



**General Certificate of Secondary Education
June 2010**

Food and Nutrition

45851

Final

Mark Scheme

Mark schemes are prepared by the Principal Examiner and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation meeting attended by all examiners and is the scheme which was used by them in this examination. The standardisation meeting ensures that the mark scheme covers the candidates' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for the standardisation meeting each examiner analyses a number of candidates' scripts: alternative answers not already covered by the mark scheme are discussed at the meeting and legislated for. If, after this meeting, examiners encounter unusual answers which have not been discussed at the meeting they are required to refer these to the Principal Examiner.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of candidates' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper. Further copies of this Mark Scheme are available to download from the AQA Website: www.aqa.org.uk

Copyright © 2010 AQA and its licensors. All rights reserved.

COPYRIGHT

AQA retains the copyright on all its publications. However, registered centres for AQA are permitted to copy material from this booklet for their own internal use, with the following important exception: AQA cannot give permission to centres to photocopy any material that is acknowledged to a third party even for internal use within the centre.

Set and published by the Assessment and Qualifications Alliance.

Question	Part	Sub Part	Marking Guidance	Mark	Comments
1	a		<p>Examples of answers to credit</p> <p>Segment Bread, rice , potato, pasta</p> <p>Importance in the diet Filling/adds bulk Helps reduce the need to snack Fibre content (Slow releasing) energy</p> <p>Segment Fruit and Vegetables</p> <p>Importance in the diet Low in fat Contains a range of vitamins Fibre Anti-oxidants</p> <p>Segment Meat, fish, eggs and beans</p> <p>Importance in the diet Protein for growth, maintenance and repair Iron</p> <p>Segment Milk and dairy foods</p> <p>Importance in the diet Calcium for strong teeth and bones Vitamins A and D</p> <p>Credit one function for each segment</p>	4	Candidates need to give a simple explanation rather than a one word answer.

1	b		Look for a colourful and healthy meal. Allocate 1 mark for a relevant food from each food group 2 extra marks to be awarded for colour and texture. Total marks 6	6	
1	c		Obesity Tooth decay/dental caries Coronary heart disease/high cholesterol Diabetes Credit any 3 relevant points	3	
Question	Part	Sub Part	Marking Guidance	Mark	Comments
2	a		Seeds e.g. sesame, sunflower etc Oils e.g. sunflower, corn, olive, sunflower, rape seed etc Nuts e.g. brazil, peanuts etc Fruits e.g. avocado pear Credit any 2 examples	2	Candidate must name oil and not just state vegetable oil.
2	b		Vitamins A,D,E or K Credit any 2 answers	2	Accept Retinol but not beta-carotene
2	c		Saturated fats:- all the carbon atoms are saturated with hydrogen atoms Saturated fats are usually solid at room temperature Saturated fats are usually from animal foods whereas polyunsaturated are oils and soft margarines Unsaturated fats:- some of the carbon atoms are joined to others by a double bond. May be mono unsaturated or polyunsaturated. Credit any 5 suitable points Simple answer should	5	Credit one response linked to health e.g: Saturated fat makes cholesterol/or is linked to coronary heart disease.

			only score 1-2 marks Better quality answer 3-5		
2	d		Small intestine 1 Bile 1 Emulsifies fats 1 Lipase 1 Breaks fats into glycerol 1 And fatty acids 1 Simple explanation – maximum 3 marks Detailed response 3-5 marks	5	
Question	Part	Sub Part	Marking Guidance	Mark	Comments
3	a		Attractive packaging Small packs Bright colours TV adverts Comics/magazines Celebrity endorsement/Sponsorship by TV stars/sportsmen Characters Sports vouchers Free toys, games, puzzles, gifts, special offers Slogans/jingles Links with a TV programme/film Credit any 4 responses	4	Response should be linked to manufacturers not supermarkets.
3	b		Pester power is the pressure put onto parents by their children to make purchase items they want.	1	
3	c		Advertising must be legal, decent, honest and truthful Trading standards 1 Sale and supply of Goods Act Food Safety Act Trade Descriptions Act Can complain to ASA 1 Credit reference to any of the above. Maximum 2	2	
Question	Part	Sub Part	Marking Guidance	Mark	Comments
4	a		Hygienic storage Safe transportation Provide information for consumer e.g. ingredients list, nutritional value etc. To attract customer/enhance appearance	4	

			Protect from damage Protect from dust, flies, bacteria To extend the life of a product Credit any 4 responses		
--	--	--	--	--	--

4	b		<p>Name of the product List the ingredients in descending order Weight of product Storage instructions Cooking instructions/instructions for use Date stamp Name and address of manufacturer Place of origin Credit any 6 responses</p>	6	
---	---	--	--	---	--

4	c		<p>Product placement Putting products in a prominent position to attract consumers 1 e.g. end of aisles, at checkout etc 1</p>	2	
			<p>Food miles Distance food travels from field to plate 1 This adds to CO2 emissions 1 Contributes to climate change 1</p>	2	
			<p>Organic Regulated by the Soil Commission 1 Uses traditional methods without artificial fertilizers/pesticides 1 Foods reared/grown according to traditional methods Better welfare standards Simple explanation 1 mark Detailed explanation 2 marks</p>	2	

Question	Part	Sub Part	Marking Guidance	Mark	Comments
5	a		<p>Type of convenience food Dried /dehydrated</p> <p>Example Milk,potatoes,soup etc</p> <p>Type of convenience food Frozen</p>		Candidates must give a correct type of convenience food to be credited with an example.

			<p>Example Pizzas, vegetables etc</p> <p>Type of convenience food Bottles/Jars</p> <p>Example Ready made sauce Jam etc.</p> <p>Type of convenience food Cook chill meals</p> <p>Example Ready meals</p> <p>Type of convenience food Ready to eat</p> <p>Example Biscuits, cakes, crisps etc</p> <p>Type of convenience food Part Processed</p> <p>Example Ready diced vegetables Sauce mix Ready made pastry etc.</p> <p>Type of convenience food Take-away</p> <p>Example Pizza Fish and chips Curry etc.</p> <p>Credit 3 types of convenience foods and one relevant example for each.</p>		
5	b		More women work/less time to prepare meals/convenience foods are quick/saves time	3	

			<p>More leisure activities Families eat at different times More families have freezers More families have microwaves Marketing/advertising Technology – greater range of products available May be cheaper than making a meal from scratch Loss of cooking skills Can buy in one portion sizes/suit people living on their own. Credit any 3 responses</p>		
5	c		<p>To help food keep longer – preservatives To improve keeping quality – antioxidants To improve flavour – flavourings, flavour enhancers, sweeteners To improve texture – emulsifiers, stabilisers To improve colour – colourings Credit 3 relevant functions and 3 examples</p>	6	

Question	Part	Sub Part	Marking Guidance	Mark	Comments
6	a		Size in relation to floor space Capacity with regard to types of food to be frozen/or number of people in the family Type of freezer e.g. fridge freezer, chest freezer, upright freezer Money available Energy efficiency Cost to run Colour – white, silver etc Manufacturers name Reliability Choose a frost free model BEAB/BSI labels Credit any 5 relevant points	5	
6	b		-18°C	1	Need to give unit to be awarded mark
6	c		Place freezer in a dry place as damp conditions may cause rusting Keep freezer in a cool place Put freezer in a place where air can circulate around it Keep freezer full as it will cost less to run Do not put warm foods into the freezer Fast freeze foods to ensure small ice crystals Do not open door any more than is necessary Defrost regularly if required Label food to be stored with type of food, weight and date In the case of a power cut keep freezer closed Only freeze fresh foods/in peak condition	9	

			<p>Use suitable packaging materials Remove as much air as possible from packaging Freeze only for recommended storage time Keep at the correct temperature/use a freezer thermometer Never refreeze thawed foods</p> <p>Criteria for award of marks</p> <p>1-3 Rather muddled. Answer shows only a superficial knowledge of how to use a freezer successfully. Little use of terminology. Basic communication skills and poor spelling.</p> <p>4-6 Fair understanding shown of how to use a freezer successfully. A range of points made. Satisfactory communication skills and spelling.</p> <p>7-9 Good understanding shown of the use of a freezer. Candidate mentions a good range of points. Good communication skills and most words spelt correctly.</p>		
Question	Part	Sub Part	Marking Guidance	Mark	Comments
7	a		<p>Warmth Moisture Food Time Oxygen/lack of oxygen The correct PH Credit any 5 correct responses</p>	5	
7	b		<p>Bread Cheese</p>	2	

			Fruit and Vegetables Jam Credit any 2 correct answers		
7	c		Campylobacter E Coli Listeria Salmonella Bacillus cereus Clostridium Perfringens Credit any 3 correctly named bacteria. Allow for misspelling providing word is recognisable.	3	
7	d		Cheese Yoghurt Bread Quorn Credit any correct example	1	
7	e		Buying: Look for clean shops Look for assistants who handle foods hygienically Check there are no animals in he shops Check date stamps Buy chilled and frozen foods last Make use of cool boxes Take shopping straight home Storing: Put chilled/frozen foods away immediately Rotate stock and use in date order Follow storage instructions on the packet Keep foods wrapped and protected from flies etc Prevent cross contamination Put raw meat at the bottom of the refrigerator, cooked meat above it Keep dried foods in storage containers to	9	

		<p>prevent them getting damp Store eggs in refrigerator Check dates on perishable foods Keep strong smelling foods e.g. fish away from eggs etc Do not overload refrigerator/allow air to circulate</p> <p>Criteria for award of marks</p> <p>1-3 Rather muddled. Answer shows only a superficial knowledge of how to buy and store foods safely, Little use of terminology. Basic communication skills and poor spelling.</p> <p>4-6 Fair understanding shown of how to buy and store food safely. A fair range of points made. May deal with one area better than the other. Satisfactory communication skills and spelling.</p> <p>7-9 Good understanding shown of how to buy and store foods safely. Candidate mentions a good range of points. Good communication skills and most words spelt correctly.</p>		
--	--	---	--	--