



**Home Economics  
Leaving Certificate  
Higher Level**

**Past Exam Questions on  
Diet and Health**

### Q3 Section A 2013

3. The conditions listed below are caused by a deficiency in the diet of specific vitamins. Identify the vitamin in each case. (6)

Conditions	Vitamin
Night blindness	
Rickets	
Poor blood clotting	
Anaemia	
Beri-beri	
Neural tube defects	

## Q1 Section B 2013

1. Irish healthy eating guidelines encourage people to eat a variety of foods based on the *Food Pyramid*. Findings are presented below on the percentage of respondents consuming the recommended number of daily servings from each shelf of the *Food Pyramid* (1998 and 2007).

(SLAN 2007: *Survey of Lifestyle, Attitudes and Nutrition in Ireland. Dietary Habits of the Irish Population, Department of Health and Children*)

	1998 %	2007 %
Cereals, breads and potatoes (6+ daily servings)	40	26
Fruit and vegetables (4+ daily servings)	56	65
Milk, cheese and yoghurt products (3 daily servings)	22	20
Meat, fish, poultry and alternatives (2 daily servings)	36	39
Top shelf: foods high in fats, sugar or salt (less than 3 daily servings)	14	14

- (a) In relation to the information provided in the chart, comment **and** elaborate on the percentage of respondents consuming the recommended number of daily servings from each shelf of the *Food Pyramid*. (24)
- (b) Identify **and** give an account of the main factors that are contributing to the prevalence of obesity in Ireland. (16)
- (c) Outline the significance of fatty acids in the diet. (8)
- (d) Describe the structure of **each** of the following:  
• cis fatty acids  
• trans fatty acids  
• omega 3 fatty acids. (12)
- (e) Discuss how food labelling assists consumers in making informed food choices. (20)

**Q1 Section A 2012**

1. Give one main function of sodium in the diet. (6)

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List two good dietary sources of sodium.

- (i) \_\_\_\_\_ (ii) \_\_\_\_\_

**Q5 Section A 2012**

5. Complete the following table in relation to alternative (novel) protein foods. (6)

	Source	Product
Plant		
Micro-organisms		

## Q1 Section B 2012

1. 'Food-based dietary guidelines' is the complete scientific term for a set of healthy eating messages provided for a population, in terms of how much and which types of foods to eat for good health.

*(Food Safety Authority of Ireland, FSAI)*

New recommendations for food-based guidelines for healthy eating in Ireland were devised by the FSAI. An extract relating to the recommended servings per day for two food groups (bread/cereals and fruit & vegetables) is presented in the table below.

Age		5-13 years		14-18 years		19-50 years		51+ years	
Gender		Male	Female	Male	Female	Male	Female	Male	Female
Bread, Cereals etc. Servings	Moderately active	3-5	3-4	5-7	4	5-7	4-5	4-5	3-4
	Sedentary	3-5	3-4	4-5	3	4-6	3-4	4	3
Fruit & Vegetables Servings		5	5	5-6	5	5-7	5-6	5	5

- (a) In relation to the two food groups referred to in the table, comment and suggest reasons for the variations in the recommendations made. (24)
- (b) Give an account of carbohydrates and refer to:
- the chemical structure of a monosaccharide
  - the formation of disaccharides
  - the hydrolysis of sugar to include inversion. (24)
- (c) Discuss the importance of balancing energy intake and energy output. (12)
- (d) Identify and discuss contemporary trends in food shopping practices. (20)

## Q2 Section B 2012

2. 'Almost six in ten people are aware of the "five or more a day message" but on average Irish people claim to be eating only three portions of fruit and vegetables a day.'

*(Bord Bia)*

- (a) Discuss the options available to consumers when selecting and purchasing fruit and vegetables. (12)
- (b) Give details of the nutritional significance and the contribution to the diet of either fruit or vegetables. (20)
- (c) Give an account of Vitamin A under each of the following headings:
- biological functions
  - effects of deficiency
  - properties. (18)

## Q3 Section A 2011

3. State three effects of calcium deficiency on the body. (6)

(i) \_\_\_\_\_

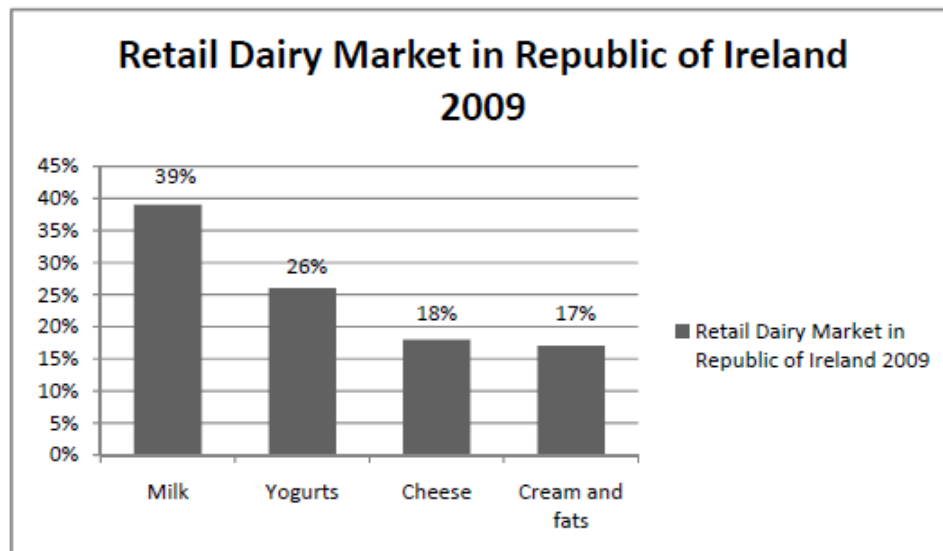
(ii) \_\_\_\_\_

(iii) \_\_\_\_\_

## Q1 Section B 2011

1. The National Dairy Council (NDC) plays a vital role in driving a sustainable dairy industry in Ireland and in educating consumers on the role of dairy in their lifestyles.

The chart below provides information on the retail dairy market in Ireland in 2009 (excluding independent/doorstep sales).



(Dairy: Food for Life Annual Review Plan 2009&2010. NDC)

- (a) Using the information provided in the chart, comment and elaborate on consumer consumption of milk and dairy products in Ireland. (20)
- (b) Give an account of protein and refer to:
- the structure of an amino acid
  - how a peptide bond is formed
  - properties.
- (28)
- (c) Describe one process used by manufacturers to prolong the shelf life of milk. In your answer refer to:
- name of process
  - how the process is carried out
  - the effect of the process on the nutritive value of milk.
- (12)
- (d) Comment and elaborate on the growing popularity of foods produced by small businesses and home enterprises. (20)

## Q2 Section B 2011

2. 'Diabetes affects people from all walks of life, from the very young to the very old and is now considered an epidemic that is exploding across the world.'

*(World Health Organisation)*

- (a) Write an informative account of diabetes.

Refer to:

- types
- symptoms
- specific dietary requirements that should be followed in order to manage the condition.

(30)

- (b) Classify artificial sweeteners and give one example of each.

(12)

- (c) Outline the uses of sweeteners in food manufacture.

(8)

## Q3 Section A 2010

3. State two functions of folate (folic acid) in the diet.

(6)

(i) \_\_\_\_\_

(ii) \_\_\_\_\_

## Q4 Section A 2010

4. List three main functions of energy in the body.

(6)

(i) \_\_\_\_\_

(ii) \_\_\_\_\_

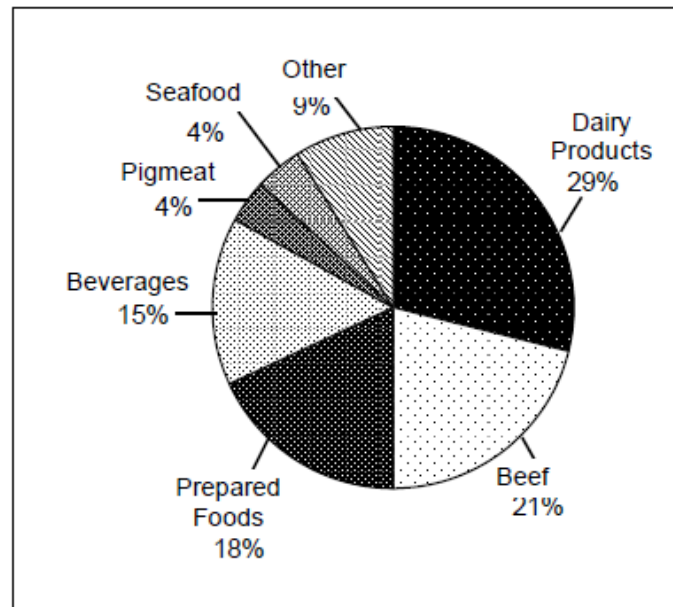
(iii) \_\_\_\_\_



## Q1 Section A 2010

1. Estimates of the distribution of Irish agri-food and drink exports in 2008 by sector are shown below.

Breakdown of Irish food and drink exports, 2008 (%)



Source: Bord Bia

- (a) (i) Comment and elaborate on the distribution (%) of Irish food and drink exports as shown above. In your answer refer to **four** sectors. (24)
- (ii) Give details of career opportunities available within one of the sectors named. (24)
- (b) Meat makes an important contribution to the intake of micronutrients such as iron. Give an account of iron and refer to:
- sources in the diet
  - biological functions
  - recommended daily allowance (RDA) for adults. (21)
- (c) Identify and explain **three** factors which affect the absorption of iron in the body. (15)
- (d) Discuss the factors that may affect consumers' decision making in relation to the purchase of meat and meat products. (20)

**Q2 Section B 2010**

2. 'Few Irish people consume the two portions of fish recommended each week. Despite being surrounded by some of the best fishing and fish in the world we are often reluctant to try this incredibly healthy food.'

*Press Release – Evening Herald*

- (a) Evaluate the nutritional and dietetic contribution that fish makes to the diet. (20)
- (b) Recommend one dry method of cooking and one moist method of cooking suitable for fish.  
In relation to each method recommended:
- state the underlying cooking principle involved
  - comment on the palatability of the cooked fish. (20)
- (c) Identify and discuss two contemporary trends in Irish eating patterns. (10)

**Q3 Section A 2009**

3. Give three specific dietary guidelines for a person with diabetes. (6)

- (i) \_\_\_\_\_  
\_\_\_\_\_
- (ii) \_\_\_\_\_  
\_\_\_\_\_
- (iii) \_\_\_\_\_  
\_\_\_\_\_

## Q1 Section B 2009

1. 'The key to a nutritionally adequate vegetarian diet is balance, ensuring that where foods are specifically omitted, suitable alternatives are included so that dietary quality is not compromised.'  
(*British Nutrition Foundation, Nutrition Bulletin 30*)

The following table provides information on the nutritive value of minced beef and quorn mince.

(*Nutritional information per 100g*).

	Energy	Protein	Fat	CHO	Fibre	Vitamins	Minerals
Minced Beef (raw)	225 kcal	19.7g	16.2g	0	0	B Group	Iron 1.4mg Sodium 80mg
Quorn Mince	94 kcal	14.5g	2.0g	4.5g	5.5g	0	Sodium 100mg

- (a) Using the information provided in the table, evaluate the contribution of quorn mince to the diet of vegetarians. (24)
- (b) (i) Using quorn mince, plan and set out the menu for a balanced three course meal suitable for a vegan.  
(ii) Indicate how the dishes selected meet the requirements of a vegan diet. (15)
- (c) Vitamin B12 is sometimes lacking in the diet of vegetarians.  
Give an account of *vitamin B12 (cobalamin)* and refer to:
- sources in the diet
  - properties
  - biological functions. (21)
- (d) Describe some of the measures taken by food manufacturers / retailers in order to meet the needs of consumers who have specific dietary requirements. (20)

## Q2 Section A 2008

2. Give one main function of potassium. (6)

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List two good sources of potassium in the diet.

- (i) \_\_\_\_\_ (ii) \_\_\_\_\_

**Q3 Section A 2008**

3. How does osteoporosis affect the body? (6)

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State two possible causes of this condition.

(i) \_\_\_\_\_

(ii) \_\_\_\_\_

## Q1 Section B 2008

1. 'Fat is an essential part of our diet. Fat has health benefits but it also has a lot of negative aspects. Consumers must make informed decisions on the amount and type of fat included in their daily diet.'  
(Consumer Choice)

The following table provides information on three commonly used products.  
(Typical % values per 100g).

<i>Constituents</i>	<i>Extra Light Spread</i>	<i>Original Spread</i>	<i>Butter</i>
Energy	188 kcal	531 kcal	744 kcal
Fat	18g	59g	82.2g
Saturated fatty acids	5.1g	12g	52.1g
Monounsaturated fatty acids	4.1g	17g	20.9g
Polyunsaturated fatty acids	8.8g	29.5g	2.8g
Omega 3 fatty acids	1.6g	3.5g	0.6g
Trans fatty acids	0.3g	0.5g	2.9g

- (a) Using the information provided in the table, evaluate each of the **three** products described, having regard to current dietary advice on fat intake. (24)
- (b) Describe the structure **and** give **one** example of **each** of the following:  
• saturated fatty acids  
• monounsaturated fatty acids  
• polyunsaturated fatty acids. (24)
- (c) Write an explanatory note on **each** of the following properties of lipids:  
• rancidity  
• emulsification. (12)
- (d) Explain how (i) advertising and (ii) a person's health status might influence decision making when purchasing dairy products. (20)

**Q2 Section B 2008**

2. 'Fruit and vegetables are highly nutritious and an essential part of the diet, however only 21% of adult men and 19% of women in Ireland are meeting the current World Health Organisation target, with young children eating even less.' (safefood)

(a) Discuss (i) the nutritional significance and (ii) the contribution to the diet of fruit and vegetables. (20)

(b) Suggest one method of food preservation which could be used to preserve a surplus of home-grown fruit or vegetables. Explain the underlying principle of the method of preservation you have selected. (15)

(c) Write an informative note on food irradiation. (15)

**Q3 Section A 2007**

3. (a) List four different sources of calcium in the diet. (6)

(i) \_\_\_\_\_

(ii) \_\_\_\_\_

(iii) \_\_\_\_\_

(iv) \_\_\_\_\_

(b) Identify two factors that inhibit the absorption of calcium.

(i) \_\_\_\_\_

(ii) \_\_\_\_\_

**Q8 Section A 2007**

8. (a) Outline the main function of *Omega-3 fatty acids* in the diet. (6)

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\_\_\_\_\_

\_\_\_\_\_

(b) Name two foods that are rich in *Omega-3 fatty acids*.

(i) \_\_\_\_\_ (ii) \_\_\_\_\_

## Q1 Section B 2007

1. “Mandatory fortification with folic acid of most breads on sale in Ireland is the policy recommendation by the National Committee on Folic Acid Food Fortification”.

(Press release 2006).

The following table provides information on the nutritive value of commonly used breads. (Nutritional information per 100g).

	Energy	Protein	Fat	Starch	Fibre	Vitamins	Minerals
White Bread	251kcal	8g	1.7g	43.3g	3.6g	2.8mg	Iron 1.7mg Calcium 100mg
Wholemeal Bread	241kcal	9.6g	3.1g	40.7g	6.0g	2.23mg	Iron 3mg Calcium 28mg
Crispbread (Ryvita)	318kcal	8.5g	2.1g	65.5g	18.0g	1.91mg	Iron 3.3mg Calcium 86mg
Flour Tortillas	313kcal	8.6g	7g	52.9g	1.4g	Trace	Sodium 1.1g

- (a) Using the information provided in the table, evaluate and compare the contribution that each bread makes to the Irish diet. (24)
- (b) In relation to starch, explain each of the following:
- gelatinisation
  - dextrinisation. (12)
- (c) Give an account of *folic acid/folate* and refer to:
- sources in the diet
  - properties
  - biological functions
  - recommended dietary allowance (RDA). (28)
- (d) Define food fortification.  
Outline the benefits of fortified foods to the consumer and to the food manufacturer. (16)

## Q2 Section B 2007

2. “Coronary Heart Disease (CHD) remains the leading cause of death in Ireland accounting for over 7,000 deaths annually”.

*(CHAIR – Coronary Heart Attack Ireland Register)*

- (a) Identify and elaborate on (i) the lifestyle changes **and** (ii) the dietary guidelines that should be followed in order to reduce the incidence of coronary heart disease. (16)
- (b) Plan a day’s menu for a person with coronary heart disease (CHD). Include **one functional food** in the menu and state a reason for its inclusion. (22)
- (c) Write an informative account of cholesterol. (12)

## Q3 Section A 2006

3. Define Coeliac condition. (3)

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Name **three** foods which should be avoided by a person with coeliac condition. (3)

(i) \_\_\_\_\_

(ii) \_\_\_\_\_

(iii) \_\_\_\_\_

## Q2 Section B 2006

2. *More than one in three Irish women do not get enough calcium.*

- (a) State:  
(i) **four** possible ill-effects of a diet deficient in calcium;  
(ii) the recommended dietary allowance (RDA) of calcium for (a) adults and (b) pregnant women. (18)
- (b) Give details of the stages involved in the manufacture of yoghurt. (20)
- (c) Outline the measures taken by the Dairy Industry to meet current trends in the eating patterns and lifestyles of the Irish consumer. (12)