

Design and Technology (Food Technology)

General Certificate of Secondary Education **GCSE 1954/01**

General Certificate of Secondary Education (Short Course) **GCSE 1054/01**

Mark Scheme for June 2010

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Mark schemes should be read in conjunction with the published question papers and the Report on the Examination.

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Question			Expected Answers	Additional Guidance	Marks
1	(a)		<ul style="list-style-type: none"> Refrigerator Fridge 	1 mark	1
	(b)		<ul style="list-style-type: none"> Obesity / overweight Diabetes / maintain / balance / control blood sugar levels Reduce tooth decay / tooth decay / erosion of teeth 	2 x 1 mark DO NOT ACCEPT Makes you fat/ gain weight.blocked arteries Rotting teeth/damage teeth	2
	(c)		<ul style="list-style-type: none"> Name of manufacturer Address of manufacturer Ingredients / what is in the product / contents Use by date / date marking Storage information /instructions Name of product / product description Allergy information Weight / amount Cooking instructions GM labelled Place of origin If has a nutritional claim – must include nutritional information 	3 x 1 mark DO NOT ACCEPT Sell by date Nutritional information on its own	3
	(d)	(i)	<ul style="list-style-type: none"> Cartoon characters / monkey on the bottle / picture Colourful packaging They like the fruits in it Can see colourful liquid in it Hand held by the child / appeals to independent child 	1 mark Do not accept the same answer in both sections	1
		(ii)	<ul style="list-style-type: none"> Contains fruit Nutritionally valuable to children Reference to vitamin content Not added artificial colourings / additives / sugar / chemicals Could be put in to packed lunches Can contribute / be part of the '5 a day' Child friendly size 	1 mark Reference to healthier must be qualified Reference to attractive must be qualified	1
	(e)		<ul style="list-style-type: none"> Recycling symbol /recycle / recyclable / mobius loop Vegetarian 	2 x 1 mark	2
Total					10

Question			Expected Answers	Additional Guidance	Marks
2	(a)		<ul style="list-style-type: none"> • To reduce the risk of heart disease / CHD • Obesity / being over weight • Diabetes • Breathlessness • Some cancers more common in overweight • Colon cancer more common in high fat diets • To reduces cholesterol 	2 x 1 mark DO NOT ACCEPT Heart attacks / heart failure / heart problems	2
	(b)		<ul style="list-style-type: none"> • Cut excess fat off food / meat • Grill / stir fry / dry fry meat rather than fry meat • Avoid frying foods • Choose 'light options' of / low fat food/ lean meat products – may give an example E.g, skimmed milk, low fat versions of named products / eat fruit instead of crisps. • Choose white meat rather than red meat / eat more chicken than red meat / beef Make informed choices by reading food labels / choice of foods • Remove skin from poultry • Skim fat off stews and casseroles • Consume more fish / white fish instead of meat • Spread butter / fats thinly on bread products • Bulk food products out with vegetables / fruit 	2 x 1 mark	2

Question			Expected Answers	Additional Guidance	Marks
	(c)	(i)	<ul style="list-style-type: none"> • Fruit and vegetables are low in fat • Reduce the risk of constipation • Reduce the risk of bowel cancer / cancer • Good source of vitamin C / A / vitamins • Good source of fibre • Help contribute to a balanced diet / 5 a day • Contain antioxidants • Iron in green leafy vegetables / pulses 	2 x 1 mark	2
		(ii)	<ul style="list-style-type: none"> • More convenient / easier for busy people / less effort required • Saves time / ready to cook • Can buy in small quantities • Less waste – can see there is no waste on the product • Do not have the skill to prepare them • Can often be microwaved in the bag / container • Can be cheaper if you are not going to use the whole of a cabbage. • Allows us to buy out of season vegetables. • Gives more variety / choice in the diet 	2 x 1 mark Do not accept cheaper / easier unless qualified Do not accept quicker to prepare	2
		(iii)	<ul style="list-style-type: none"> • Stir fry • Steam • Boil / boiling water • Microwave 	2 x 1 mark	2
			Total		10

Question		Expected Answers		Additional Guidance	Marks
3	(a)			4 x 1 mark	4
		Specification point	Specification point	Credit if labelled on diagram Credit if this is clearly seen on the diagram Must clearly relate to TWO or more textures	
		To have at least two different layers	<ul style="list-style-type: none">Drawing has two clearly identified layersWritten explanation of what the two layers are eg different layers of sponge / icing / filling		
		To be decorated	<ul style="list-style-type: none">Use of icingPipingDecorations eg Hundreds and thousands, sweets, pre manufactured components, fruit, nuts		
		To be an original shape	<ul style="list-style-type: none">Must not be a circle / bun / bar / rectangle / squareStatement about the shape / why it is novel – may relate to a theme / sporting event etc.		
		To have a variety of textures	<ul style="list-style-type: none">Must state the foods and the textures Sponge – soft / chewy Icing - creamy / smoothCorrect reference made to any other decorations e.g. chocolate leaves crisp. Fruit chewy.		

Question		Expected Answers	Additional Guidance	Marks
	(b)	<ul style="list-style-type: none"> Strength of the material / strong material / protection / so that the product does not break / crumble as cakes mixtures are soft. Size / big enough so that the decoration / cake is not crushed / damaged / that the icing is not damaged / sticks to the packaging material. Material used is suitable for products which contain fat – could leave grease on materials such as card and therefore the packaging would not look attractive. Keeping quality / keep the product fresh / stops product going stale/ prevents bacterial contamination / what type of packaging will best suit the product so that its shelf life is as long as possible. Cost of packaging materials. Size / amount of packaging materials to be used – reference to waste disposal. Whether environmentally friendly materials can be used / can recyclable materials be used. What shape to use. Material is suitable to be printed on. Attractive to the consumer / so customer buys it / eye catching / attractive to target group / colourful / window to see product Labelling information / legal requirement included Lightweight / easy to carry 		2
	(c)	<ul style="list-style-type: none"> Large amounts of mixture can be made at one time / may make reference to size of bowl / powerful motor. Consistent / thoroughly mixed/ evenly mixing There are controls on the machine to control the speed of mixing therefore ensuring each batch can be mixed at the same speed. Can be controlled by the staff to mix a mixture for the same amount of time. Saves time / quicker than doing it by hand Saves physical energy of a person mixing by hand. Easier than doing it by hand Adds air 	2 x 1 mark Do not accept: easier and quicker on their own – must be qualified large amounts of mixture – this is in the question	2

Question			Expected Answers	Additional Guidance	Marks
	(d)		<ul style="list-style-type: none"> • Staff would need to ensure they have been trained how to use the machines correctly. • Have correct footwear. • To ensure long hair is tied back/ hair covered/ wearing a hat. • No loose clothing • Eye protection • Need to check the machinery before use – no obvious parts missing. • That maintenance checks have been completed / PAT test • Set up correctly • Guards safety covers / lid in place • Switch machine off prior to checking the mixture • Don't operate the machines with wet hands 	2 x 1 mark	2
			Total		10

Question		Expected Answers	Additional Guidance	Marks
4	(a)	<ul style="list-style-type: none"> • Saves time / quicker production / than doing it by hand • Accuracy / consistency/they are the same / identical • May save wages / don't need to employ as many people • Machines can work longer hours / run seven days a week • Removes human error / more accurate • Detect what the human eye cannot see 	2 x 1 mark Quicker must be qualified	2
	(b)	<ul style="list-style-type: none"> • Checking the temperatures of high risk foods as they arrive • Checking foods are in date / date marking / damaged / fresh • Checking equipment is clean • Visual checking raw / washed foods are clean • Checking the storage temperatures of foods / fridge temperatures given (0 - 8°C) • Checking the temperatures of cooking the foods • Timing the processes e.g. Cooking / chilling • Rolling the thickness of the pastry • Depositing of the filling in the pastry case • Moulding the pastry / cutting out pastry • Preparation of the filling – chopping / slicing / grating • Weighing / checking weight/ weight of ingredients / same amount per flan • Timing / rate of production eg Cooking / chilling / mixing • Metal detection • Flans are cooked / final appearance / look same / colour / decoration • Microbiological tests / pH testing 	2 x 1 mark Do not accept <ul style="list-style-type: none"> • Temperature of the product unless qualified • Reference to packaging • Reference to size and shape 	2
	(c)	<ul style="list-style-type: none"> • Clear storage instructions for the consumer / and the retailer • Use of preservatives in the food product • Chilled / frozen transportation of the food product • Suitable packaging / so that nothing harmful can enter / bacteria / physical contaminants / prevent contamination • Chilled / frozen / right temperature linked to storage • Clear date stamping – use by date • Freezing / store at / below -18°C or chilling / 0 - 8°C the product 	2 x 1 mark Do not accept one word answers except for the last bullet point Do not accept best before date	2

Question			Expected Answers	Additional Guidance	Marks
	(d)		Task <ul style="list-style-type: none"> • Garnishing / hand finishing / putting the topping on / tomatoes • Tasting • Micro biological testing • Cleaning and maintenance of machines • Packing /packaging the product • Programming machines / set up correctly • Visual checks quality control • Producing small samples during development work • Developing HACCP • Adding ingredients into mixture Reason <ul style="list-style-type: none"> • People can make decisions / judgements / see / spot • People can do delicate work • Human skill is required • Value added – unique product – hand finished • Some tasks cannot be done by machine – e.g. tasting 	4 x 1 mark The reason must relate to the task. Do not accept the same reason twice Do not except reference to the design stage	4
			Total		10

Question		Expected Answers		Additional Guidance	Marks													
5	(a)	<ul style="list-style-type: none">• Wide variety of different products available / traditional foods• Can be cooked in lots of different ways• Choice of prices – cheap to luxury products• Quick to cook• Can be frozen• Can be made in to a variety of different dishes• Can buy in different quantities• Suitable for / aimed at different target groups• Popularity of BBQs•		1 mark	1													
	(b)	<table><tr><th>Product</th><th>Target group</th><th>Reason</th></tr><tr><td rowspan="3">Lincolnshire Quorn Sausage</td><td><ul style="list-style-type: none">• Vegetarians</td><td><ul style="list-style-type: none">• Uses a meat alternative• Contains protein• No meat in the product</td></tr><tr><td><ul style="list-style-type: none">• Different religions – e.g. hindus, muslims, jewish</td><td><ul style="list-style-type: none">• Don't eat meat – pork beef – linked to correct religion</td></tr><tr><td><ul style="list-style-type: none">• People wanting to reduce fat intake</td><td><ul style="list-style-type: none">• Low in fat• Low in cholesterol</td></tr><tr><td>Healthy Lifestyle sausages</td><td><ul style="list-style-type: none">• Adults / children / families• People wanting to lose weight / slimmers / overweight• People wanting to reduce fat intake</td><td><ul style="list-style-type: none">• Low / reduced fat content• Contains protein</td></tr></table>		Product	Target group	Reason	Lincolnshire Quorn Sausage	<ul style="list-style-type: none">• Vegetarians	<ul style="list-style-type: none">• Uses a meat alternative• Contains protein• No meat in the product	<ul style="list-style-type: none">• Different religions – e.g. hindus, muslims, jewish	<ul style="list-style-type: none">• Don't eat meat – pork beef – linked to correct religion	<ul style="list-style-type: none">• People wanting to reduce fat intake	<ul style="list-style-type: none">• Low in fat• Low in cholesterol	Healthy Lifestyle sausages	<ul style="list-style-type: none">• Adults / children / families• People wanting to lose weight / slimmers / overweight• People wanting to reduce fat intake	<ul style="list-style-type: none">• Low / reduced fat content• Contains protein	4 x 1 mark Do not accept the same target groups and reasons for each type of sausage Do not accept: healthier as a reason unless it is qualified vegans Reference to diet must say what diet e.g. low fat	4
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	(c)	<ul style="list-style-type: none">• Consumers can make informed choices about the product /compare• Can see if it meets their dietary needs• To check the specific content of nutrients/ may name specific nutrient• To see how it contributes to the balanced diet		2 x 1 mark Re bullet point 3 – only credit this once if makes reference to specific nutrient	2													

Question			Expected Answers	Additional Guidance	Marks
	(d)		<ul style="list-style-type: none"> • Uses red wine • Uses fresh herbs • Organic production 	1 mark Do not accept – they are more expensive ingredients	1
	(e)		<ul style="list-style-type: none"> • Thickens the mixture • Stops the ingredients separating / prevents syneresis • Bulk / extends protein 	1 mark	1
	(f)		Prevents fat in foods going rancid / reaction of fats / fat soluble vitamins with oxygen causing rancidity <ul style="list-style-type: none"> • Helps to keep the correct flavour in foods • Help to preserve the food/ longer shelf life • Prevents some foods from going brown 	1 mark Do not accept reference to fresh / going off	1
			Total		10

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