

Mark Scheme (Results) Summer 2008

GCSE

GCSE Design and Technology: Food Technology (1970) Paper 2F

1970 2F Mark Scheme

Question Number	Answer	Mark
Q1(a)	<p>Name and task that can be carried out by using the following:</p> <p>Name: Rolling pin/ roller pin</p> <p>Task: Rolling (doughs/icing) or crushing (biscuits) or flattening</p> <p>Name: Cooling rack/ cool rack/ cool wire (Do not accept grill pan)</p> <p>Task: Cooling, patting, placing, decorating, icing (cakes, pastries, biscuits)</p> <p>Name: Flour dredger/shaker/sugar caster/sprinkler (Do not accept duster)</p> <p>Task: Sprinkling/shaking/dredging/dusting (flour/cornflour/icing sugar/caster sugar)</p> <p>Name: Electronic scales/industrial scales/electric scales/digital scales/ weighing machine/ scales (Do not accept measuring)</p> <p>Task: Weighing (Do not accept scales or measuring)</p> <p>Name: Industrial/Commercial thermometer/food probe (Do not accept “Thermometer” unqualified.)</p> <p>Task: Checking/measuring temperatures (Meat/Fish/prepared or microwave meals)</p> <p style="text-align: right;">(10 x 1)</p>	(10)
Q1(b)(i)	<p>Three ways given:</p> <ul style="list-style-type: none"> • Lightweight (1) • Easy to use / hold / manipulate/work (1) • Easy to clean (1) • Easy of access the controls/easy to find/use knobs (1) • Small to store/doesn't take up much space/store in a small space (1) • Cheap / low cost / low running costs (1) • Work in saucepan / directly in containers/saves washing up (1) • Does not require strength / pressure to operate/easy to use with arthritis (1) <p style="text-align: center;">(Do not accept safety)</p> <p style="text-align: right;">(3 x 1)</p>	(3)

Q1(b)(ii)	<p>One advantage explained:</p> <ul style="list-style-type: none"> • No preparation of ingredients/quick to prepare/make because all you have to do is add hot water. Also saves time/ quicker than making your own/ from scratch • Cheaper because you do not have to buy separate/different ingredients/saves energy • Stores well so that you do not have to go shopping often/dried for long shelf life • Versatile/not boring because there are lots of different varieties • Easy to take to work because it's light to carry/small to put in bags • No waste because it's a single portion <p style="text-align: right;">(2 x 1)</p>	(2)
Q1(c)	<p>Two stages given:</p> <p>Weight sensors</p> <ul style="list-style-type: none"> • Ingredients • Liquids • Packaging/amount in packet/box/final product <p style="text-align: right;">(2 x 1)</p> <p>Temperature controls</p> <ul style="list-style-type: none"> • Storing ingredients • Cooking • Drying • Storing finished product • During transport/in lorry to shop <p style="text-align: right;">(2 x 1)</p> <p style="text-align: center;">(Do not accept reference to shop storage/ point of sale)</p>	(2)
Q1(d)	<p>Three pieces of data given:</p> <ul style="list-style-type: none"> • total cost/sales figures • total sales of each item • prices • weight of loose products • savings worked out/take money off for special offers (BOGOF) • total amount spent by each customer • identifies product for stock control/to see what is left in stock/ company/manufacturer/name/description/identity/ stock control <p style="text-align: center;">(Do not accept reference to dates)</p> <p style="text-align: right;">(3 x 1)</p>	(3)
Total for question		22

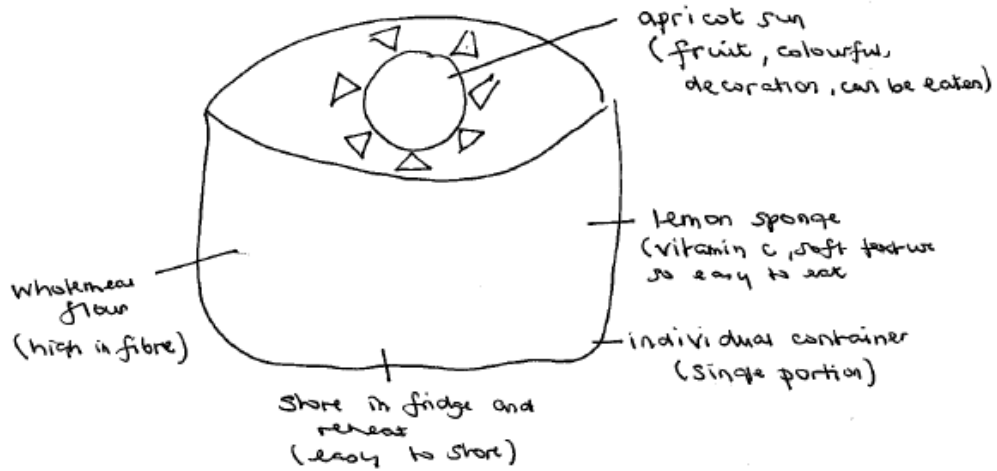
Question Number	Answer	Mark
Q2(a)(i)	<p>Two nutrients given:</p> <ul style="list-style-type: none"> • protein/proteen/protene/protein (1) • fat (1) • carbohydrate/CHO/Lactose (1) • vitamin A (1) <p style="text-align: right;">(2 x 1)</p> <p style="text-align: center;">(Any alternative spellings acceptable)</p>	(2)
Q2(a)(ii)	<p>One reason given:</p> <ul style="list-style-type: none"> • strong/strengthen / harden bones • strong/strengthen / harden teeth <p style="text-align: center;">(No reference to growth allowed)</p>	(1)
Q2(a)(iii)	<p>One way described:</p> <ul style="list-style-type: none"> • there is less saturated fat so that it lowers the risk of CHD / heart attack / reduces clogging of arteries • it lowers the fat / energy so that there is less risk of obesity / being overweight/less fattening <p style="text-align: right;">(2 x 1)</p>	(2)
Q2(a)(iv)	<p>One reason explained:</p> <ul style="list-style-type: none"> • the milk will go sour because of the action of enzymes • when it is stored for a long time food poisoning can occur because bacteria will breed • needs low temperatures/increases in temperature allow the milk to sour quickly / bacteria to breed / grow / multiply • milk provides ideal source of food for bacteria to breed / grow / multiply/a high risk food <p style="text-align: right;">(2 x 1)</p>	(2)
Q2(a)(v)	<p>Two different ways given:</p> <ul style="list-style-type: none"> • pasteurisation (1) • evaporated (1) • condensed (1) • sterilisation (1) • homogenisation (1) • UHT treatment/UHT (1) • Canning (1) • drying/drying/dried (1) • freezing/frozen (1) • irradiation (1) <p style="text-align: right;">(2 x 1)</p> <p style="text-align: center;">(Any alternative spellings acceptable)</p>	(2)

Q2(a)(vi)	<p>One reason explained:</p> <ul style="list-style-type: none"> • it is cheaper / reduces the cost of the milkshake because strawberries are expensive • it is easier to store because strawberries have a short shelf life / go off quickly / go mouldy • improves/ strengthens taste or flavour / makes it less bland fresh strawberries are weaker in flavour / not concentrated • it helps to provide a even/consistent flavour because strawberries will vary <p style="text-align: right;">(2 x 1)</p>	(2)
Q2(b)(i)	<p>Three ways given:</p> <ul style="list-style-type: none"> • less waste / reduces human error/less mistakes/weights food accurately (1) • lower wages / less labour/fewer staff/less jobs (1) • lower energy costs/electricity costs (1) • made in large quantities (1) • bulk buying (1) • 24 hour working potential/can work 24/7/faster/quicker (1) <p style="text-align: right;">(3 x 1)</p>	(3)
Q2(b)(ii)	<p>Two advantages:</p> <ul style="list-style-type: none"> • to be able to sell/buy better quality foods (1) • budget/reference to cheaper/affordability (1) • more can be bought (1) • more sales/increased profit (1) • available to more people/appeal to more people (1) • to buy enough to feed the family (1) • more variety / greater choice (1) • improved / better nutrition (1) • reduce illness / less sick leave/risk of malnutrition (1) <p style="text-align: right;">(2 x 1)</p>	(2)
Q2(c)	<p>One reasons explained:</p> <ul style="list-style-type: none"> • disease/sick/ill • animals kept in cruel/unnatural/unethical conditions/treated wrong because they are not free/overcrowding • the animals may harm each other because they are so close /bored or in a small cage/confined environment • the meat may contain chemicals because the animals are given growth hormones/antibiotics • animals get arthritis / leg problems because of overweight bodies meat lacks quality / flavour because of short growing time / unnatural conditions <p style="text-align: right;">(2 x 1)</p>	(2)

Q2(d)	<p>Four reasons given:</p> <ul style="list-style-type: none"> • dislike the way animals are reared or cared for (1) • religion (1) • culture (1) • lower in fat/saturated fat (1) • healthier diet (1) • dislike animals being killed/think it is morally wrong to eat meat (1) • dislike the taste / texture of meat (1) • provides variety in the diet (1) • more people enjoy vegetarian foods e.g. torfu/soya/quorn/t.v.p (1) • more marketing / advertising of vegetarian foods/bigger range available (1) • food scares e.g. BSC, CJD, disease (1) • popular role models (1) <p style="text-align: right;">(4 x 1)</p>	(4)
Total for question		22

Question Number	Answer	Mark
Q3(a)	<p>Design Idea 1</p> <p>Contain at least one fruit and have added fibre</p> <ul style="list-style-type: none"> • Evidence given that it contains one fruit. (1) • Evidence that it has added fibre. e.g. Use of wholemeal flour, fruit, oats, coconut, nuts etc. (1) <p>Have a colourful decoration that can be eaten</p> <ul style="list-style-type: none"> • Evidence given that it has a colourful decoration. Use of colourful decoration e.g. cherries, fresh fruits colours showing through. (1) • Evidence given that the decoration can be eaten e.g. Use of fruits, sweets, chocolate, piping, pastry shapes. (1) <p>Be simple to cook and easy to eat</p> <ul style="list-style-type: none"> • Evidence that it is simple to cook. Suitable method of cooking e.g. baking, steaming, microwave cooking, fried pancake batters etc, or is small in size for quick cooking. (1) • Evidence that it is easy to eat e.g. Use of soft textures, small pieces of fruit, small size/eat with just a spoon or fork. (1) <p>Be easy to store and can be served as a single portion</p> <ul style="list-style-type: none"> • Evidence that it easy to store e.g. Use of containers that stack, ingredients that give a good shelf life, Lemon juice/preservatives, freezing, chilling. (1) • Evidence that it is served as a single portion e.g. Use of a container, hand sizes, cut shape, tray bake, appropriate dimensions. (1) 	

DESIGN ONE



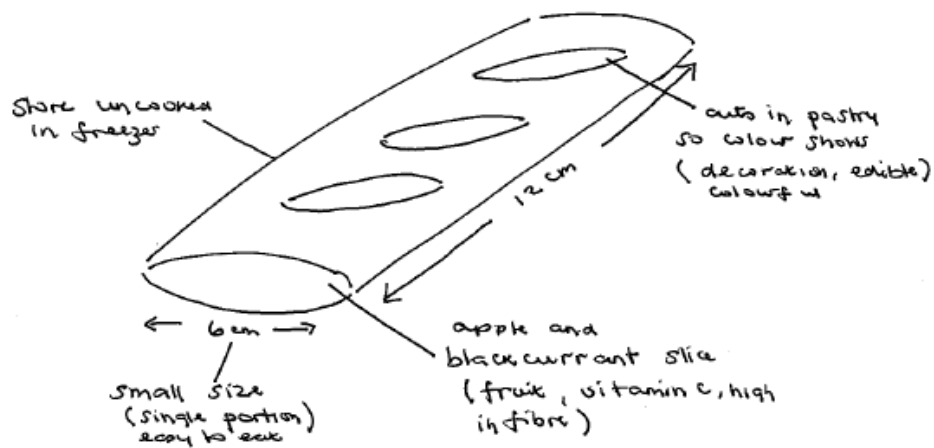
(8)

Design Idea 2

Different applies to design idea

- One different fruit (1)
- One different method of introducing fibre (1)
- One different colour used for the decoration (1)
- One different edible decoration (1)
- One different method of simple cooking (1)
- One different way that it is easy to eat - dimensions (1)
- One different method of making it easy to store - shelf life (1)
- One different way of serving as a single portion (1)

DESIGN TWO



(8)

3 (b)	Marks may be awarded for two justifications of one specification point.	
3(b)(i)	<p>Evaluation of: Must contain at least one fruit and have added fibre.</p> <p>Positive and negative reasons relating to:</p> <ul style="list-style-type: none"> • Reference made to the type of fruit used (1) • Reference made to the source of fibre (1) <p style="text-align: right;">(2 x 1)</p>	(2)
3(b)(ii)	<p>Evaluation of: Must have a colourful decoration that can be eaten.</p> <p>Positive and negative reasons relating to:</p> <ul style="list-style-type: none"> • Reference made to the ingredient and how it is colourful (1) • Reference made to the ingredient that is edible (1) <p style="text-align: right;">(2 x 1)</p>	(2)
3(b)(iii)	<p>Evaluation of : Must be easy to store and can be served as a single portion.</p> <p>Positive and negative reasons relating to:</p> <ul style="list-style-type: none"> • Reference made to the reason it is easy to store (1) • Reference made to the way it is served as a single portion (1) <p style="text-align: right;">(2 x 1)</p>	(2)
	Total for question	22

Question Number	Answer	Mark
Q4(a)	It is essential that the point and reason both fully relate to form, function or user requirements.	
Q4(a)(i)	<p>MARKET</p> <p>Point: Provide a single portion/small portion/eaten from a small container Reason: For students/elderly/those on their own/lunch boxes/different meal times/food on the move/saves time</p> <p>Point: Provide use low fat ingredients Reason: Appeal to health conscious market</p> <p>Point: Appeal to a wide audience/age group Reason: Greater demand: profit/sell more</p> <p>Point: To provide a ready made dessert Reason: For convenience/save time/for those who lack skill</p> <p>Point: To provide a traditional dessert Reason: Authentic taste</p> <p style="text-align: right;">(2 x 1)</p>	(2)
Q4(a)(ii)	<p>ENVIRONMENT</p> <p>Point: Strawberries free from pesticides / organic Reason: To prevent contamination/protect wildlife</p> <p>Point: No GM ingredients Reason: To prevent mutation of crops / cross breeding</p> <p>Point: Container able to be recycled/biodegradable Reason: Prevent litter / preserve resources / reduce pollution/stop overuse of landfill sites/reduce waste</p> <p style="text-align: right;">(2 x 1)</p>	(2)
Q4(a)(iii)	<p>QUALITY</p> <p>Point: Even / straight layers Reason: To improve look of product</p> <p>Point: Even piping Reason: To make it attractive/cover the top</p> <p>Point: Even spread of chocolate curls Reason: To make it consistent / improve appearance</p> <p style="text-align: right;">(2 x 1)</p>	(2)

Q4(b)(i)	<p>Two reasons given:</p> <ul style="list-style-type: none"> • Good mouth feel (1) • Luxury ingredient (1) • Traditional topping (1) • Lower fat than double cream (1) • Cheaper than double cream (1) • Holds its shape (1) <p style="text-align: right;">(2 x 1)</p>	(2)
Q4(b)(ii)	<p>Two reasons given:</p> <ul style="list-style-type: none"> • Chocolate is popular (1) • Contrast in tastes/flavour (1) • Little effect on nutritional value/fat (1) • Contrast in colour/different colour (1) • Luxury ingredient (1) • Easy to shape/make/grate (1) • Will stick to cream easily (1) • Curls are lightweight so will not sink into the cream (1) • Chocolate will not dissolve/leach into cream (1) <p style="text-align: right;">(2 x 1)</p> <p>(Do <i>not</i> accept any reference to attractive, appealing/look better)</p>	(2)
Q4(c)	<p>Two properties and reasons given:</p> <p>Property: fatless Reason: reduce the total fat content / lower risk of CHD / heart attack (Do <i>not</i> accept healthy)</p> <p>Property: light/open texture/soft texture Reason: good mouth feel / contrast to other layers /different texture</p> <p>Property: to soak up/absorb the fruit jelly/fruit juice Reason: aerated / full of holes</p> <p>Property: aerated / full of holes Reason: to soak up/absorb the fruit jelly/fruit juice</p> <p>Property: traditional ingredient Reason: to give authentic taste / texture</p> <p>Property: firm / solid / sturdy Reason: keep layers separated</p> <p style="text-align: right;">(4 x 1)</p>	(4)

Q4(d)	<p>Two Quality Control Checks given:</p> <ul style="list-style-type: none"> ▪ Bacterial / lab / laboratory check ▪ Weight ▪ X-ray/ scanning ▪ Metal detector ▪ Check/probe temperature ▪ Visual check to see lid secure/sealed /tamper proof <p style="text-align: right;">(2 x 1)</p> <p style="text-align: center;">(Do not accept HACCP on its own)</p>	(2)
Q4(e)	<p>One way described:</p> <ul style="list-style-type: none"> ▪ The cream / jelly / milk / fruit have a short shelf life / high risk of food poisoning ▪ Strong competition as wide choice available / huge variety of desserts on the market ▪ Layers may separate during storage which spoils the appearance ▪ Where problems arise it is easy to trace faulty products ▪ Trifle must be chilled and cold storage is limited <p style="text-align: right;">(2 x 1)</p>	(2)
Q4(f)(i)	<p>One explanation given:</p> <p>Encourage people to eat more portions of fruit each day</p> <ul style="list-style-type: none"> • One fruit portion because of the strawberries • One fruit portion because of the fruit juice <p style="text-align: right;">(2 x 1)</p>	(2)
Q4(f)(ii)	<p>(ii) Be eye-catching to attract customers</p> <ul style="list-style-type: none"> • A variety of colours because of the layers e.g. reference to custard, jelly, chocolate and cream (minimum 2) • A decorative finish because of the piping/chocolate curls • Provide contrasts in colours between layers/cream and chocolate • Use of individual/decorative container because it appeals to singles/elderly/for parents • Use of clear containers which allows the consumer to see the contents <p style="text-align: right;">(2 x 1)</p>	(2)
	Total for question	22
	Total for paper	88