

can destress the body and gives it time to recover

Results Plus: Examiner Comments
This candidate achieves the mark available for this question. They actually give two appropriate responses allowing time to 'de-stress' and 'time to recover'

Results Plus: Examiner Tip
Candidates should be careful when giving more than one response if only one is required. If the first response is incorrect the answer will be marked as wrong. This is to avoid the situation where candidates are unsure of the answer and so give a few in the hope that the examiner will select the correct one on their behalf.

(ii) Rest

(1)

if you don't rest for long enough you can cause yourself and injury.

Results Plus: Examiner Comments
This candidate response was credited as answer states if you don't rest injury can occur, in other words they presented the 'reverse' point to that on the mark scheme which was valid and therefore credited.

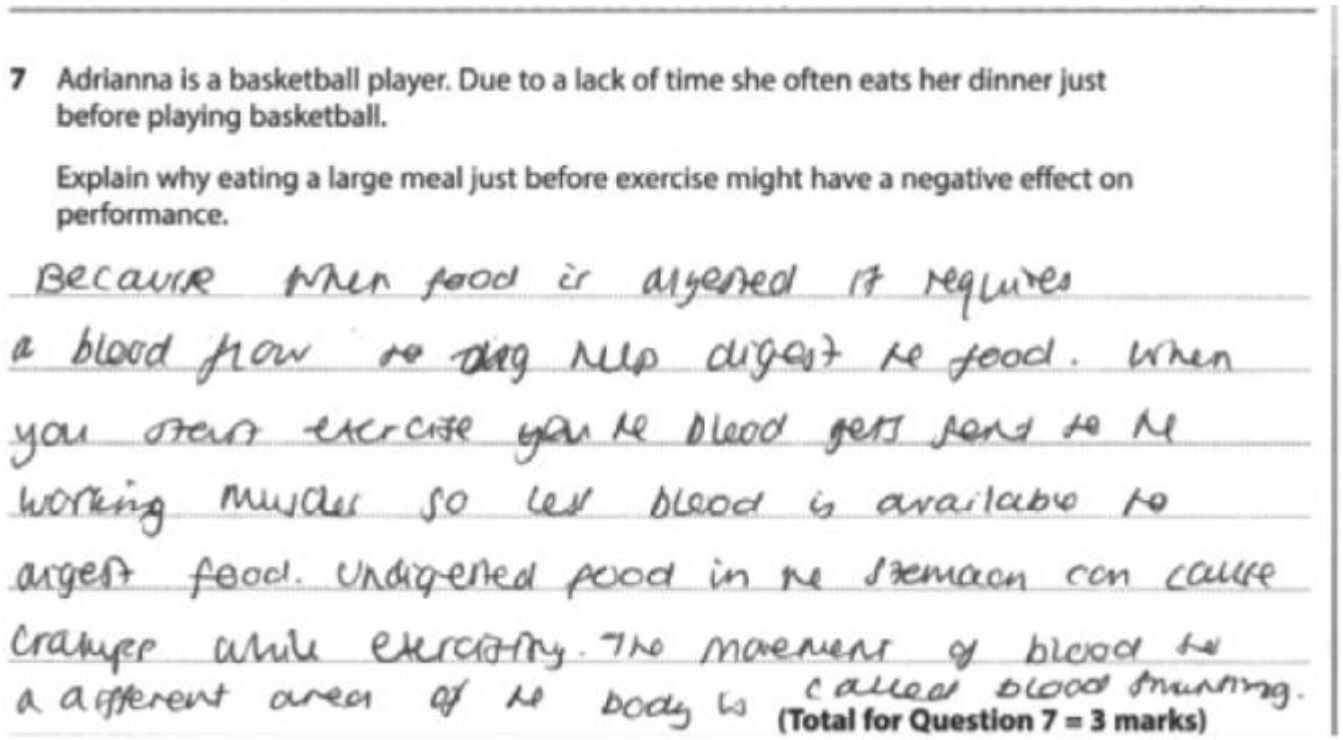
Q11.

This question assessed candidates' knowledge and understanding of redistribution of blood flow.

Blood or vascular shunting was identified correctly, as was the need to allow time for food to digest before exercising. Some candidates were also able to discuss the conflict for blood to continue with digestion but also to supply sufficient oxygenated blood to the working muscles.

Candidates did not gain credit for making reference to a stitch/stomach cramps or inability to utilise the energy from the food.

Overall, this question was well-answered, with the majority of candidates achieving at least one mark, but with a good spread across the mark range.



7 Adrianna is a basketball player. Due to a lack of time she often eats her dinner just before playing basketball.

Explain why eating a large meal just before exercise might have a negative effect on performance.

Because when food is digested it requires a blood flow to the stomach to digest the food. When you start exercise your blood gets sent to the working muscles so less blood is available to digest food. Undigested food in the stomach can cause cramps while exercising. The movement of blood to a different area of the body is called blood shunting.

(Total for Question 7 = 3 marks)

Results Plus: Examiner Comments
The candidate identifies four points from the mark scheme and thus gains maximum credit.
They identify:

- the need for increased blood flow to aid digestion
- the need for increased blood flow to the working muscles during exercise
- that this reduces blood flow available to the digestive system meaning that food remains undigested
- that the process is called blood shunting

Total = Max 3

7 Adrianna is a basketball player. Due to a lack of time she often eats her dinner just before playing basketball.

Explain why eating a large meal just before exercise might have a negative effect on performance.

Once you have eaten a large meal more blood needs to be supplied to the digestive system to aid digestion. During exercise the working muscles need more oxygen and therfor more blood flow to work efficiently. More blood flow cannot go to both areas at the same time so during exercise it goes to the working muscles. This means that there will be foods and other compounds that have not been digested causing stomach cramps and dizziness which effects performance significantly. **(Total for Question 7 = 3 marks)**

Results Plus: Examiner Comments
In this example we see a clear explanation of the conflict between the areas of the body vying for additional blood flow and the consequences to the digestive system of not receiving sufficient blood flow as a result of exercise.
This response gains the three available marks.
Total = 3 marks

Q12.

(i)

This question asked for a brief explanation of the importance of carbohydrates to a sports performer.

The majority of candidates were able to achieve at least one mark for this question, identifying correctly the role of carbohydrates in energy release. Those candidates that went on to link with performance by explaining the impact of this, were able to access the second mark. Examples included being able to continue in the activity for longer without tiring - as in the last set in a tennis match - or needing the energy to maintain the quality of their performance throughout the match.

Where candidates did not gain the second mark, this was due to lack of application to the question context, ie why energy was important to a sports performer.

6 Elite sports performers make sure they eat a balanced diet.

Briefly explain the importance of carbohydrates and protein to an elite sports performer.

(i) Carbohydrates

(2)

Energy is given through carbohydrates. Which allows the perform perform at their best, with energy given from foods like pasta.

Results Plus: Examiner Comments
Credit is given for identifying the role of carbohydrates and the explanation of their importance to the performer, ie the energy allows the performer to perform at their best.
Total = 2 marks

6 Elite sports performers make sure they eat a balanced diet.

Briefly explain the importance of carbohydrates and protein to an elite sports performer.

(i) Carbohydrates

(2)

To provide energy. This can keep a football for example running for 90 minutes.

Results Plus: Examiner Comments
This response also gains maximum marks.
In this instance, credit is given for identifying that carbohydrates provide energy so that sports performers could keep running for 90 minutes.
Total = 2 marks

(ii)

This question asked for a brief explanation of the importance of protein to a sports performer.

Whilst fewer candidates achieved at least one mark, those that did were more likely to gain both marks, than for the previous question. This indicated that if the role were known, candidates found it more straightforward to apply their knowledge to the question.

Where candidates did not gain both marks, this was often due to a confused response. For example, reference may have been made to protein for muscle growth but linked with improved recovery rate from injury, rather than linking this with the 'repair' function of protein.

A popular correct response was that protein allowed muscle growth, thereby increasing the strength of the performer.

(ii) Protein

(2)

Protein is needed for growth and repair of muscle tissue. It is important to an elite peformer as if they are injured, they need to be able to ~~recovery~~ recover as quickly as possible.

Results Plus: Examiner Comments
This response achieves both available marks.
This response identifies both functions of protein - growth and repair - and goes on to explain why this is important to a performer, ie to speed up recovery.
Total = 2 marks

(ii) Protein

(2)

Protein is important because it helps grow and repair muscles. This is ~~key~~ key if a performer has an injury to a ~~muscle~~ muscle as it would repair it quicker meaning he could get back to training faster.

(Total for Question 6 = 4 marks)

Results Plus: Examiner Comments
This response gains both available marks.
The candidate identifies the role of protein in growth and repair and places it in the correct context. They explain that it is important to allow quicker recovery so that the performer is able to return to training sooner.
Total = 2 marks

Q13.

This question was the first of the extended, levels-based responses. There was a good distribution of marks for this question across Levels 1 and 2, (0 – 4 marks), although candidates continued to experience difficulty in accessing the top marks. This was not surprising, because the levels reflect the quality of the response, rather than the number of 'knowledge points' made.

The demands of this question were similar to those of previous years and the impression from examiners was that more candidates appeared to be accessing Level 2 than in the previous series.

Candidates were asked to discuss why an elite sports performer would make sure they ate a

balanced diet. In order to discuss this question, candidates needed to demonstrate their knowledge of the topic by providing content that related to a balanced diet. For example, they could have made reference to the components of a balanced diet, the ratio of the elements and then applied this knowledge by linking it to an elite sports performer. Candidates could discuss the need for carbohydrates to provide energy for performance, or proteins for growth and repair.

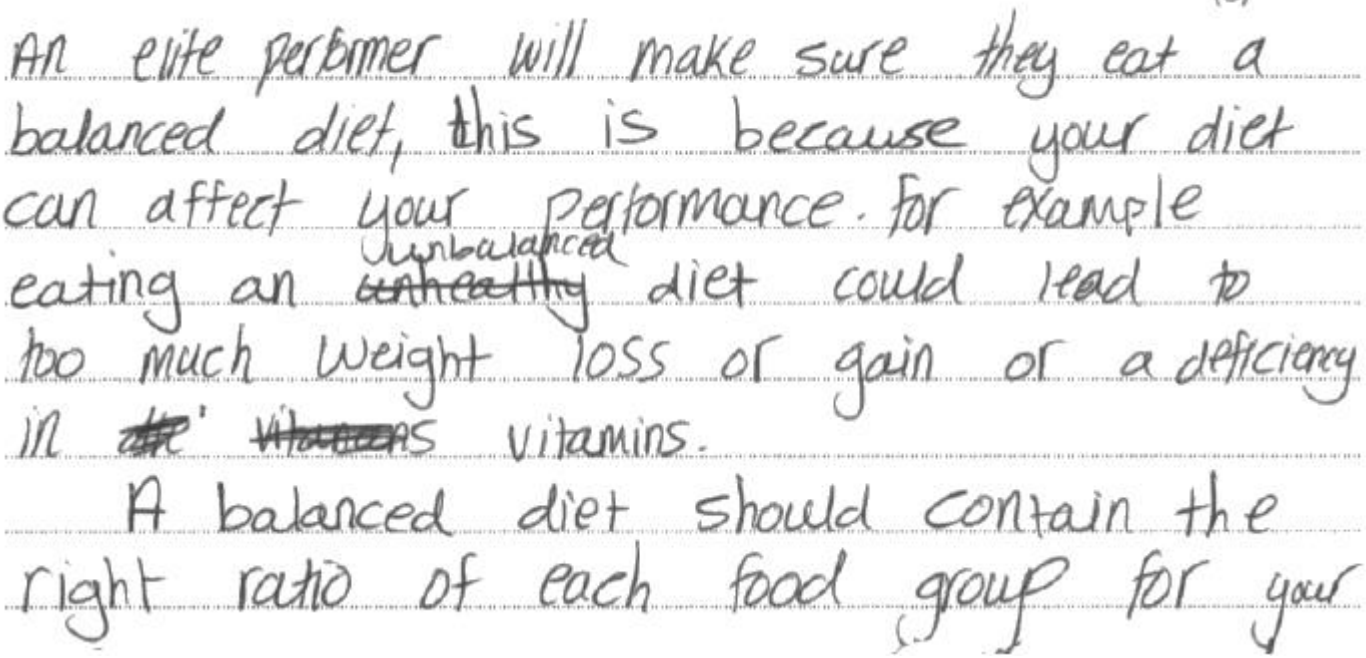
To extend the discussion point (and therefore the quality of the response), rather than just giving the role of the nutrient, some candidates also made reference to the impact this would have on performance. For example, they could cite an athlete's energy requirement so that the athlete could continue to work at an appropriate standard throughout the activity or training, or water for hydration to replace that lost through sweat whilst exercising.

Those candidates achieving Level 1 tended to do so due to their knowledge of balanced diets. They would make a number of relevant facts about a balanced diet but did not attempt to link this to the question context. Those that were able to apply this knowledge often achieved three marks at Level 2, demonstrating sufficient quality in their response to move to Level 2, due to a greater understanding of the question's demands.

Level 3 responses were factually accurate around a range of 'dietary' points, demonstrating knowledge, the ability to apply this knowledge and discuss the impact of the various food groups on the elite performer and their performance. In some instances, this was an accurate discussion about the need for elite athletes to amend their diet based on the demands of their activity, ie to move away from a balanced diet, to ensure that they ate what they needed to be effective in their activity. A popular correct response in relation to this was a discussion of carbohydrate loading for endurance athletes.

* Discuss why an elite sports performer will make sure they eat a balanced diet.

(6)



somatotype. for example an ecromorph would need more fibre whereas a mesomorph needs more carbohydrates.

An Elite performer ~~should~~ would know that they need to play at their best to be able to impress and they cant do that if they are lacking energy thats why a lot of top athletes carbo load. Carbo loading is where you consume a lot of foods high in carbs within a week before the event the carbs are now stored as glucose in the body ~~to~~ ready to be slowly released during the activity. This will allow the athlete to perform for longer at high intensitys.

An elite athlete will not intake more ~~than~~ calories than they are burning off, this is because it stays in the body and becomes fat adding unnecessary weight to the athlete.

Results Plus: Examiner Comments
Good example of discussion point around dietary manipulation, in particular carbo-loading. Good application to question.

* Discuss why an elite sports performer will make sure they eat a balanced diet.

(6)

An elite sports performer will want an edge on their opponents. There are many ways to attempt this. A balanced diet is one way they will try and become even better to become a best. A balanced diet will help an elite performer to maintain high levels of health and fitness. There are many components of a balanced diet but elite performers will make sure they do it right. For example Carbohydrates will be expected to be eaten the most by elite performers. This will release slow burning energy. They will also have a lot of fruit and vegetables to keep them fit and healthy. This will give them the vitamins they need. Despite fats and sugars being unhealthy they will need to eat them to ensure a balanced diet. They are useful for giving a short burst of energy. Fats are a store of energy so performers will need that. An elite performer will also eat different amounts of each food depending on their sport. For example rugby players will have more fats and protein to increase muscular strength and weight. This is important for them as they use this throughout a game. However, a long distance runner will eat more

Carbohydrates to keep energy levels high throughout the run. I think it is essential for elite performers to have a balanced diet. This is because they need to be as fit and healthy as they can to compete at top levels. Overall balanced diets are essential for elite performers as they give them advantages in games. However, they may have different diets for different sports. This is to keep their diet specific to their sport.

(Total for Question = 6 marks)

Results Plus: Examiner Comments

This is an example of a Level 1, two-mark response.

Credit is given for display of some knowledge of the components of a balanced diet, for example:

– carbohydrates/fats provide energy
– carbohydrates should form the largest part of the meal
– vitamins and fats are required as part of a balanced diet

There is also some attempt to link to the question context:

– rugby players will eat more fats and protein to increase their strength and weight (candidate does not state which effect links to which nutrient)
– long-distance runners would eat more carbohydrates

However, at no point does the response go into depth, to discuss any points. For example:

– why does the long distance runner need more carbohydrate?
– what is the role of vitamins?
– how do vitamins help elite performers?

Although the candidate has written extensively in response to the question, they have not addressed the discursive needs of the question nor demonstrated sufficient knowledge to move into Level 2.

Fibre, fats, water, carbohydrate, proteins, minerals etc.

* Discuss why an elite sports performer will make sure they eat a balanced diet.

(6)

A balanced diet contains different things like fibre, fats, water, carbohydrates, proteins and minerals and vitamins. each one provides different things that benefit your body. Carbohydrates provide long lasting energy e.g pasta. Fat provides short term energy e.g sweets. Proteins provides repair and to damage tissues which would be good for an elite player because their body will need to repair after taking part in a game. Water keeps you hydrated and for a elite performer, it's key to stay hydrated because water is always lost through sweats. Minerals and vitamins provide bone growth which will benefit a elite player because their skeletal structure needs to be strong and healthy. Fibre allows waste products like poo to come out smoothly, this is important because the elite player will need a clear digestive system to stay focus on the game or training.

*, both carbohydrates and fats will benefit an elite performer because they both provide energy which will be needed for games and training.

Results Plus: Examiner Comments
This is an extract from a Level 2, three-mark response.

The response demonstrates knowledge of the nutritional requirements of a balanced diet, for example, all seven components are listed, and their role is stated.
This response moves to Level 2 because there are attempts to link and discuss the role of some of the nutrients in terms of an elite performer. For example, 'protein provides repair to damaged tissue, this is good for an elite performer because their body will need repair after taking part in a game'. This could have been extended further, linking to reduced risk of injury or improved performance in the next game, but there is partial, relevant discussion.
There is another attempt to discuss a point, this time in relation to water: 'Water keeps you hydrated, for an elite performer this is key...because water is always lost through sweat'. The impact on performance of not remaining hydrated could have been a means to develop this point fully.
The knowledge demonstrated and the partial success at applying and developing this knowledge places this response at Level 2.

* Discuss why an elite sports performer will make sure they eat a balanced diet.

(6)

A balanced diet is ensuring you eat the correct proportions of the correct foods based on your activity. The energy in = energy out therefore if elite sports performers are training and competing more, they will need more energy so will need to eat more food in comparison to someone who does little or no exercise.

They would need to eat carbohydrates, found in bread, pasta and rice, as these provide the most energy. This would be especially important for endurance athletes, such as ~~Mo~~ marathon runners as it will mean they can continue running for long periods of time without having as much to complete the race. This is why carbo-loading is done before a large race to ensure they have the energy. They provide slow-release energy. However, a 100m sprinter may not need as much carbohydrates as slow release energy isn't needed due to the speed of the event.

Only a small amount of fat (and sugar) would be eaten. This is because fat only provides a secondary source of energy, but can easily ~~gain~~ stay in your body and lead to weight gain. It's found in foods like fatty meat and cheese. This would restrict the ability of an endurance racer as fat could result in decreased access to a ~~fat~~ less efficient heat. On the other hand, performers such as sumo wrestlers where an endomorph ~~body~~ mesomorphic is needed, fat may be consumed in small.

Sports performers will eat a lot of protein. This will help them to build and repair muscle so they can continue to train ~~for~~ with a decreased risk of injury. It's found in fish and dairy and eggs. Sports such as sprinting where a mesomorph body type is key may eat a lot of it as it can help build muscle mass and strength resulting in a greater power to run quicker.

Lots of vitamins and minerals will be needed by sports performers compared to normal people who don't participate as much. They help to maintain the immune system and help the body maintained. People doing weight-bearing activities - like rugby - may need a lot of calcium for strong bones to reduce risk of fracture in a scrum meaning they are unable to participate. Also, they will need a lot of vitamin D to absorb the calcium. People who don't do weight-bearing such as swimmers, may need a lot to make up for the decreased bone density they get in exercise to reduce their risk of osteoporosis.

(Total for Question = 6 marks)

Fibre will be eaten by all sports performers to aid healthy digestion and help reduce cholesterol. Water will be drunk to prevent dehydration and control body temperature and transport nutrients. Elite performers would drink a lot to replenished water lost through intense exercise therefore decreasing the risk of dehydration or headaches preventing them from training.

Results Plus: Examiner Comments
This is a level 3, six-mark response.
The response contains several discussions points that link an aspect of a balanced diet

to its role and importance for an elite performer, or the specific nutritional requirements for specific activities. For example, in the first and second paragraph there is discussion of the need for carbohydrates for energy and a balanced energy intake based on the energy demands of two different activities (long distance running and sprinting).
The third paragraph discusses the value of fats for energy, but the need to limit intake in order to avoid weight gain. To develop this point fully, a further link would have then been made to elite performance, rather than to health.
At the bottom of page one of the response, and top of page two, there is full discussion of the role of protein from an elite performer's point of view, culminating in discussion of the need for sprinters to eat more protein so they are more mesomorph, therefore stronger, and better able to generate more power to run at faster speeds.
The remaining paragraphs on page two discuss the relevance of vitamins/minerals and water to the elite performer.
This is an outstanding response.

Mark Scheme

Q1.

	Answer	Do not accept	Additional Guidance	Marks	Total
	Tuesday	Monday any other day of the week	Accept Tues	**1 × 1**	**1**

Q2.

	Answer	Mark
	1. Accept reference to protein if related to muscle / repair / food for energy / equiv 2. Accept reference to carbohydrates/fats for energy for activity 3. Accept reference to balance between input - output / eat calories - burning off / eat in ratio to exercise / activity 4. Balance diet <u>therefore</u> well enough to exercise (1 × 1)	**(1)**

Q3.

	An explanation that makes reference to any **four** of the following: 1. Balanced diet should include macronutrients; micronutrients; water and fibre **OR** Balanced diet should include fats; carbohydrates; proteins; vitamins; minerals; water; fibre (1) --- 2. Correct proportions <u>of</u> macronutrients and micronutrients **OR** Optimal ratio of nutrients **OR** Correct amounts of nutrients (1) --- 3. Macronutrients for energy **OR** Fats **OR** Carbohydrates for energy **OR** Protein for growth and repair (1) --- 4. Micronutrients for maintaining body health **OR** Vitamins **OR** Minerals for maintaining body health (1) --- 5. Water to avoid dehydration **OR** Fibre to aid/help digestion (1) ---	***Do not accept*** *carbs in place of carbohydrates* *Healthy mix* ***Do not accept*** *carbs in place of carbohydrates* ***Do not accept*** *fluid or liquid*	must be more than simple list for full credit, however, if *list is given, provided contains* ***all*** *elements can gain point 1* *Point 2: Accept reference to relative size of proportions e.g. correct percentage of nutrients e.g. fats should form smaller part of diet than carbohydrates* (1) *Point 4 accept specific example of vitamin or mineral and effect e.g. vitamin D stronger bones* *Point 5 accept reference to replacing lost fluids due to exercise. Accept chemical equiv for water (H_2O)*	**4×1**	**4**

Q4.

Question		Answer	Do not accept	Additional Guidance	Marks	Total
		Carbohydrates	*Carbs*	*Do accept phonetic spellings*	**1x1**	**(1)**

Question		Answer	Do not accept	Additional Guidance	Marks	Total
		Remember we are not marking part (a) Provides energy	*Slow release energy*	*As reference is made to the 'missing nutrient' in the table response must relate to carbohydrates* *Can credit provides energy even if incorrect nutrient identified in (a) or if no nutrient identified in (a)*	**1x1**	**(1)**

Q5.

Question		Answer	Do not accept	Additional Guidance	Marks	Total
		Remember we are not marking part (a) Provides energy	*Slow release energy*	*As reference is made to the 'missing nutrient' in the table response must relate to carbohydrates* *Can credit provides energy even if incorrect nutrient identified in (a) or if no nutrient identified in (a)*	**1x1**	**(1)**

Q6.

	Answer	Mark
	Q - Which of the following statements is true? **D** – (Blood shunting is the term used to describe the redistribution of blood during exercise)	**(1)**

Q7.

	Answer	Mark
	D Two hours	**(1)**

Q8.

Question		Answer	Do not accept	Additional Guidance	Marks	Total
		A **linked** description of the relationship between exercise and rest that includes **two** of the following points: • During rest (muscle) **repair** takes place (1) therefore without rest will be subject to injury/overuse (1) • During rest **energy** (stores) are replaced (1) therefore without rest would not have correct energy levels to work/be fatigued/couldn't perform at their best (1) • During rest **adaptations** take place (1) therefore need rest to increase fitness (1)	*Tired (unless in context of depleted energy)*	Can credit second marking point without first. Accept response from exercise perspective Accept specific component of fitness/hypertrophy	**1x2**	**(2)**

Q9.

			Answer	Do not accept	Additional Guidance	Mark	Total
			An **explanation** that		Explanation must be linked	**2x1**	**(2)**

			makes reference to the following: **Micronutrients** • Insufficient can lead to deficiency illnesses **OR** lack of <u>vitamins/minerals</u> can lead to ill health/ **OR** micronutrients are <u>vitamins **and** minerals</u>**(1)** • for example, without enough calcium an individual could suffer with osteoporosis/weak bones making it difficult to lead a healthy, active lifestyle **(1) OR (**if approached from positive viewpoint) • (The correct ratio of) micronutrients are vitamins **<u>and</u>**	***Pt 2.*** *Keep us fit* ***Pt 3.*** *Answer that includes a list of more than vitamins and minerals or 'bodily functions'*	to correct aspect of diet. ***Pt 1.*** Credit other specific examples of impact of vitamin or mineral deficiencies ***Pt 2/4.*** Credit other <u>specific</u> examples of impact of health but must state vitamin or mineral name and purpose, e.g. calcium to strengthen bones		

			minerals **OR** they help to maintain health/body systems **(1)** • For example, iron prevents anaemia. **OR** vitamin D helps increase strength of bones **(1)**				

Q10.

	Answer	**Mark**
(i)	THIS QUESTION IS ABOUT HEALTH – NOT EXERCISE. 1. Accept specific comment e.g. Eat too much become overweight / places strain on vital organs/equiv 2. E.g. Don't eat enough become anorexic/equiv 3. E.g. Eating wrong diet can cause health problems, e.g. heart attack Do not accept eat right nutrients for exercise / energy / protein for recovery / must be a healthy diet / not diet as in dieting. Do not accept one-word answers (1 × 1)	**(1)**
(ii)	Allows recovery / less prone to illness/injury / mental health issues / stress / exhaustion / equiv Accept reverse, i.e. insufficient time for recovery/more prone to illness / mental health issues / stress / exhaustion / equiv (1 × 1)	**(1)**

Q11.

Question	Answer	Marks	Total
	Linked explanation any three of the following points: • Blood shunting occurs (1) • (Increased) blood flow to the digestive system is required after eating a large meal (1) • (However) blood flow is required to the active muscles during exercise (1) • (Resulting in) insufficient blood for increased blood flow to <u>both</u> the digestive system and active muscles /exercise causes blood flow to digestive system to be restricted/blood goes to muscles rather than digestive system (1) • Therefore insufficient blood is made available to the digestive system/meal is not fully digested /need time to digest food (1) Accept other relevant explanations.	1x3	(3)

Q12.

Question	Answer	Marks	Total
(i)	A linked explanation, e.g. • Carbohydrates provide energy (1) • Carbohydrates provide energy (1) so quality of performance remains high/optimum performance (1) • Carbohydrates provide energy (1) so they can last longer in their game/race/event • Carbohydrates provide energy (1) so they can maintain/continue activity level in game/race/event <u>without tiring</u> • Carbohydrates provide energy (1) so can increase intensity/work rate when needed in a fast break (1) Accept other relevant explanations.	1x2	(4)

Question	Answer	Marks	Total
(ii)	A linked explanation, e.g. • Protein is used for growth/ increased muscle mass/bigger muscles (1) so stronger/powerful/faster for their event (1) • Repair of tissue/muscle (1) to recover from injury/quicker recovery (1) Accept other relevant explanations.	1x2	(2)

Q13.

Question		Answer
		Discuss why elite sports performers will make sure they eat a balanced diet.

Indicative content

This is indicative content only; candidates should be credited for all relevant accurate statements related to the question.

A –Simple statements linking a list of items making up balanced diet or what a balanced diet means e.g.

- Minimum of two elements of balanced diet from: Fats, carbohydrates, proteins, vitamins, minerals, fibre and water, **or** macronutrients, micronutrients, fibre and water
- The right mix/ratio/proportions/amounts of the required nutrients in a diet - Require a balanced diet to maintain correct/healthy body weight

B –Simple statements linking food group with function e.g.

- Carbohydrates/fats for energy ('carbs' does not demonstrate required technical language) - Protein for growth/repair
- Vitamins/Minerals to reduce deficiency diseases/maintain health (accept specific examples as simple statements, e.g. calcium/vitamin D for bone density/strength, vitamin C helps heal wounds)
- Water for hydration
- Fibre to aid the digestive system

C – Developed statements linking simple statement re diet to performance e.g.

- Carbohydrates/fats for energy (S) so they can continue to work throughout the activity/not get fatigued (S+) so quality of play is not affected (D)
- Fats for long term energy use (S) so they can continue to provide energy to work aerobically (S+) throughout the activity (D)
- Protein for repair (S) of muscle tears after training (S+) so they can continue with training programme (DS)
- Protein for growth (S) so that adaptations can take place (S+) increasing the strength of the muscle (D)
- Water to remain hydrated (S) preventing dehydration (S+) otherwise exercise becomes more difficult due to elevated heart rate/unable to regulate body temperature (D)
- Calcium for increased bone density (S) making the bone stronger (S+) reducing risk of breaks in contact sports (DS)

Accept other accurate statements demonstrating ability to apply knowledge of aspects of balanced diet to importance when playing sport.

D – Developed discussion points re why a balanced diet is important e.g.

Elite play is physically demanding (S) therefore need to make sure they eat the right foods, in the correct quantities (S+) to allow them to meet the demands of the sport (D)

During match play muscles could be damaged (S) therefore it is essential they eat protein to repair the damage (S+) so they can play the next game/train (D)

A balanced diet is the correct mix of carbohydrates, fats, proteins, vitamins, minerals, water and fibre, (S) if the ratio was incorrect the body could not function at its optimum level (S+) e.g. too much fat would mean additional 'dead weight' to carry slowing the player down /increasing energy usage so they tire more quickly (D).

Nutritional requirements for activity may mean that the performer needs a different ratio of nutrients (S), for example, increased a power athlete may need increased protein intake (S+) compared to an endurance athlete (D).

Accept other accurate statements that discuss why a balanced diet is important in sport.

Level	Mark	Descriptor
Level 0	0	No rewardable material
Level 1	1-2	(i) A number of simple statements that link the items required to make a balanced diet/describe a balanced diet. **(Indicative content area A)** (ii) A number of simple statements that link food groups to function. **(Indicative content area B)** Candidates will produce brief and narrative responses, making a limited number of simple statements, probably with limited reference to the question. Little knowledge and understanding of the range of requirements. Responses produced by candidates will be mostly generalised, and may not fully address the requirement of the question to discuss why an elite sports performer will make sure they eat a balanced diet. Candidates' writing communicates ideas using everyday language, but lacks clarity and organisation. There will be frequent errors in candidates' spelling, grammar and punctuation.
Level 2	3-4	(i) Developed statements, i.e. simple statements that progress to explain the link between the function of the food group and performance in the activity. **(Indicative content area C)** (ii) Developed statements, i.e. simple statements that progress to explain the link between a balanced diet and an aspect of performance. **(Indicative content area D)** (iii) May contain a basic (but accurate) conclusion in line with previous points. Candidates' responses will be mostly accurate and include relevant factual material. Some knowledge and understanding of the requirements of a balanced diet for an elite sports performer. Candidates will have some success in addressing the requirement of the question to discuss why an elite sports performer will make sure they eat a balanced diet. Candidates' writing communicates ideas with accurate use of appropriate terminology, and the organisation of the response shows some direction and control. There will be few errors in spelling, punctuation and grammar.
Level 3	5-6	(i) Developed statements (using relevant examples) balanced and succinct. **(Indicative content areas C and D)** (ii) Probably provides a conclusion based on points raised Candidates will offer factually accurate and sustained responses that relate well to the focus of the question and successfully addresses the discursive demands.

		Sound knowledge and understanding of the requirements of a balanced diet and why it is important for specific sport performance. The discussion will be supported by accurate factual material that is relevant to the question. Both function of food groups and relevance to sporting performance will be evident with appropriate conclusions reached. Candidates' writing communicates ideas effectively using appropriate terminology, and organises material clearly and coherently. Spelling, punctuation and grammar will be accurate throughout the response.