

# **Home Economics (Food, Nutrition and Health)**

Advanced GCE

Unit **G004**: Nutrition and Food Production

## **Mark Scheme for June 2013**

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This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

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**Annotations**

used in the detailed Mark Scheme (to include abbreviations and subject-specific conventions)

Annotation	Meaning
	Unclear
	Benefit of doubt
	Caret sign to show omission
	Not answered question
	Repeat
	Noted but no credit given
	Tick

Question			Answer	Marks	Guidance
1	(a)	(i)	<p><b>Two</b> marks are available. <b>One</b> mark for any correctly identified good source</p> <ul style="list-style-type: none"> <li>• Dairy products e.g. milk, cheese, yoghurt and other (but not butter)</li> <li>• White flour and other products made from white flour</li> <li>• Green leafy vegetable e.g. broccoli, watercress</li> <li>• Fish where bones are eaten e.g. sardines, canned salmon</li> <li>• Nuts</li> <li>• Pulses</li> <li>• Soya products such as tofu and tempeh.</li> <li>• Dried figs, rhubarb, dates, kumquats, dried apricots, oranges, prunes</li> </ul>	2	<p>Accept two dairy products/green veg/fish with bones</p> <p><b>Credit will be given for all valid points.</b></p>
		(ii)	<p><b>Three</b> marks are available. <b>One</b> mark for stating each function.</p> <ul style="list-style-type: none"> <li>• It is essential for building and maintaining healthy bones and teeth</li> <li>• For the contraction of muscles</li> <li>• The maintenance of a regular heart beat</li> <li>• For nerve function/impulses</li> <li>• It is involved in blood clotting</li> <li>• It is needed for the activity of several enzymes</li> <li>• Calcium may reduce the risk of osteoporosis/brittle bones/fractures.</li> </ul>	3	Only accept bones and teeth once.
	(b)	(i)	<p><b>One</b> mark is available. <b>One</b> mark for stating any correct food source.</p> <ul style="list-style-type: none"> <li>• eggs</li> <li>• shellfish</li> <li>• poultry</li> <li>• meat</li> <li>• dairy produce</li> <li>• fortified cereals products.</li> </ul>	1	
		(ii)	<p><b>One mark</b> is available.</p> <p><b>One</b> mark for stating either <b>vegans, fruitarian</b> or the <b>elderly</b>.</p>	1	

Question		Answer	Marks	Guidance
1	(iii)	<p><b>Two marks</b> are available. <b>One mark</b> is available for describing each effect.</p> <ul style="list-style-type: none"> <li>• The development of <b>pernicious</b> anaemia/</li> <li>• The symptoms include tiredness/fatigue/lack of energy</li> <li>• tingling/numbness</li> <li>• loss of memory/ confusion/mental deterioration</li> <li>• chest pain</li> <li>• Vitamin B12 is vital for a healthy nerve function/ deficiency can also cause damage/inflammation of the nerves.</li> </ul>	2	
	(c) (i)	<p><b>Two marks</b> are available for each function.</p> <p><b>Emulsifiers</b></p> <ul style="list-style-type: none"> <li>• Emulsifiers help to improve the consistency of food during storage and processing.</li> <li>• Emulsifiers such as lecithin found in eggs, help mix ingredients together that would normally separate, such as oil and water emulsions.</li> <li>• Lecithin is used in salad dressings, low fat spreads and mayonnaise.</li> </ul>	2	Explanation + example
	(c) (ii)	<p><b>Nutritional additives</b></p> <ul style="list-style-type: none"> <li>• Nutritional additives can enhance nutrient content of certain foods eg sports drinks, cereals, to back up a nutritional claim by manufacturers</li> <li>• May be added to restore nutrients lost during food processing, eg white flour</li> <li>• UK law requires that iron, calcium carbonate, thiamine and niacin are added back to white and brown flour after processing</li> <li>• Nutrients are added to some substitute products so they have a similar nutritive value to the original product. For example, margarine/spreads has vitamins A and D added to levels similar to butter.</li> </ul>	2	Explanation + example

Question		Answer	Marks	Guidance
1	(iii)	<p><b>Antioxidants</b></p> <ul style="list-style-type: none"> <li>• Antioxidants make food last longer/extend shelf life/reduce wastage</li> <li>• Vitamin C is able to slow down oxidation in fruit and vegetables and is used in fruit juices to extend shelf life</li> <li>• Antioxidants are used to prevent rancidity in many products which contain a small quantity of fat, for example stock cubes, dried soups and cheese spreads.</li> </ul>	2	To gain the second mark they need to mention that the removal of oxygen stops chemical reactions responsible for food going off or rancid.
	(d)	<p><b>2 points x 2 marks from the following:</b></p> <ul style="list-style-type: none"> <li>• The Maillard reaction occurs (1) a chemical reaction between proteins (amino acids) and starch (maltose) to produce a brown colour (1)</li> <li>• The starch is converted into dextrin and is called dextrinisation (1). This process produces the brown crust on baked products (1)</li> <li>• Caramelisation occurs (1). When sugars are heated above their melting point, they produce a range of brown substances collectively known as caramel. Eventually the caramel burns or carbonises if heating continues (1)</li> <li>• The application of heat to proteins produces coagulation (1), which is the change from a liquid to a solid structure, and is an example of proteins denaturing (1). The process of coagulation in both egg and wheat proteins in the production of cakes (1)</li> <li>• Raising agent is activated, carbon dioxide/steam is produced (1) and the cake rises (1)</li> </ul>	2	

Question		Answer	Marks	Content	Guidance
					Levels of response
1	(e)	<p><b>Answers may include:</b></p> <ul style="list-style-type: none"> <li>• The energy balance is concerned with the intake of energy and the expenditure of energy by the body</li> <li>• When an individual's energy intake is equal to their energy expenditure their body weight will remain stable</li> <li>• Individuals who consume more energy than required will over time, put weight on and those who consume less energy than required will lose body weight</li> <li>• Energy balance is concerned with having an energy intake which matches energy expenditure so there is no weight gain or loss</li> <li>• An imbalance can be associated with diet related illness e.g. obesity</li> <li>• Energy requirements vary between individuals and varies with age, gender, and activity level</li> <li>• Individuals with a fast metabolic rate burn energy more quickly</li> <li>• The basal metabolic rate (BMR) is the energy required for supporting the basic processes required for life e.g. heart beat and maintaining body temperature</li> <li>• Normal Energy Balance</li> <li>• This occurs when energy intake and expenditure is equal and balanced. This will result in a stable weight, with no weight gain or no weight loss</li> <li>• Negative Energy Balance</li> </ul> <p style="text-align: right;"><b>PTO</b></p>	6	Providing appropriate examples demonstrates clear knowledge	<p><b>Level 3 (5–6 marks)</b> Candidates are able to demonstrate clear knowledge of how an energy imbalance can contribute to obesity. The explanation will be detailed. The explanation will be well developed and supported by the use of subject specific examples. Ideas will be expressed clearly and fluently. There will be few, if any, errors of grammar, punctuation or spelling.</p> <p><b>Level 2 (3–4 marks)</b> Candidates are able to demonstrate satisfactory knowledge of how an energy imbalance can contribute to obesity. The explanation will show understanding. The explanation may not be fully developed and may lack specific examples. There may be occasional errors of grammar, punctuation or spelling.</p> <p><b>Level 1 (1–2 marks)</b> Candidates are able to demonstrate superficial knowledge of how an energy imbalance can contribute to obesity. They will show very limited understanding. The information may be poorly expressed and errors of grammar, punctuation and spelling will be intrusive.</p> <p>0 = no response worthy of credit</p>

Question			Answer	Marks	Guidance	
					Content	Levels of response
			<ul style="list-style-type: none"> <li>• This occurs when energy intake or food intake is less than energy expenditure. In this situation weight loss will occur because a negative energy balance is created</li> <li>• Positive Energy Balance</li> <li>• This occurs when energy intake is greater than energy expenditure. The surplus energy will be stored resulting in weight gain</li> <li>• Energy requirements vary considerably between different groups</li> <li>• Obesity is caused by an imbalance of energy intake. If a person regularly consumes more energy than they use up, they will start to gain weight and eventually become overweight or obese</li> <li>• Energy from dietary fat is more likely to be stored as fat in the body than energy from dietary carbohydrates. Fat is energy dense and is converted into glucose and then into body fat much more efficiently than the conversion of carbohydrates and protein in to body fat</li> <li>• Most dietary carbohydrate is stored as glycogen or used directly as energy</li> <li>• Obesity is a condition in which excessive fat accumulates in adipose tissue and impairs health. It is defined in adults as a body mass index (BMI) above 30.</li> </ul> <p><b>Credit will be given for all valid points.</b></p>			

## SECTION B

Question		Answer	Marks	Guidance	
				Content	Levels of response
2		<p><b>Answers may include:</b></p> <p><b>Nutritional value of fruit and vegetables</b></p> <ul style="list-style-type: none"> <li>• Fruit and vegetables are rich sources of a number of nutrients most notably vitamin C, folates, and non-starch polysaccharides</li> <li>• They also contain a number of other nutrients including sugars, Vitamin A, Vitamin B group, iron and calcium</li> <li>• The government recommends we eat at least five portions of fruit and vegetables daily a portion is approximately 80 g</li> <li>• A diet rich in fruits and vegetables may lessen the risk of cardiovascular disease and some cancers</li> <li>• Food processing and preparation techniques can lead to the loss of some nutrients in fruit and vegetables, especially sensitive nutrients such as vitamin C and folic acid</li> <li>• Storing fruit and vegetables for long periods will also reduce their vitamin C and folic acid content.</li> </ul> <p><b>Choice of fruit and vegetables</b></p> <ul style="list-style-type: none"> <li>• Because of modern growing techniques and transport systems, it is easy to obtain fruit and vegetables all year round, from countries around the world</li> <li>• Consumers can choose from value/basic range, luxury range, organic and Fair Trade products</li> <li>• Ready prepared and washed products are available to suit people with busy lifestyles</li> </ul> <p style="text-align: right;"><b>PTO</b></p>	25		<p><b>Level 4 (19–25 marks)</b> The candidate demonstrates an accurate knowledge of the nutritional value, choice and use of fruit and vegetables in food preparation and cooking. The explanation will be detailed. The information will be presented in a fluent and well structured manner. Subject specific terminology will be used accurately. There will be few, if any errors of grammar, punctuation and spelling.</p> <p><b>Level 3 (13–18 marks)</b> The candidate demonstrates a good knowledge of the nutritional value, choice and use of fruit and vegetables in food preparation and cooking. The explanation will show understanding. The information will be presented clearly and some subject specific terminology will be used. There may be occasional errors of grammar; punctuation and spelling are able to explain satisfactorily.</p> <p><b>Level 2 (7–12 marks)</b> The candidate demonstrates some knowledge of the nutritional value, choice and use of fruit and vegetables in food preparation and cooking. The explanation will show a limited understanding and may lack detail. The information will be presented simply and some subject specific terminology will be used, although not always used appropriately. There will be errors of grammar, punctuation and spelling.</p>

Question			Answer	Marks	Content	Guidance
						<b>Levels of response</b>
			<ul style="list-style-type: none"> <li>Fruit and vegetables are classified into groups: <i>Soft fruits</i> e.g. raspberry, blackberry. <i>Citrus fruits</i> e.g. orange, lime, lemon. <i>Stone fruits</i> e.g. plum, apricot, peach. <i>Vine fruits</i> e.g. grape, watermelon. <i>Fruit vegetables</i> e.g. aubergine, marrow. <i>Legumes</i> e.g. pea, bean and lentil. <i>Flower vegetables</i> e.g. broccoli, cauliflower. <i>Leafy vegetables</i> e.g. spinach, cabbage. <i>Stem vegetables</i> e.g. asparagus, fennel and celery. <i>Fungi</i> e.g. oyster and button mushroom. <i>Bulbs</i> e.g. onion, garlic, shallot and leek. <i>Roots</i> e.g. beetroot, swede, carrot, parsnip</li> <li>Chopping and preparing fruit and vegetables a short time before they are needed for cooking helps retain vitamins, as does cooking them for the minimum amount of time in as little water as possible</li> <li>Dietary fibre, vitamins and minerals can be retained if fruit and vegetables are eaten with their skin on. Some fruit and vegetables go brown when cut and exposed to the air, for example, apples and potatoes. This is because of oxidation and is called enzymic browning.</li> </ul> <p><b>Uses of fruit and vegetables</b></p> <ul style="list-style-type: none"> <li>Addition of colour e.g. fruit and vegetables contribute colour to the diet. The colour pigments <b>chlorophyll</b> (green), <b>carotenoids</b> (orange) and <b>anthocyanins</b> (purples)</li> <li>Addition of flavour e.g. fruit and vegetables contribute flavour to the diet</li> <li>Addition of texture e.g. fruit and vegetables contribute texture to the diet. They contain varying amounts of water and fibre, which accounts for the difference in their texture.</li> </ul>			<p><b>Level 1 (1–6 marks)</b> The candidate demonstrates superficial knowledge of how the nutritional value and/or choice and use of fruit and vegetables in food preparation and cooking. They will show very limited understanding. The information will be poorly expressed with little or no use of subject specific terminology. Errors of grammar, punctuation and spelling may be intrusive.</p> <p>0 = no response worthy of credit</p>

PTO

Question			Answer	Marks	Guidance	
					Content	Levels of response
			<ul style="list-style-type: none"> <li>• Setting e.g. fruit contains pectin which, when mixed with an acid and sugar, helps mixtures to set</li> <li>• Eaten raw e.g. some fruit and vegetables can be eaten raw because they are appetising and doing so will ensure they retain maximum colour, flavour and texture</li> <li>• Cooking e.g. can be cooked by a variety of methods – stewing, boiling, steaming, baking, grilling, stir frying, and microwaving. Cooking also reduces bulk, enabling more to be eaten</li> <li>• Processing methods include drying, canning, freezing and pickling.</li> </ul> <p><b>Credit will be given for all valid points.</b></p>			

Question		Answer	Marks	Content	Guidance
					Levels of response
3		<p><b>Answers may include:</b></p> <p><b>Benefits of plastics.</b></p> <ul style="list-style-type: none"> <li>Plastics have a high strength to weight ratio, making them strong and lightweight</li> <li>Polystyrene is a good insulator and can be used to serve hot drinks and takeaway foods</li> <li>Plastic can withstand the temperatures required for commercial freezing</li> <li>Flexible plastic packaging in the form of Stand-Up Pouches (SUPs) can be used for soups and sauces</li> <li>SUPs save shelf space and are more attractive to consumers</li> <li>Laminating the polythene film on the package can improve a product's resistance to oxygen and extend the shelf life of foods containing fat</li> <li>Plastics offer the consumer lightweight, easy to carry and strong food storage</li> <li>Some plastic packaging incorporates easy to pour spouts and re-closure devices.</li> </ul> <p><b>Limitations of plastic</b></p> <ul style="list-style-type: none"> <li>The use of plastics is an area of increasing concern as they are made from non-renewable oil resources</li> <li>Although biodegradable plastics are possible, they are expensive for the food retailer</li> <li>Some types of plastic can be recycled but the majority are difficult to recycle because the facilities for recycling plastic do not cover all types</li> <li>Educating the consumer about recycling plastics is a challenge as there are so many types of plastic.</li> </ul> <p style="text-align: right;"><b>PTO</b></p>	25		<p><b>Level 4 (19–25 marks)</b> The candidate demonstrates an accurate knowledge of the benefits and limitations of the different materials used for food packaging for the manufacturer, retailer and consumer. The explanation will be detailed. The information will be presented in a fluent and well structured manner. Subject specific terminology will be used accurately. There will be few, if any errors of grammar, punctuation and spelling.</p> <p><b>Level 3 (13–18 marks)</b> The candidate demonstrates a good knowledge of the benefits and limitations different materials used for food packaging for the manufacturer, retailer and consumer. The explanation will show understanding. The information will be presented clearly and some subject specific terminology will be used. There may be occasional errors of grammar; punctuation and spelling are able to explain satisfactorily.</p> <p><b>Level 2 (7–12 marks)</b> The candidate demonstrates some knowledge of the benefits and limitations of the different materials used for food packaging for the manufacturer, retailer and consumer. The explanation will show a limited understanding and may lack detail. The information will be presented simply and some subject specific terminology will be used, although not always used appropriately. There will be errors of grammar, punctuation and spelling.</p>

Question			Answer	Marks	Content	Guidance
						<b>Levels of response</b>
			<p><b>Paper and cardboard</b></p> <p><b>Benefits of paper and cardboard</b></p> <ul style="list-style-type: none"> <li>• Paper is used for bags, labels, greaseproof paper, cartons, parchments</li> <li>• Board is used for boxes, sleeves, lids and many outer food containers</li> <li>• Pulp board is a good surface for printing</li> <li>• Many weights and grades are available</li> <li>• Corrugated board has fluting and is stronger</li> <li>• Paper can be coated or laminated to reduce absorption of oil or fat</li> <li>• Paper can be recycled. It is inexpensive, lightweight</li> <li>• Paper and board are easy to carry and tend to be easier to open than other materials</li> <li>• <b>'Ovenable' boards</b> can withstand microwave temperatures</li> <li>• Paper and board is easy to collapse after use, which makes disposal easier.</li> </ul> <p><b>Limitations of paper and cardboard</b></p> <ul style="list-style-type: none"> <li>• Paper and board can be damaged if stored in a damp environment</li> <li>• Contamination from odours or pests can occur.</li> </ul> <p><b>Metals and foils</b></p> <p><b>Advantages of metal</b></p> <ul style="list-style-type: none"> <li>• Two metals – aluminium and steel – are used in the food industry to make cans, aerosols, foil containers and metal tie closures, as well as screw tops, bottle tops, trays, foil wrappings and laminates</li> </ul> <p style="text-align: right;"><b>PTO</b></p>			<p><b>Level 1 (1–6 marks)</b></p> <p>The candidate demonstrates superficial knowledge of the benefits and limitations of the different materials used for food packaging for the manufacturer, retailer and/or the consumer. They will show very limited understanding. The information will be poorly expressed with little or no use of subject specific terminology. Errors of grammar, punctuation and spelling may be intrusive.</p> <p>0 = no response worthy of credit</p>

Question			Answer	Marks	Guidance	
					Content	Levels of response
			<ul style="list-style-type: none"> <li>• Tinned cans made from a thin layer of steel are protected from corrosion by a layer of tin inside the can</li> <li>• Metal packaging has an excellent strength-to-weight ratio</li> <li>• Foil is used for food wrappings, trays, dishes and pot lids where information can be printed or embossed onto the surface</li> <li>• Foil trays are used for cook chill meals, as uncoated aluminium foil will not react with the vast majority of foods</li> <li>• Aluminium foil is an excellent barrier to <u>light</u> and <u>oxygen</u>, reducing the risk of oxidation of fats and protecting the food from bacteria and moisture</li> <li>• Cans are available in different sizes, shapes and with direct surface decorations. The product is secure inside and contents protected from damage</li> <li>• Coatings applied to the inside of tinplate ensure that virtually any food can be canned, including foods that have a strong acidic content such as tomatoes</li> <li>• Canned food does not need the addition of preservatives</li> <li>• The food retailer is reassured that the product is protected by a shock resistant and robust material</li> <li>• The food products stored inside have a long shelf life</li> <li>• Canned food will last for many months or even years, provided it is stored in cool, dry conditions</li> <li>• Ring pull technology enables metal cans to be opened easily and reduces littering because the ring pulls do not separate from the can</li> <li>• Metals can be easily recycled.</li> </ul> <p style="text-align: right; color: red; margin: 0;"><b>PTO</b></p>			

Question			Answer	Marks	Guidance	
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			<p><b>Limitations of metal</b></p> <ul style="list-style-type: none"> <li>• There are very few disadvantages of metal packaging. However, once a metal can has been opened it cannot be resealed, so shelf life is limited</li> <li>• Environmental implications of the production of raw materials.</li> </ul> <p><b>Glass</b></p> <p><b>Benefits of glass</b></p> <ul style="list-style-type: none"> <li>• Glass bottles are used to package milk, wines, salad dressings and olive oils, preserves and jams</li> <li>• Provides a hard but brittle barrier to protect food. It is impervious</li> <li>• The addition of chemicals can produce different colours including green, blue or amber. Some food products are light sensitive and require coloured glass packaging</li> <li>• Glass can be moulded into a wide variety of shapes</li> <li>• Easily sterilised by a food manufacturer</li> <li>• Glass provides an excellent moisture and gas barrier and does not affect the taste of the food inside</li> <li>• Food processed at high temperatures can be hot filled directly into glass containers, saving manufacturing time and ensuring a high quality product is produced</li> <li>• Glass offers some advantages to the retailer, as the consumer can see the product</li> </ul> <p style="text-align: right;"><b>PTO</b></p>			

Question			Answer	Marks	Guidance	
					Content	Levels of response
			<ul style="list-style-type: none"> <li>Some premium products are associated with heavy glass packaging by consumer</li> <li>The consumer can recycle glass easily</li> <li>The consumer can reuse glass in the home for making chutneys, jams and wines</li> <li>Glass bottles and jars can be opened/resealed easily</li> </ul> <p><b>Limitations of glass</b></p> <ul style="list-style-type: none"> <li>Glass is relatively strong and durable but it is vulnerable to breakage. Retailers may suffer some profit loss due to breakages</li> <li>Mixed and dark coloured glass is currently difficult to recycle</li> <li>Glass is heavier for the consumer to carry than other packaging materials.</li> </ul> <p><b>Biodegradable and compostable packaging materials</b></p> <ul style="list-style-type: none"> <li>Biodegradable and compostable packaging is made from agricultural waste products or special crops grown for packaging production.</li> </ul> <p><b>Credit will be given for all valid points.</b></p>			

Question		Answer	Marks	Guidance	
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4		<p><b>Answers may include:</b> <b>Adolescents (11 to 18 years)</b></p> <ul style="list-style-type: none"> <li>• It is a period of considerable change centred on puberty</li> <li>• <b>11–14 years.</b> Energy requirements continue to increase and protein requirements increase by approximately 50%</li> <li>• By the age of 11, the vitamin and mineral requirements for boys and girls start to differ. For boys there is an increased requirement for all the vitamins and minerals. For girls there is no change in the requirement for thiamine, niacin, vitamin B6, but there is an increased requirement for all the minerals</li> <li>• Girls have a much higher iron requirement than boys once they reach menstruation</li> <li>• <b>15–18 years. Boys:</b> The energy and protein requirements continue to increase as do the requirements of a number of vitamins – namely thiamine, riboflavin, niacin, vitamins B6, B12, C and A. Calcium requirements remain high as skeletal development is rapid</li> <li>• <b>Girls:</b> The requirements for energy, protein, thiamine, niacin, vitamins B6, B12 and C increases from the 11–14years requirements</li> <li>• Boys and girls have the same requirement for vitamin B12, folate, vitamin C, magnesium, sodium, potassium</li> <li>• Foods high in energy such as pasta, rice, potatoes, bread should be consumed, and foods high in protein such as meat, fish, eggs, nuts, pulses, should also be consumed</li> </ul> <p style="text-align: right;"><b>PTO</b></p>	25		<p><b>Level 4 (19–25 marks)</b> The candidate demonstrates an accurate knowledge of how to meet the dietary and nutritional needs of adolescents and adults. The explanation will show detailed understanding. The information will be presented in a fluent and well structured manner. Subject specific terminology will be used accurately. There will be few, if any errors of grammar, punctuation and spelling.</p> <p><b>Level 3 (13–18 marks)</b> The candidate demonstrates a good knowledge of how to meet the dietary and nutritional needs of adolescents and adults. The explanation will show understanding. The information will be presented clearly and some subject specific terminology will be used. There may be occasional errors of grammar; punctuation and spelling are able to explain satisfactorily.</p> <p><b>Level 2 (7–12 marks)</b> The candidate demonstrates some knowledge of how to meet the dietary and nutritional needs of adolescents and adults. The explanation will show a limited understanding and may lack detail. The information will be presented simply and some subject specific terminology will be used, although not always used appropriately. There will be errors of grammar, punctuation and spelling.</p>

Question			Answer	Marks	Guidance	
					Content	Levels of response
			<ul style="list-style-type: none"> <li>Calcium needs are higher because of bone development about 45% of the adult skeleton is laid down during these years</li> <li>Obesity amongst this age group is increasingly common so the aim should be to prevent it by eating sensibly.</li> </ul> <p><b>Adults (19–50 years)</b></p> <ul style="list-style-type: none"> <li>The nutritional needs of adults differ from those of adolescents because adults are no longer growing</li> <li>At the adult stage of life nutrients are needed for energy requirements, to maintain and repair body tissue, and for normal bodily functions. Energy requirements are lower for both men and women compared to adolescents</li> <li>Energy requirements for males aged 19–50 yr is 2550kcal and female 1940kcal</li> <li>Energy requirements for males aged 51–59 yr is 2550kcal and female 1900kcal</li> <li>Energy requirements decrease gradually after the age of 50 in women and age 60 in men as people typically become less active</li> <li>There is also a reduced requirement in women for magnesium, and in men for iron. The requirements for protein and most of the vitamins and minerals remain virtually unchanged in comparison to adolescents (except for selenium in men which increases slightly)</li> <li>There is also a reduced requirement in women for magnesium, and in men for iron</li> <li>The requirements most of the vitamins and minerals remain virtually unchanged compared to adolescents</li> </ul>			<p><b>Level 1 (1–6 marks)</b> The candidate demonstrates superficial knowledge of how to meet the dietary and nutritional needs of adolescents and adults. The explanation will show a very limited understanding and may lack detail. The information will be poorly expressed with little or no use of subject specific terminology. Errors of grammar, punctuation and spelling may be intrusive.</p> <p>0 = no response worthy of credit</p>



Question			Answer	Marks	Guidance	
					Content	Levels of response
			<ul style="list-style-type: none"> <li>• The Balance of Good Health gives good advice on which to base meeting dietary needs of adults. It is advisable to               <ol style="list-style-type: none"> <li>1 Base your meals on starchy foods</li> <li>2 Eat lots of fruit and vegetables</li> <li>3 Eat more fish</li> <li>4 Cut down on saturated fat and sugar</li> <li>5 Try to eat less salt – no more than 6g a day</li> <li>6 Get active and try to be a healthy weight</li> <li>7 Drink plenty of water</li> <li>8 Don't skip breakfast.</li> </ol> </li> </ul> <p><b>Credit will be given for all valid points.</b></p>			

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