

Candidate 2 evidence

Total marks — 60
Attempt ALL questions

Question 1

- (a) Give two sources of high biological value protein and two sources of low biological value protein. 4

High biological value protein 1 Liver

High biological value protein 2 Beef

Low biological value protein 1 Beans

Low biological value protein 2 Lentils

- (b) State two functions of protein. 2

Function 1 For growth and repair of body cells

Function 2 It is a secondary source of energy

- (c) Give two reasons for choosing a vegetarian diet. 2

Reason 1 They believe it is healthier as they consume less saturated fat

Reason 2 For moral reasons ~~and religiously~~ ~~reasons~~ for example if they care about animal welfare

• They may have been brought up that way by family members.

Question 1 (continued)

- (d) Explain two ways in which supermarkets can encourage consumers to eat more fruit and vegetables.

2

Way 1 They could provide pre-prepared fruit and vegetables so they are quicker to consume and prepare.

Way 2 They could put fruit and vegetables on promotion e.g. buy one get one free.

- They could give out coupons for reductions on fruit/vegetable prices
- They could involve celebrities to promote fruit and vegetables
- They could provide recipes / recipe cards to inform consumers on ways to incorporate fruit and vegetables.

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Question 2

A 19 year old male is studying at university and enjoys playing football.

The table below shows the daily reference values for males aged 19-50 years.

Dietary Reference Values for males aged 19-50 years					
Estimated average requirements	Reference Nutrient Intakes				
Energy (MJ)	Protein (g)	Vitamin B (mg)	Iron (mg)	Sodium (g)	Vitamin C (mg)
10.6	55.5	1.0	14.8	1.6	40



The table below shows the dietary analysis of the 19 year old male.

Dietary analysis of his typical day's meals					
Energy (MJ)	Protein (g)	Vitamin B (mg)	Iron (mg)	Sodium (g)	Vitamin C (mg)
9.5	57	0.8	13.7	2.5	45

Question 2 (continued)

- (a) Taking account of the Dietary Reference Values (DRVs) for males aged 19-50 years, evaluate the suitability of his typical day's meals. 6

Evaluation • The 19 year old active male is consuming more protein than recommended. This is good because as he is still young it will be used for growth, repair and maintenance of his body cells.

• The active male isn't consuming enough Vitamin B. This is bad because it is required to help release the energy from carbohydrates. Without enough vitamin B he may not have enough energy to play football.

• The male who is studying at university is not consuming enough iron. This is bad because without it he may eventually become anaemic. This could mean he feels tired and listless which would affect his studies.

• The ~~young~~ young male is consuming a much higher amount of sodium than is required. This is bad as sodium increases blood pressure and could eventually lead to coronary heart disease in later life.

• The young, active male is consuming too much vitamin C. This is good because as he is active he may get cuts and wounds. (continued at back)

Question 2 (continued)

- (b) Give two dietary factors that may contribute to the development of coronary heart disease. 2

Dietary factor 1 A diet too high in saturated fat will increase blood pressure and could lead to coronary heart disease.

* Dietary factor 2 Consuming too much alcohol will also increase the likelihood of developing coronary heart disease

- (c) Describe two functions of water in the diet. 2

Function 1. Water combines with USP (non-starch polysaccharides) to form faeces. The water helps to soften faeces, making them easier to excrete

Function 2 Water is required for all bodily fluids e.g. saliva, urine, sweat etc.

↓
consuming foods which are high in 'bad' cholesterol will lead to arteries becoming clogged up. This puts a strain on the heart and can lead to coronary heart disease.

Question 3

- (a) Identify and explain two stages in the food product development process.

4

Stage 1 Concept generation - this is when all ideas are thought up and brought together.

Stage 2 Concept screening - this is when the best ideas are taken forward to the next stage and any ideas that are considered unsuitable are taken out.
(more at back)

- (b) Explain functional properties of the following ingredients when making a baked item.

3

Sugar • Sugar adds flavour to a baked item.

• Sugar also caramelises, giving the product a golden colour

• Sugar when creamed with fat will also provide aeration into the product.

This is because the sugar particles cut into the fat particles and the fat then surrounds the air pockets that are formed.

Egg

• When whisked, the proteins in egg ^{whites} become denatured. This leads to the structure of the protein loosening which allows air into the ~~product~~ ^{product}. This leads to aeration of a baked product.

• Egg can also bind a baked ingredient together as when it is cooked it becomes solid.
(coagulation)

Question 3 (continued)

- (c) Explain one advantage and one disadvantage to the consumer of using Fairtrade food products. 2

Advantage: An advantage of a consumer buying fairtrade products is that the customer knows that the workers who grew the fairtrade product are being paid the fair amount. This is an advantage because it means they will feel more satisfied knowing that they are helping the people who have produced the product.

Disadvantage: A disadvantage to a consumer buying fairtrade food products is that they generally cost more. This is a disadvantage because it will cost the consumer more than if they did not buy fair-trade. (more at back)

they cost more
than the other

- (d) Explain why a food manufacturer would carry out sensory testing: 1

Sensory testing allows a food manufacturer to find out the customer's preferences, likes and dislikes. This then helps them to develop a product that consumers want.

Question 4

- (a) An elderly woman who lives alone is considering ordering frozen ready meals from a food delivery company.

Read the information provided about the ready meals service.

Food Delivery Company
<ul style="list-style-type: none"> • 300 ready meals and desserts to choose from ✓ • Order online from website ✓ • Selection of meals enriched with calcium and vitamin D ✓ • Small portion range for smaller appetites • Introductory offer - 5 main meals and 2 desserts for £9.99 ✓ • All meals can be microwaved or oven cooked ✓

Evaluate the suitability of the frozen ready meals for the elderly woman.

4

Evaluation • This company is ideal for the elderly woman because they offer a wide range of ready meals and desserts. This is good because as people get older they may become more fussy so the large variety allows her to pick what she enjoys.

• This company is good for the elderly woman because you can order online from their website. This is good because the ^{elderly} woman will be less able to go to a supermarket so the online factor makes the company ideal.

• This company is good for the old woman because they have meals enriched with calcium and vitamin D. This is good because ~~as~~ as people get older they ~~are~~ are at a higher risk of developing osteomalacia so the vitamin D and calcium help to prevent this.

• All the meals can be microwaved which is ideal for the elderly woman as it doesn't require much preparing and therefore makes it possible for her to make her own meals.
(more at back)

Question 4 (continued)

- (b) Explain how each of the following factors could affect consumers' choice of food.

3

Food miles • If a food product has travelled a long distance a customer may be less likely to purchase it.

This is because due to fuel costs the product may be more expensive. If a product has travelled a long distance it may also affect the taste of the product.

Nutritional knowledge • If a consumer has little nutritional knowledge they may be more likely to buy food which are high in saturated fat. They also may not know how to eat a variety of different foods to ensure they get all the essential nutrients, ~~and~~ vitamins and minerals.

Budget • If a consumer has a high budget then they may choose to eat out in restaurants more often.

When they are in a restaurant they are quite likely to choose foods which are high in saturated fat or have a high salt content. This could then lead to hypertension or obesity.

- * (c) Explain why preservatives are beneficial in food production.

3

• Preservatives help to extend foods' shelf life. This is good as it means that consumers can then keep the product for longer once they have bought it.

• Preservatives are also good because it delays the time it takes bacteria to grow. This is good because it means the company is less likely to lose money on food that's been spoiled.

• Preservatives are good as it means foods can be delivered around the world with a lower chance of them going off while in transit.

Question 5

(a) During an inspection of the kitchen of a take away food outlet, the following issues were found:

- raw chicken stored beside salad
- fresh cream with an expired use-by date
- the fridge temperature is 11°C

Explain how these issues could cause food poisoning.

3

• Raw chicken contains many bacteria.

If stored beside a food product which is not going to be cooked then it will contaminate it.

This could lead to salmonella/ecoli.

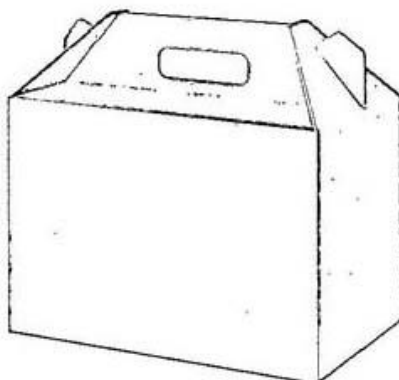
• Dairy products are a highly perishable food which will grow many bacteria quickly.

If cream is eaten after the use-by date a high amount of bacteria is likely to be present which would then lead to food poisoning.

• 11°C is in the 'danger zone' for the growth of bacteria. This means it is a temperature at which bacteria can multiply rapidly. A fridge should be roughly 1°C-5°C [Turn over to slow down the growth of bacteria. At 11°C the amount of bacteria multiplying will be high, therefore increasing the risk of food poisoning

Question 5 (continued)

(b) Take-away food is packed in a cardboard carry box.



Evaluate cardboard as a packaging material.

3

Evaluation

- Cardboard is a good packaging material as it is widely recycled. This means that it doesn't make too great of an environmental impact and can be reused to make other items.
- Cardboard is good for packaging material as logos/designs/branding can easily transfer onto ~~the~~ it.
- Cardboard is also ideal packaging material as it is lightweight.
- Cardboard is not a good packaging material however as if it gets wet it becomes easily breakable.

Question 5 (continued)

- * (c) Identify two consumer organisations and describe how they protect the consumer when buying food.

4

Organisation 1 Environmental Health Department

Protection • They will investigate claims of unhygienic practice or if a customer has become ill after eating out. They can then take food samples from the location and if necessary close down anywhere that poses

Organisation 2 Food Standards Agency

Protection • They ensure that labelling on food products is accurate and they also monitor food additives. This prevents people with allergies having a reaction and also allows people to choose foods based on their likes and dislikes.

Trading Standards

- They ensure that bars/restaurants/shops are selling products that are the weight/volume they are said to be

[Turn over

a threat to consumers' health.

Question 6

(a) Explain two nutritional benefits of eating breakfast cereal. 2

* Benefit 1 • They provide ^{carbohydrates} fibre/ASP which is a good source of slow release energy for throughout the day

Benefit 2 • They are a source of vitamin B complex which helps to release energy from carbohydrates.

It also helps the production of red blood cells and maintaining a healthy nervous system

(b) State two points of information which must be included by law on a label for breakfast cereal.

Explain how each of these points of information can help consumers make informed choices. 4

Point of information 1 Allergy information/ingredients

Explanation This is so that people with allergies are aware of what is in the product they are buying to prevent them from having an allergic reaction

Point of information 2 How to contact the manufacturer

Explanation This is so that if a consumer has any questions or issues about the product they ~~will~~ have a way to contact the manufacturer.

(c) Explain two ways of preventing tooth decay. 2

Way 1 Assuming ~~consuming~~ ~~foods~~ ~~for~~ ~~example~~ ~~brushing~~ ~~teeth~~ will help to ~~prevent~~ prevent gum. Brushing teeth 2-3 times a day will prevent

Way 2 • Consuming low amounts of sugar and acidic foods reduces the build up of plaque, which prevents tooth decay.

• Flossing helps to remove any plaque between teeth

build up of plaque (which leads to tooth decay)

Question 6 (continued)

(d) Describe two ways of reducing salt in the diet

2

✱

Way 1 • Using spices instead of salt will provide flavour and reduces the intake of salt.

Way 2 • Using herbs in dishes provides flavour without the need for salt

• Reducing intake of ready meals and fast food can reduce the intake of salt.

[END OF QUESTION PAPER]

2a) The vitamin C helps to heal cuts and wounds faster.

- The young male is consuming more Vitamin C than is required. This is good because it is required for the absorption of iron and will help to prevent him from becoming anaemic which would affect his studies.
- The male who enjoys football is consuming a high amount of protein. This is good because the protein will be used to help repair any body cells that may be damaged if he strains or tears any muscles while playing football.
- The active male is consuming too much vitamin C. This is good as it is a water soluble vitamin and will be lost through sweat when he is playing football. If he is consuming more than is required it ensures that even if he loses any through sweat he is still receiving enough.

ADDITIONAL SPACE FOR ANSWERS

^{preferred}

3a) Prototype production - This is when a sample of the idea is made. Different variations could be produced to see which is the ~~preferred~~ ^{preferred} product.

Marketing plan - This is when the Price, Place, Promotion and Product are decided to ensure that when it is released onto the market, consumer will buy it.

Product launch - This is when the product is released into the market for sale.

3c) Fairtrade food products are also less widely available. This is a disadvantage because a consumer may not always be able to find fairtrade products.

4a) The ready meals have a special introductory price. This is good for the elderly lady as she may not have much money available. She may be living off of benefits and the cheaper price would be useful.

- The company do smaller portions for smaller appetites. This is good as it means there will be less food wastage. The elderly woman will not feel guilty for leaving food and money won't be wasted on food that isn't being consumed.