
FOOD STUDIES

9336/02

Paper 2 Practical Test

October/November 2017

MARK SCHEME

Maximum Mark: 100

Published

This mark scheme is published as an aid to teachers and candidates, to indicate the requirements of the examination. It shows the basis on which Examiners were instructed to award marks. It does not indicate the details of the discussions that took place at an Examiners' meeting before marking began, which would have considered the acceptability of alternative answers.

Mark schemes should be read in conjunction with the question paper and the Principal Examiner Report for Teachers.

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Question	Answer	Marks
1(a)	dishes chosen – four dishes – suitability	4
	variety of skills chosen without repetition	4
1(b)	suitable choice of decorated cake	1
	degree of skill in decoration	1
1(c)(i)	<p>in the mouth salivary amylase / ptyalin acts on cooked starch converting it to maltose; in the duodenum pancreatic amylase from the pancreatic juice breaks down undigested starch to maltose; in the ileum – maltase converts maltose to glucose – sucrose / invertase converts sucrose to glucose and fructose – lactase converts lactose to glucose and galactose; absorbed by active transport into the blood capillaries of the villi – and then via the hepatic portal vein to the liver where all monosaccharides are changed to glucose – then passed to the cells by active transport;</p>	4
1(c)(ii)	<p><i>health problems associated with a lack of sugar</i> diabetes – body does not produce enough insulin – leads to a high level of glucose in the blood – excreted in urine – can damage kidneys / eyes / feet; obesity – excess sugar is converted to fat – stored under the skin – adipose tissue and around internal organs – extra weight puts a strain on the heart – may cause hypertension / CHD / arthritis / breathing difficulties; CHD – hypertension – can lead to strokes – poor blood circulation – fatty deposits block / narrow artery walls – restrict supply of oxygen to the heart muscle of oxygen – can lead to heart attack; tooth decay – acids produced by bacteria in the mouth and break down sugars on teeth – cause plaque – a sweet sticky residue which coats the teeth – can dissolve tooth enamel / form holes;</p>	3
	<p><i>ways to reduce sugar consumption</i> avoid adding to beverages – use artificial sweeteners; choose diet / low calorie carbonated drinks; reduce the amount of sugar in recipes; avoid canned fruit in syrup – choose fresh fruit or fruit in its own juice; reduce the consumption of cakes / biscuits / sweets / chocolate; avoid sugar-coated cereals; read nutritional labels on packaged foods; fresh fruit instead of cordials / soda;</p>	3

Question	Answer	Marks
1(c)(iii)	skills used – use of seasonal foods – ease of obtaining foods, e.g. grow in garden at home – oven management – cost / in season – serving	4
1(c)(iv)	at least four nutrients and appropriate functions given	4

Question	Answer	Marks
2(a)	dishes chosen – four dishes – suitability	4
	variety of skills chosen without repetition	4
2(b)	suitable choice of decorated cake	1
	degree of skill in decoration	1
2(c)(i)	<p>in the stomach hydrochloric acid and pepsin from gastric juice and begin protein digestion – makes the stomach very acidic with a pH of 1.5 – acidic environment is necessary for hydrochloric acid to react with pepsinogen to form pepsin – so that it can break the peptide bond in proteins – polypeptides / peptones;</p> <p>rennin is an enzyme that is present in infants to clot milk so that pepsin can act upon it more efficiently;</p> <p>in the duodenum – bile from the gall bladder neutralises the acid and stops the action of pepsin;</p> <p>trypsinogen produced by the pancreas mixes with enterokinase – activates trypsinogen to form trypsin – continues breakdown of protein to peptones;</p> <p>in the ileum – erepsin converts peptones to amino acids;</p> <p>amino acids are absorbed by active transport into the blood capillaries of the villi – via hepatic portal vein to the liver – deamination occurs in the liver – nitrogen removed and is excreted as urea;</p>	4
2(c)(ii)	<p>lightening – ovalbumin stretches and traps air – meringues / mousses / souffles;</p> <p>raising agent – ovalbumin stretches and traps air – cake making;</p> <p>thickening – coagulation of protein – custards / sauces / soups;</p> <p>emulsifying – egg yolk contains lecithin – enables oils and water to be mixed together without separation – mayonnaise;</p> <p>binding – protein coagulates and holds ingredients together – fish cakes / rissoles;</p> <p>coating – egg forms a protective layer on the outside of the food which sets and prevents the food from falling apart – fish;</p> <p>glazing – eggs can be brushed over food to produce a golden-brown glaze during baking – pastries / bread;</p> <p>enriching – provide extra protein to a dish – milk puddings / soups;</p> <p>garnishing – hard-boiled egg can be used to make a dish look more attractive / add colour – dressed crab;</p> <p>as a main meal – breakfast – scrambled / poached;</p> <p>clarifying – soups;</p>	6
2(c)(iii)	skills used – use of seasonal foods – ease of obtaining foods, e.g. grow in garden at home – oven management – cost / in season – serving	4
2(c)(iv)	at least four nutrients and appropriate functions given	4

Question	Answer	Marks
3(a)	dishes chosen – four dishes – suitability	4
	variety of skills chosen without repetition	4
3(b)	suitable choice of decorated cake	1
	degree of skill in decoration	1
3(c)(i)	<p><i>calcium</i> formation and maintenance of bones and teeth / clotting of blood / muscle and nerve function – milk / cheese / bones of canned fish;</p> <p><i>iron</i> component of haemoglobin / needed for the transport of oxygen around the body – red meat / liver / kidney / cocoa / plain chocolate;</p> <p><i>vitamin A</i> needed to make visual purple / enables vision in dim light / keeps mucous membranes moist and free from infection / health of skin – milk / cheese / egg yolk / carrots / green vegetables;</p> <p><i>vitamin C</i> needed to make connective tissue / absorption of iron / healing of wounds – kiwi fruit / blackcurrants / citrus fruit / green vegetables;</p>	4

Question	Answer	Marks
3(c)(ii)	vitamin C for absorption of iron – important for the formation of collagen which is especially important in blood vessels – citrus fruit; calcium – formation of bones – fetus – milk and cheese; vitamin D – absorption of calcium – bones and teeth – shortage could lead to rickets – oily fish / sunlight; folic acid / folate prevent birth defects known as neural tube defects – spina bifida – green vegetables / brown rice / fortified breakfast cereals; iron – supply baby and prevent anaemia – red meat / green vegetables / fortified breakfast cereals; zinc – component of enzymes that help regulate gene expression / important for rapid cell growth that occurs during pregnancy – lean meat / wholegrain cereals / milk / seafood / legumes / nuts; vitamin A – too much can harm the fetus – can affect development of the central nervous system – can also have a detrimental effect on the fetus’ respiratory system – avoid liver or liver-containing products – liver pâté / liver sausage / haggis; ensure all meat is thoroughly cooked – risk of toxoplasmosis – infection caused by a parasite that can be found in raw and undercooked meat / unpasteurised goats’ milk / untreated water; limit tuna as it may contain mercury – could harm fetus’ developing nervous system; avoid some soft cheeses and pâté – ideal environment for growth of listeria – can cause miscarriage / stillbirth; make sure eggs are thoroughly cooked – to prevent the risk of salmonella food poisoning; only small amounts of caffeine – can cause low birth weight / miscarriage;	6
3(c)(iii)	skills used – use of seasonal foods – ease of obtaining foods, e.g. grow in garden at home – oven management – cost / in season – serving	4
3(c)(iv)	at least four nutrients and appropriate functions given	4