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## **Workshop 2 – Health and Food Technology Question Paper**

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### **Candidate G Evidence**

**This section contains  
candidate evidence – please store securely**

## Question 1

MARKS  
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A restaurant is extending its range of fish dishes.

- (a) Identify **two** nutrients found in oily fish.

Give **one** function of each of the nutrients identified.

4

Nutrient 1 Protein

Function Growth and repair of bodily tissues

Nutrient 2 Vitamin C

Function Increases eye strengthens immune system and prevents some cancers.

- (b) State **two** practical ways to increase consumption of fish.

2

Practical Way 1 Have a tuna salad for lunch instead of a ham sandwich or a chicken baguette

Practical Way 2 Swap one meal a week with fish instead of meat

- (c) The restaurant has the following dish on its menu.

*Baked Cod with a Herb Breadcrumb Crust*

Explain how this dish could contribute to healthier eating.

2

It is baked so no fat is added through frying and nothing is lost through grilling. The breadcrumb crust is a good source of fibre and carbohydrates. The cod is high in nutrients. Such as vitamin A for eyesight.



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Question 1 (continued)

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(d) An Environmental Health Officer inspects the restaurant and finds the following.

- The fridge is operating at 10°C
- Desserts are stored in the same fridge as raw meat

Describe how this could cause food poisoning.

2

Fridges should be maintained between 0-4°C in order for bacteria not to be able to grow. With the fridge at 10°C bacteria are able to grow and multiply. Raw meat should be kept in a freezer. Blood from the meat could drip onto the desserts and the spread of bacteria could cause food poisoning or salmonella.

Total marks 10

[Turn over



\* X 7 3 6 7 5 0 1 0 3 \*

## Question 2

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An active three year old boy is starting nursery school.

The table below shows the daily reference values for 1 to 3 year olds.

Dietary Reference Values for 1 – 3 year olds					
Estimated average requirements	Reference Nutrient Intakes				
Energy (MJ)	Protein (g)	Vitamin B (mg)	Iron (mg)	Vitamin C (mg)	Calcium (mg)
5.2	14.5	0.6	6.9	30	350

The table below shows the daily analysis of this 3 year old boy's meals.

Dietary analysis of his typical day's meals					
Energy (MJ)	Protein (g)	Vitamin B (mg)	Iron (mg)	Vitamin C (mg)	Calcium (mg)
4.8	16.0	0.5	7.4	27	370

- (a) Taking account of the Dietary Reference Values (DRVs) for 1 – 3 year olds, evaluate the suitability of his typical day's meals.

6

Evaluation The 3 year old boy is not getting enough energy. This is not suitable as he requires energy for his active lifestyle. Without enough energy he may feel fatigued and unable to do as much.

The 3 year old boy is also not getting enough vitamin B. This is not suitable as vitamin B is required for absorption of energy. Without enough vitamin B he will not absorb enough energy which will leave him tired and be stored as fat which can lead to problems with obesity in later life.

The 3 year old is not getting enough vitamin C...



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Question 2 (continued)

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- (b) Identify and explain two different ways in which food manufacturers could develop products that encourage healthier eating for children.

4

Way 1 Concept generation

Explanation They could discuss new ideas or improve an existing product.

Way 2 Prototype production

Explanation They could get a group of consumers to try the new or improved product and perform a rating test.

Total marks 10

[Turn over



\* X 7 3 6 7 5 0 1 0 5 \*

Question 3

A local tourist attraction wants to sell a healthy picnic bag option for families. Each picnic bag must serve four people.

- (a) (i) Consider all the information shown in the table below.

Features	Picnic Bag A	Picnic Bag B	Picnic Bag C
Choice of sandwich fillings	3 options	4 options	2 options
Type of Bread	Wholemeal sliced bread	Tortilla wrap	White crusty rolls
Drinks	<ul style="list-style-type: none"> <li>2 litre bottle of flavoured water</li> <li>4 cups</li> </ul>	<ul style="list-style-type: none"> <li>1 litre bottle of vanilla milkshake</li> <li>2 cups</li> </ul>	<ul style="list-style-type: none"> <li>2 litre of fizzy pineapple juice</li> <li>6 cups</li> </ul>
Packaging	Reusable insulated bag	Reusable plastic bag	Brown paper bag
Additional items included	Paper plates and napkins  4 fruit salad tubs	Hand wipes  Family size bag of crisps	Money off voucher for next purchase  Family size chocolate bar
Cost	££	£££	££

Key:  
 £ Inexpensive → £££ Expensive

Identify the most suitable picnic bag for the tourist attraction to sell.

1

Picnic Bag A



\* X 7 3 6 7 5 0 1 0 6 \*

## Question 3 (a) (continued)

(ii) Give three reasons for your choice of picnic bag.

3

Reason 1 It is inexpensive and with 3 options  
of sandwich fillings customers will want to  
buy it as it is value for money.

Reason 2 It is healthy. The wholemeal bread provides  
fibre, carbohydrates and iron and the fruit salad provides  
many vitamins and minerals.

Reason 3 It comes with cups, paper plates &  
napkins. This is beneficial to customers as  
they have something to eat on.

(b) State two functions of dietary fibre.

2

Function 1 To aid digestion

Function 2 To stop water from being bulky.

[Turn over]



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Question 3 (continued)

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- (c) The choice of packaging is considered carefully by food manufacturers. Evaluate the use of aluminium cans for the drinks industry.

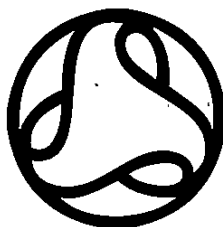
2



Evaluation They are easy to open. When refrigerated  
the ~~metal~~ aluminium retains the cold keeping the  
contents cool. They can be recycled so it is not  
damaging to the environment.

- (d) (i) Identify the following symbol.

1



Symbol Recycling

- (ii) Explain how this symbol may influence consumer choice of foods.

1

Explanation Environmentally aware customers  
may choose items with this symbol so that  
they know when they throw it away it won't  
be sent to landfill and left to decay and damage  
the environment.

Total marks 10





Question 4

MARKS

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A Scottish bakery chain wants to extend its range of scones.

- (a) Explain the following two stages in the product development process. 2

Concept generation Ideas are discussed and manufacturers  
decide whether to create a new product or  
improve an existing one.

First production run The product is made in the  
factory to see whether it can be made in  
bulk.

[Turn over



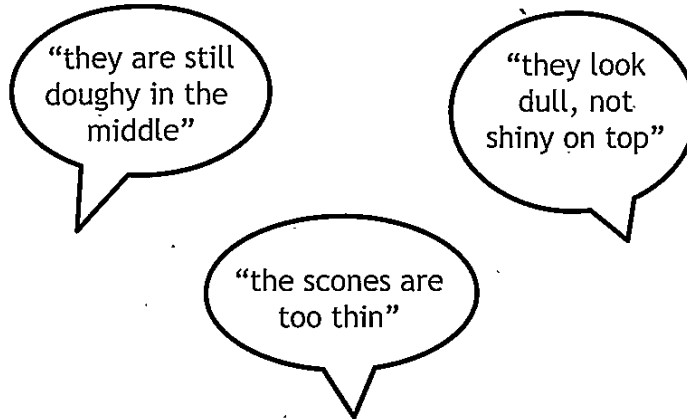
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Question 4 (continued)

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- (b) The bakery chain carried out sensory testing with a group of consumers. They received the following comments about the scones.



Explain why these faults could have happened when producing the scones.

4

Doughy in the middle - oven door opened before they were fully cooked.

Too thin - rolled too thin or not enough rising agent added

Dull - Crystallisation and/or dextrinisation have not taken place.



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Question 4 (continued)

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- (c) Describe two rules that must be followed when carrying out sensory testing.

2

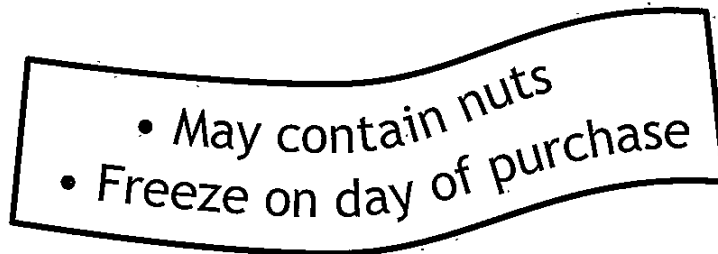
Rule 1 Must give honest opinion or rating.

\_\_\_\_\_

Rule 2 Must be put in order from 1 to 5

\_\_\_\_\_

- (d) The label on the scone packaging includes the following information.



Explain one benefit to the consumer of each of the above points of information.

2

• Informs anyone with a nut allergy that the product may not be safe.

• Informs consumer of storage information so that they can avoid food poisoning or the product rotting before it has been used.

Total marks 10



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Question 5

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- (a) A couple want to reduce the cost of their weekly food shopping, and would like to buy ethically produced food, with low food miles.

Make four evaluative comments about the suitability of the following method of shopping for the couple.

4



Sunnytown Weekly Farmers Market

- Locally grown organic fruit and vegetables at low prices
- Free range eggs available
- Over 30 stalls of food produce
- All fish and meat vacuum packed
- Fairtrade group selling a range of coffee, tea and chocolate

Evaluation

Point 1 Food miles are very low ~~which~~ since it is locally produced. Which is suitable

Point 2 The chickens the eggs came from probably lived on a local farm since they are free range which is suitable.

Point 3 There is a wide variety to choose from the 30 stalls which is suitable.



\* X 7 3 6 7 5 0 1 1 2 \*

Question 5 (a) (continued)

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Point 4 The fish and meat are suitable as the  
Vacuum packing keeps it fresh and keeps the  
colour.

- (b) Explain how the following factors may affect consumer choice of food. 2

Budget Consumers need food to be affordable  
because if it costs too much to buy groceries they may  
buy takeaways which negatively impact their health.

Advertising Celebrity endorsement may influence  
them if a celebrity they like is eating something  
they may want to be the same.

- (c) Give two reasons why Trading Standards officers would inspect the food stalls at a Farmers Market. 2

Reason 1 To make sure products are sold fairly

Reason 2 To make sure ~~consumers~~ products are  
safe and can be legally sold.

[Turn over for Question 5 (d) on Page fourteen



\* X 7 3 6 7 5 0 1 1 3 \*

Question 5 (continued)

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- (d) Evaluate the suitability of Ultra Heat Treated (UHT) products for the consumer.

2

UHT is suitable as it kills bacteria.  
It is, however, also unsuitable because it  
can impact flavour.

Total marks 10

[END OF QUESTION PAPER]



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ADDITIONAL SPACE FOR ANSWERS

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2a) ...which is not suitable as vitamin C is needed to strengthen the immune system to help fight infection and can prevent some cancers. Without enough vitamin C ~~the~~ his immune system may not be strong enough to fight infection.

The 3 year old boy is getting too much calcium. This is suitable as it helps develop strong bones and teeth and prevents rickets and osteoporosis later in life.

The 3 year old boy is getting too much protein. This is suitable as it is needed for growth and repair of bodily tissues, which he would require if he were to fall and scrape his knee in the playground. ~~the~~

The 3 year old boy is getting too much iron. This is suitable as it helps to produce red blood cells and haemoglobin to carry oxygen around the body and to prevent anaemia.



\* X 7 3 6 7 5 0 1 1 5 \*