

Mark Scheme (Results) Summer 2008

GCSE

GCSE Design & Technology: Food Technology (3970) Paper 2H

3970 2H Mark Scheme

Question Number	Answer	Mark
	It is essential that the point and reason both fully relate to form, function or user requirements.	
Q1(a)(i)	<p>MARKET 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</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)
Q1(a)(ii)	<p>ENVIRONMENT 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)
Q1(a)(iii)	<p>QUALITY 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)

Q1(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)
Q1(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)
Q1(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)

Q1(d)	<p>Two Quality Control Checks given:</p> <ul style="list-style-type: none"> • bacterial / lab / laboratory check (1) • weight (1) • x-ray/scanning (1) • metal detector (1) • check/probe temperature (1) • visual check to see lid secure/sealed/tamper proof (1) <p style="text-align: right;">(2 x 1)</p> <p>(Do <i>not</i> accept HACCP)</p>	(2)
Q1(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)
Q1(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)
Q1(f)(ii)	<p>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

Question Number	Answer	Mark
Q2(a)	<p>Two ways given:</p> <ul style="list-style-type: none"> • piping (1) • slicing (1) • tins / trays / pattie tins (1) • moulds (1) • crimping / pinching (1) • extrusion (1) <p style="text-align: right;">(2 x 1)</p>	(2)
Q2(a)(ii)	<p>Explanation (only answer)</p> <p>They give consistency/equal sizes across a batch because the cutter has a set shape</p> <p style="text-align: right;">(2 x 1)</p>	(2)
Q2(b)	<p>Two ways described:</p> <p>Eggs:</p> <ul style="list-style-type: none"> • they provide protein to enrich the dough/make the dough richer • the fat in the egg yolks makes the dough tastes richer • glaze on the surface prior to baking improves appearance <p style="text-align: right;">(2 x 1)</p> <p>Salt:</p> <ul style="list-style-type: none"> • it removes moisture for bacteria to grow which improves the shelf life • salt is tasted by the tongue / less bland which adds flavour • salt increases the rate of fermentation to yeast works quicker • salt strengthens/toughens gluten which makes the dough stretch • better/become more elastic <p style="text-align: right;">(2 x 1)</p> <p>(do <i>not</i> accept ‘makes bread rise’ or ‘binding’)</p>	(4)

Q2(c)	<p>Three decorations named:</p> <ul style="list-style-type: none"> • marzipan (1) • sauce / couli (1) • pastry decorations (1) • chocolate (1) • fruits (1) • sugar(s) / frosting / spun (1) • icings / butter icing / glace icing /royal icing (1) • sweets / hundreds & thousands (1) • piped icing (1) • cream (1) • fresh herbs (1) • zest / peel (1) • nuts (1) <p>(only accept one from each bullet point)</p>	<p>(3 x 1)</p> <p>(3)</p>
Total for question		11

Question Number	Answer	Mark
Q3(a)(i)	<p>Two advantages given:</p> <ul style="list-style-type: none"> • Extend shelf life / last longer (1) • Safer to eat / destroy bacteria/ pathogenic bacteria/harmful bacteria (1) • Create new product (1) • Improve flavour / texture / taste / appearance / colour / aroma / smell (1) • Fortified foods / improved nutritional qualities (1) <p style="text-align: right;">(2 x 1)</p>	(2)
Q3(a)(ii)	<p>One way described:</p> <ul style="list-style-type: none"> • Vitamin C will be destroyed by heat • Vitamin B will be destroyed by heat • Protein will toughen • Protein becomes denatured • Polyunsaturated fats/hydrogenated fats can be denatured into saturated fats at high/frying temperatures <p style="text-align: right;">(2 x 1)</p>	(2)
Q3(a)(iii)	<ul style="list-style-type: none"> • Bacteria/enzymes/micro-organisms cannot multiply / are killed/destroyed because the solution is too acidic • Acidic solution acts as a preservative • Extend shelf life / preserve because bacteria / enzymes / micro-organisms are destroyed/killed • The colour darkens because of the effects of acid • The flavour gets stronger because of prolonged storage <p style="text-align: right;">(2 x 1)</p>	(2)
Q3(b)(i)	<p>Advantage explained:</p> <ul style="list-style-type: none"> • They can be converted directly into cells in the human body because they contain all the essential amino acids / it is the only source that does this <p style="text-align: right;">(2 x 1)</p> <p>(two relevant points from above)</p>	(2)
Q3(b)(ii)	<p>One Low Biological Value (LBV) protein named:</p> <ul style="list-style-type: none"> • Peas (1) • Beans (1) • Lentils (1) • Nuts (1) • Cereals (1) <p style="text-align: right;">(1 x 1)</p> <p>(Do <i>not</i> accept Quorn or Soya / Tofu / bean curd/TVP)</p>	(1)

Q3(c)	<p>One way explained:</p> <ul style="list-style-type: none"> • Bacteria are destroyed / killed because of high temperatures during cooking • Bacteria cannot re-form because rapid/blast chilling to low temperatures <p>(do <i>not</i> accept 'chilling' on its own)</p> <p style="text-align: right;">(2 x 1)</p>	(2)
	Total for question	11
	Total for paper	44