



**General Certificate of Secondary  
Education**

*Home Economics: Food and  
Nutrition*

**Specimen 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.

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## Home Economics: Food and Nutrition

## Specimen Paper

Question	Examples of points to credit	Marks
1. a)	<p>A diet where no meat is eaten.  A diet which included no food from which an animal has to be slaughtered or has suffered in any way.  <b>Credit any suitable response.</b></p>	1
1. b)	<p><b>Vegan-</b> a diet which includes no food from animal sources. A very strict vegetarian.  <b>Lacto vegetarian-</b> a person who will not eat meat, fish or eggs but will eat dairy foods.  <b>Ova lacto vegetarian-</b> a person who will not eat meat or fish but will eat dairy foods and eggs.  <b>One mark for name and one for description</b></p>	4
1.c)	<p>Religious belief / cultural/ family reasons  Objections to slaughter of animals / cruelty etc.  Dietary reason  Belief that a vegetarian diet is more healthy  Economically wasteful to feed animals to slaughter.  <b>Credit any three suitable responses</b></p>	3
1.d)	Anaemia	1
1.e)	<p>Pulses, fortified cereals, green vegetables, cocoa / dark chocolate, egg yolk, bread, dried fruit.  <b>Any 2 suitable responses</b></p>	2
1.f)	<p>Pulses (peas, beans, lentils)  Soya  Cereals (wheat, rice, oats)  Nuts  Quorn  <b>Credit 3 suitable responses</b></p>	3
1.g)	<p>Where two LBV proteins are eaten together  The limiting amino acid from one protein source is supplied by another food.  Credit one suitable example of protein complementation / where two different LBV are eaten together e.g. pulses and cereals.  <b>Credit any 2 suitable responses</b></p>	2
		Total: (16)

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Question	Examples of points to credit	Marks
2. a)	To prevent constipation To prevent disorders of the digestive system To add bulk to increase waste matter <b>Any 2 suitable responses</b>	2
2. b)	Wholemeal bread, beans, lentils, nuts, high fibre breakfast cereals, wholemeal pasta, brown rice, jacket potato, fruits, vegetables <b>Any 2 suitable answers</b>	2
2. c)	Constipation Diverticular disease Bowel cancer Appendicitis Haemorrhoids  <b>Any 2 suitable foods</b>	2
		Total: (6)

Question	Examples of points to credit	Marks															
3.a)	To destroy bacteria / make food safe to eat To improve texture To improve flavour To provide hot food To combine ingredients To make new dishes <b>Any 3 suitable answers</b>	3															
3.b)	<b>Conduction-</b> heat is transferred through a substance. Metals are good conductors. Example - heat travels from hot plate to pan or up a metal spoon.  <b>Convection-</b> transfer of heat through liquids and gasses As liquid (gas) is heated it expands and rises Cold liquid (gas) moves to take its place Convection currents are set up. Example – gas oven, water in a pan  <b>Radiation</b> –heat energy passes from heat source to food Heat travels by infra-red rays which are absorbed by food through a space Example - grilling <b>Simple responses – 1 mark. Detailed answers – 2 marks</b>	2       2    2															
3.c)	<table border="1" data-bbox="384 1160 1002 1890"> <thead> <tr> <th data-bbox="384 1160 587 1227">Method of cooking</th> <th data-bbox="587 1160 783 1227">Advantages</th> <th data-bbox="783 1160 1002 1227">Disadvantages</th> </tr> </thead> <tbody> <tr> <td data-bbox="384 1227 587 1438">Boiling</td> <td data-bbox="587 1227 783 1438">Quick No fat</td> <td data-bbox="783 1227 1002 1438">Loss of water soluble vitamins Can damage structure of food</td> </tr> <tr> <td data-bbox="384 1438 587 1648">Stir frying</td> <td data-bbox="587 1438 783 1648">Less loss of water soluble vitamins. Food keeps crunchy texture</td> <td data-bbox="783 1438 1002 1648">Some fat is added</td> </tr> <tr> <td data-bbox="384 1648 587 1787">Microwave</td> <td data-bbox="587 1648 783 1787">Quick Cheap on fuel Less loss of vitamins</td> <td data-bbox="783 1648 1002 1787">Easily overcooked</td> </tr> <tr> <td data-bbox="384 1787 587 1890">Grilling</td> <td data-bbox="587 1787 783 1890">Quick Reduces fat content</td> <td data-bbox="783 1787 1002 1890">Needs watching</td> </tr> </tbody> </table> <p data-bbox="384 1921 922 1951"><b>Credit any one correct answer in each box.</b></p>	Method of cooking	Advantages	Disadvantages	Boiling	Quick No fat	Loss of water soluble vitamins Can damage structure of food	Stir frying	Less loss of water soluble vitamins. Food keeps crunchy texture	Some fat is added	Microwave	Quick Cheap on fuel Less loss of vitamins	Easily overcooked	Grilling	Quick Reduces fat content	Needs watching	8 Total : (17)
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Question	Examples of points to credit	Marks
4.a)	Food input = food output	1
4. b)	Age Gender Size Physical activity Climate State of health Pregnancy	5
4. c)	<p><b>Any 5 suitable answers</b></p> Heart disease Varicose veins High blood pressure Diabetes Gall stones Complications with operations/surgery	4 Total: (10)
<p><b>Any 2 suitable conditions could be discussed</b>  <b>Simple response with no discussion – maximum 2 marks</b>  <b>More detailed response – 4 marks</b></p>		

Question	Examples of points to credit			Marks									
5.a)	<table border="1"> <thead> <tr> <th data-bbox="392 293 539 405">Name of vitamin</th> <th data-bbox="539 293 858 405"><b>Two</b> functions in the body</th> <th data-bbox="858 293 1198 405"><b>One</b> good food source</th> </tr> </thead> <tbody> <tr> <td data-bbox="392 405 539 824">Vitamin A (Retinol)</td> <td data-bbox="539 405 858 824">To make visual purple To help you see in the dark Keep mucous membranes in throat, digestive, bronchial and excretory systems free from infection Maintain healthy skin Normal growth in children</td> <td data-bbox="858 405 1198 824">Milk, egg yolk, oily fish, liver, kidney, cod liver oil, cheese, butter</td> </tr> <tr> <td data-bbox="392 824 539 1227">Vitamin C (Ascorbic Acid)</td> <td data-bbox="539 824 858 1227">Production of blood Building and maintenance of skin and linings of digestive system Assists vitamin E in role of anti-oxidant Make connective tissue Assists building of strong teeth and bones</td> <td data-bbox="858 824 1198 1227">Citrus fruits, blackcurrants, kiwi fruit, strawberries, broccoli, raspberries, cabbage, spinach</td> </tr> </tbody> </table>			Name of vitamin	<b>Two</b> functions in the body	<b>One</b> good food source	Vitamin A (Retinol)	To make visual purple To help you see in the dark Keep mucous membranes in throat, digestive, bronchial and excretory systems free from infection Maintain healthy skin Normal growth in children	Milk, egg yolk, oily fish, liver, kidney, cod liver oil, cheese, butter	Vitamin C (Ascorbic Acid)	Production of blood Building and maintenance of skin and linings of digestive system Assists vitamin E in role of anti-oxidant Make connective tissue Assists building of strong teeth and bones	Citrus fruits, blackcurrants, kiwi fruit, strawberries, broccoli, raspberries, cabbage, spinach	6
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5.b)	<p>Prepare immediately before cooking Peel thinly Tear rather than chop Do not add bicarbonate of soda Use the minimum amount of water Minimum cooking time Steam/microwave Immerse into boiling water Cook and serve as quickly as possible <b>Credit any 5 suitable points</b></p>			5 Total: (10)									

Question	Examples of points to credit	Marks
6.a)	Abdominal pains Sickness Diarrhoea Fever /high temperature <b>Any 2 suitable answers</b>	2
6.b)	Salmonella Listeria E-coli Clostridium Perfringens Campylobacter Bacillus cereus <b>Any 3 suitable answers</b>	3
6.c)	Temperature (warm 37°C) Moisture Food Warmth <b>Any 3 answers</b>	3
6.d)	<b>Examples of points to credit</b> High risk foods – prawns, ham, rice, trifle  Ensure frozen food e.g. prawns are completely defrosted before reheating Ensure samosas are fully cooked / reheated Serve samosas hot (not warm) Keep sushi cold until served Internal temperature of food should be 72°C Use different chopping boards for raw and cooked foods Store raw meat / fish at the bottom of the refrigerator, cooked ham at the top. Ensure rice is cooked then cooled immediately. Store rice salad in refrigerator before serving. Store trifles in the refrigerator Do not make custard with lightly cooked eggs Wash hands between jobs Use separate areas for food preparation Use different chopping boards, knives etc Wash utensils well <b>Credit any 5 suitable answers</b>	8 Total: (16)



Question	Examples of points to consider	Marks
7.	<p>Lunch is high in fat from crisps, cheese and chocolate. Remove and replace with raw fruit or vegetables to lower fat content.</p> <p>Lunch is high in sugar from chocolate and coke. Replace cheese with a lower fat protein food. Replace cola with fruit juice/ water Replace chocolate with dried or fresh fruit to lower sugar content.</p> <p>Lunch is high in salt. Replace crisps with unsalted nuts to lower salt content.</p> <p>Lunch is low in fibre. Replace white bread with wholemeal. Add fruit and vegetables to increase fibre.</p> <p>Lunch is low in minerals and vitamins. Include some fruit and vegetables to increase calcium and iron content.</p> <p><b>Criteria for award of marks</b>  <b>0-3</b> – answers may be muddled and information superficial. Little reference will have been made to healthy eating guidelines. Candidate may have been able to suggest changes to the meal but with little justification. A limited number of points will have been made. Little or no use of terminology and only basic communication skills.  <b>4-6</b> – answers will be fairly well organised but may lack precision. Candidate has recognised most of the healthy eating guidelines and has made some sensible suggestions to improve the menu. There will be some use of appropriate and relevant terminology. Satisfactory communication skills.  <b>7-10</b> – answers will be well organised and clearly presented. Candidate has recognised most of the healthy eating guidelines and has been able to make sound suggestions to improve the menu. There will be good use of appropriate terminology and good communication skills.</p>	<p>Total: (10)</p>

Question	Examples of points to credit	Marks
8	<ul style="list-style-type: none"> <li>○ <b>The internet</b></li> <li>Saves time and effort / suitable for people with busy lives</li> <li>Good for people without transport or who have difficulty carrying bags</li> <li>Food delivered to your door</li> <li>Need to have computer / computer skills</li> <li>Need to have a credit/debit card</li> <li>Cannot inspect goods before purchase</li> <li>More difficult to return unsuitable goods</li> <li>May get incorrect goods / alternatives</li> <li>Computer fraud</li>   <li>○ <b>Farmers markets</b></li> <li>More limited range of foods</li> <li>Range of foods varies with availability</li> <li>Good quality foods</li> <li>Freshness</li> <li>Support local farmers</li> <li>Environmentally friendly</li> <li>Cannot handle goods</li> <li>No guarantees</li> <li>Usually need to pay cash</li> <li>Often goods are quite expensive</li> <li>May only take place once a week/month</li>   <li>○ <b>Supermarkets</b></li> <li>Sell a very wide range of different types of products</li> <li>Good parking</li> <li>In store facilities such as café, crèche, pharmacists</li> <li>Range of prices according to brands chosen / cater for different incomes</li> <li>Parking facilities</li> <li>Disabled parking/ parent and child</li> <li>Wide aisles</li> <li>Family friendly</li> <li>Everything under one roof</li> <li>Banking facilities /cash back</li> <li>May have to travel / need transport</li>   <li>○ <b>Specialist shops</b></li> <li>Wide range of a few types of goods</li> <li>Knowledgeable staff for advice and assistance</li> <li>Good customer care</li> <li>Fewer shops available, may have to travel to get there</li> </ul>	

	<p>○ <b>Corner shops</b></p> <p>Convenient for people lacking transport  Saves travel costs  Stocks everyday items  Open late / long hours  Friendly service  More expensive  Limited range of foods  No parking or limited parking</p> <p><b>Criteria for award of marks</b></p> <p><b>0-5</b> – answers may be muddled and information superficial. A limited number of points will have been made and candidates will only have a basic understanding of the advantages and disadvantages of different shopping methods. Answers may concentrate on mainly one method. Little or no use of terminology and only basic communication skills.  Poor spelling and use of grammar.</p> <p><b>6-10</b> – answers will be fairly well organised but may lack precision. A range of points will be given which will show some understanding of the advantages and disadvantages of the different shopping methods. There will be some use of appropriate and relevant terminology. Satisfactory communication skills. Candidates spell, punctuate and use the rules of grammar with reasonable accuracy.</p> <p><b>11-15</b> – answers will be well organised and clearly presented. A good range of points will be given which will show a good understanding of the advantages and disadvantages of different shopping methods. There will be good use of appropriate terminology and good communication skills. Reference will have been made to all four shopping methods. Candidates spell, punctuate and use the rules of grammar well.</p>	<p>Total: (15)</p>
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Total for paper: 100