

GCSE PE PLCs 1.1.5 Your personal health & well-being Mock Exam

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

i) **Which** of the **two days, Monday or Tuesday**, provided a **more balanced diet**? **(1)**

Tuesday

ii) **Explain** why you have **chosen** this **day** **(2)**

This is because Tuesday contains carbohydrate and fat for energy, protein for repair and growth, it has reduced calorie intake compared to Monday which avoids excessive weight gain and is a balanced diet which is necessary for exercise

Q2. Why do you **need** to **consider** what you **eat** if you **exercise regularly**? **(1)**

If you exercise regularly you will need to consider carbohydrate for energy and protein for muscle repair and growth

Q3. Explain the **requirements** of a **balanced diet**. **(4)**

The **requirements** of a **balanced diet** is the **correct or optimal ratio of macronutrients (carbohydrate and fat for energy and protein for growth and repair), micronutrients (vitamins and minerals for maintaining health), water (for hydration) and fibre (to aid digestion)**

Q4. 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**
-

Q5. 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**

Q6 Explain the link between exercise, diet, work and rest

(4)

The link between the 4 elements is that exercise prepares the body so that it is physically capable of completing tasks without being exhausted, and your diet will see the correct amount of calories to provide the body with enough energy to complete the exercise. Work and rest create a physical and mental balance which is especially important in demanding times and a balance between all 4 enables the body to function at its optimal level

Q7 Explain the importance, and use, of two macro nutrients

(4)

One macro nutrient is carbohydrate. It is important because it provides energy.

A second macro nutrient is protein. It is important because it is responsible for the growth and repair of muscle.

Could also have ...

A macro nutrient is fat. It is important because it provides energy.

Q8 Explain the importance, and use, of two micro nutrients

(4)

One micro nutrient are minerals such as calcium. It is important for maintaining health because it provides bone strength

One micro nutrient are vitamins such as vitamin D. They are important for maintaining health because they allow for general skin, bone, teeth and vision health and the formation of red blood cells`

Q9 Explain the importance, and use, of;

i) Water is important because it provides hydration which is important in the marathon to avoid dehydration especially on a hot day

ii) Fibre is important because it aids digestion which is important after you have eaten a meal before exercise as the blood will eventually be shunted away from the digestive system

(4)

Q10 Explain the need to **consider** the **timing** of **dietary intake** when **performing** the **marathon** (4)

When **performing the marathon** an **athlete** needs to **ensure** that they **eat a carbohydrate rich meal at least two hours prior to exercise** so it is **fully digested to provide energy**. **During the marathon eating simple sugars (glucose gels or powders) will provide energy**. **During exercise blood is shunted (redistributed around the body) from the digestive system to the working muscles** which means that **blood supply to the digestive system is massively reduced**, which means that any **undigested food will stop being digested**.

Q11 Explain the **need to consider** the **redistribution** of **blood flow (blood shunting)** during **exercise** (4)

Individual's **need to consider blood shunting during exercise because blood is shunted (redistributed around the body) from the major body systems (such as the digestive system) to the working muscles**. This is so that **more oxygen can be delivered to the working muscles**, so that **energy can be released**. This also means however that **blood supply to the other systems (such as the digestive system) is massively reduced** which means that any **undigested food will stop being digested**.

Q12 Diet is an important consideration in a healthy, active lifestyle. The list 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)

Carbohydrate

(b) **State** the **importance** of the **missing nutrient** in **maintaining** an **active lifestyle**. (1)

Carbohydrate is important because it provides energy

(c) Some vitamins and minerals can increase bone strength. Apart from diet, **how** else can a **person increase** their **bone strength**? (1)

Weight bearing activities (running) will increase bone density and therefore increase bone strength

(d) **Explain** why we are told **not to exercise immediately** after **eating a large meal**. (3)

At rest 85% of blood is directed at the organs (which includes the digestive system) which is important for the digestion of food. During exercise blood is shunted away from the digestive system and delivered to the working muscles. We are told not to exercise immediately after eating a large meal because the food will not have been fully digested because the blood supply has been massively reduced. You should eat 3-4 hours before exercise.

Total Marks 40