

FOOD AND NUTRITION

Paper 6065/11
Theory

Key messages

For questions in which greater credit is available, candidates need to give detailed reasons, explanations and examples to illustrate the points made in their answers.

Candidates should aim to demonstrate their ability to select information appropriately by tailoring their answers to the demands of the question.

General comments

Candidates are reminded to adhere to the parameters of the question and plan their answers prior to writing. It is important that answers for questions attracting the most credit are supported with relevant linked examples or explanation.

Comments on specific questions

Section A

Question 1

- (a) The majority of candidates were able to correctly name carbon, oxygen or hydrogen as elements from which carbohydrates are formed.
- (b) The majority of candidates were able to correctly name lactose, maltose or sucrose as examples of disaccharides.
- (c) Many candidates achieved the available credit by correctly identifying that a reduction in the consumption of sugar decreased the risk of dental caries, type 2 diabetes or obesity.
- (d) Most candidates were able to correctly name either fat or protein as nutrients which provide the body with energy.
- (e) The majority of candidates correctly named calories or joules as units used to measure energy.
- (f) It was encouraging to note that a good proportion of candidates could correctly identify examples of processes carried out by the body using different types of energy.
 - (i) Popular answers for mechanical energy usage were different forms of physical muscle movement such as running, chewing and walking.
 - (ii) Examples given for chemical energy usage were different forms of metabolic reaction such as digestion and absorption.
 - (iii) It was well known that transmission of nerve impulses used electrical energy.
- (g) Many candidates were able to correctly define metabolism as any chemical process or reaction in the body to maintain life.
- (h) Many candidates correctly identified loss of weight, increased tiredness and risk of becoming anorexic as health issues which can occur as a result of a low energy input. Only a few candidates

gave answers such as muscle wastage and dysmenorrhoea. Credit was not awarded for marasmus or kwashiorkor as these are nutritional disorders related to food shortage.

- (i) It was well known by a majority of candidates that the enzyme which acts on starch in the mouth is amylase. Credit was given for salivary amylase or ptyalin.
- (j) Many candidates correctly described the effect of dry heat on starch with the expected responses of the starch changing to dextrin and further stating the colour of the food changes to golden brown.
- (k) It was well known that gelatinisation is the term used to describe the swelling and bursting of starch granules when moist heat is applied.

Question 2

- (a) Most candidates gained credit by stating that fluoride either helps strengthen bones or protects teeth against dental decay. Formation or maintenance of teeth were not credited as fluoride specifically inhibits the growth of dental plaque and increases resistance to acid attack.
- (b) Most candidates achieved partial credit by stating that phosphorus helps in the structure and maintenance of the skeleton. Only a small number of candidates knew that phosphorus maintains fluid balance in the body and assists in the production of energy from carbohydrates and fats.
- (c) Candidates found this question about how sodium and potassium work together in the body challenging. Some candidates correctly stated that they are involved in the transmission of nerve impulses. Fewer answers showed understanding of how they work to regulate fluid balance or how potassium helps counter the effects of sodium as it helps lower blood pressure.

Question 3

- (a) Few responses indicated that fat-soluble vitamins are stored in the liver. Many candidates thought they were stored under the skin or in the intestines.
- (b)(i) Most candidates knew that retinol is found in animal foods such as milk, cheese, liver and eggs. If fish was given as a source of this vitamin then candidates needed to state that the fish was oily or give a named oily fish such as salmon or sardine.
 - (ii) It was well known that beta-carotene is found in plant foods. Popular answers were carrots, cabbage, apricots and tomatoes. The question asked for different sources of the vitamin, so credit was not given for naming two green leafy vegetables.
- (c) The majority of candidates correctly named night-blindness as the deficiency disease associated with a lack of vitamin A.
- (d) Candidates found this question challenging. Correct answers showed knowledge that it is used to promote healthy skin and acts as an antioxidant.
- (e) Although it was known that vitamin K helps with clotting of blood, fewer candidates gave a second function of this vitamin in the body.

Question 4

Many candidates gave detailed answers with reasons why water is vital in the diet. There were several excellent accounts which noted that water is continually being lost so needs replacing to maintain water balance, water prevents dehydration, it is required for all body fluids, it plays a major part in the regulation of body temperature and helps removal of waste products so reducing the risk of bowel disorders.

Section B

Question 5

- (a) Many candidates were able to correctly name melting as the method used to make a flapjack.
- (b) Many candidates showed good knowledge by correctly naming margarine, olive oil or sunflower oil as ingredients lower in saturated fat which could be used to replace the butter in the recipe.
- (c) Most candidates knew that the oats were the ingredient high in non-starch polysaccharide (NSP)/dietary fibre.
- (d) Most candidates gained the majority of available credit in this question by suggesting a variety of suitable ingredients which could be added to vary the flavour of the flapjack. Most popular responses were coconut, named fresh fruit such as apple, named examples of dried fruit, vanilla essence, spices such as cinnamon and ginger, and chocolate chips.
- (e) The most popular methods for preparing the baking tin to prevent the flapjack sticking was to use grease, grease and flour or baking parchment. Greaseproof paper used alone was not credited as some form of oil is needed to hold the paper in place in the tin.
- (f) Many candidates achieved at least partial credit for their explanation of conduction. Strong answers explained that heat is transferred through solids such as the oven shelf or baking tin and the heat causes molecules to vibrate which in turn generates heat which passes through the mixture.

Question 6

- (a) Very few candidates named cream of tartar as the other main ingredient in baking powder.
- (b) Few candidates knew that bicarbonate of soda imparts a bitter or soapy taste to the food. Very few candidates knew that a yellowish residue is left when bicarbonate of soda is used as the sole raising agent.
- (c) Most candidates knew that carbon dioxide is the gas produced when bicarbonate of soda is used as a raising agent.
- (d) Most candidates gained full credit by correctly responding that baking powder should be stored in a cool, dry place with the lid tightly closed.
- (e) The reasons for using raising agents in baked products was generally given as to make mixture rise and give the product a fluffy texture. Very few candidates stated that raising agents make mixtures easier to digest and produces a more attractive product.

Question 7

- (a) It was well known that dishes which can be made from batters are pancakes, fritters, toad-in-the-hole and Yorkshire pudding.
- (b) Most candidates showed good knowledge of how to make a traditional batter and wrote some very detailed responses.
- (c) Candidates found this question challenging. Candidates could have referred to labour-saving equipment such as a liquidiser, food processor, electric knife or bread-maker with an appropriate example in order to gain the available credit. Credit was not given for equipment such as kettles, microwaves and toasters as they save time not labour.
- (d) It was well known that electrical equipment must only be used if there are no exposed wires, hands are dry and manufacturer's instructions are followed. Many answers also noted that hair should be tied back and operators should not have loose clothing.

Question 8

- (a) Some candidates gave detailed answers showing a good knowledge of the first-aid treatment required for someone who has fainted. Responses which involved the use of CPR were not credited.
- (b) This question was generally well answered with a good proportion of candidates showing excellent knowledge of how important ventilation is in a kitchen. When answering questions like this, candidates should take note of the available credit and give an appropriate number of responses.

Section C

Question 9

- (a) This question was found challenging by those who chose it. Candidates needed to refer to the processes of dehydration and cook-chill in their answers in order to increase their opportunity to gain maximum credit.

Generalised points concerning the popularity of convenience food included the fact that people work so have less time to prepare meals and convenience foods save time and effort in shopping, cooking and preparation as they are easy to use. Many stated that convenience foods are good for people with limited skills as they come with cooking instructions as well as the fact they may be a cheaper option to making a meal from scratch with less wastage of ingredients as portion sizes are controlled.

Some candidates were able to give one or two facts about dehydrated food and gave appropriate examples.

Candidates need to ensure familiarity with cook-chill methods. Many candidates referred to freezing the products after purchase rather than the fact that the products were fully prepared in a factory and simply needed to be kept refrigerated until the use by date then reheated according to instructions.

- (b) Some candidates were awarded much of the available credit by demonstrating good knowledge of the way a female office worker can achieve a healthy diet and gave good examples to illustrate their responses.

It was well known that working in an office is a sedentary occupation which would require the provision of a low energy diet with restrictions on the amounts of fat and sugar eaten. Many suggestions were given as to how to adapt food choices and how to prepare and cook food to limit fat and sugar intake.

A good proportion of candidates knew that being female the worker would need to ensure adequate provision of iron and vitamin C for menstruation as well as calcium, phosphorus and vitamin D to guard against osteoporosis.

When answering a question like this it is important candidates concentrate on the specific nutritional requirements of the question focus. This enables the candidates to use the available time appropriately to qualify the statements they make and to elaborate their answer with appropriate examples.

FOOD AND NUTRITION

Paper 6065/12
Theory

Key messages

Questions should be read carefully to ensure answers reflect the demands of the question.

Candidates should only include factual information which demonstrates knowledge and understanding relevant to the question.

General comments

Candidates should be aware that in the questions where there is greater credit available it is vital to plan an answer carefully and illustrate understanding of the topic matter by supporting statements with clear explanations and examples, where appropriate.

Comments on specific questions

Section A

Question 1

The majority of candidates were able to give two correct responses to this question, the most popular answers being children, the elderly, teenagers and pregnant women. Many candidates incorrectly gave vegetarians as their answer.

Question 2

Many candidates correctly stated that unsaturated fats are liquid at room temperature. Some candidates knew that there are at least two double bonds in the structure of the molecule and that more hydrogen could be taken up.

Occasionally the opposite characteristics were given and some candidates referred to fats as being unhealthy or listed foods containing fats.

Question 3

Very few candidates were able to give two correct functions. Some incorrectly wrote the functions of other nutrients by listing repair, heat, warmth and maintenance of body. The most popular correct response was energy.

Question 4

Candidates found this question challenging. Candidates should ensure that they understand the term *basal metabolic rate*.

Incorrect responses, such as mechanical, chemical, electrical or heat energy, which are linked to different types of energy used in the body were given.

Some candidates identified age, gender and climate but gave incorrect explanations.

Question 5

- (a) Most candidates were able to provide at least two correct responses for this question.

Sources of calcium were usually given as milk and cheese; some candidates mentioned canned fish eaten with the bones such as sardines. Eggs were often incorrectly listed and when candidates stated cereals credit could not be awarded due to the omission of the classification wholegrain.

- (b) Many candidates were able to identify one other nutrient which works with calcium; both vitamin D and phosphorous were common responses.

Some candidates listed sources of calcium which was not required.

- (c) Most candidates were able to name a deficiency disease associated with a lack of calcium but some gave an explanation of the condition rather than the name of the disease. Rickets was the most popular answer although a few named osteomalacia.

Question 6

- (a) B group vitamin food sources were clearly identified by many candidates. The most popular responses were meat, milk, liver and kidney. Full credit could not be given when there was a repeat of answers such as meat and poultry as the question asked for different foods.

- (b) Growth was the most popular correct answer given for the function of B group vitamins. Many candidates stated that a function was energy but this could not be credited as candidates did not make it clear that the vitamin released energy from carbohydrates, fats and proteins not provided energy. Very few candidates gave maintenance of nerves as a function.

- (c) Many candidates were able to name one health problem caused by a deficiency of nicotinic acid, dermatitis being the most popular. Some candidates described a condition but were unable to identify the common name for it.

Question 7

- (a) Candidates understood that enzymes are involved in the breakdown of food but did not acknowledge that they speed up reactions or act as a catalyst.

- (b)(i) Some candidates were able to correctly identify one enzyme found in gastric juice.

- (ii) Only a few candidates correctly answered that protein is the nutrient which the enzymes found in gastric juice act upon.

Question 8

- (a) The majority of candidates correctly named some health issues which can result from obesity. Most frequent answers included heart disease, high blood pressure and diabetes. Common mistakes resulted from candidates interpreting *health issues* as being causes of obesity while other responses included what could be done to avoid becoming obese. Many candidates gave repeated answers such as hypertension and high blood pressure, or heart disease and CHD.

- (b) The majority of candidates were able to achieve most of the available credit.

Some candidates incorrectly discussed the removal of sugar or incorrectly advised the use of unsaturated fat instead of saturated fats.

Section B

Question 9

- (a) The majority of candidates were able to identify at least two correct reasons for toughness in meat. Many answers stated the age of the animal, if the animal was stressed before slaughter or the use of an unsuitable method of cooking. Very few responses included information on the length and thickness of muscle fibres, the amount of connective tissue or the amount of use of that particular part of the animal. Answers which were vague or lacked explanation could not be credited.
- (b) Possible ways of tenderising tough meat were generally well known and clearly explained with a high proportion of candidates gaining most of the available credit. Some candidates provided responses which were too brief such as simply saying, mechanical or with acid or did not note the question was asking about tenderising before cooking meat.
- (c) The majority of candidates were able to achieve at least some of the available credit by correctly naming a moist method of cooking such as stewing, boiling, steaming or pressure cooking as suitable methods of cooking tough meat. Most frequent incorrect responses were grilling or frying which were not credited.
- (d) Some candidates could identify that beef changes colour from red to brown, it shrinks in size and fat melts during cooking but very few referred to protein coagulating, meat becoming more digestible or collagen being converted to gelatine. Some answers were vague simply stating texture, flavour or aroma change with little or no clarifying extension.
- (e) The majority of candidates correctly advised storing fresh meat in the freezer or refrigerator in a container or covered. Sometimes candidates showed further knowledge and stated the correct storage temperatures. Stronger answers referred to storing raw meat on the bottom shelf of the fridge or raw and cooked meat on different shelves.
- (f) On the whole this was answered well showing good knowledge of why some people choose not to eat meat. Stronger answers gave well explained responses.

Question 10

- (a) Most candidates who answered the question could identify the first stage involved caster sugar being added to margarine and combined together but correct terminology of creaming the ingredients was often lacking, many just referred to beating, whisking or mixing. Eggs were occasionally beaten before being added to the creamed mixture, but many candidates added all the egg at once. Stronger candidates described the flour as being sieved before adding to the mixture and then folded in and stated the equipment used plus the consistency and colour of the mixture.
- Some candidates included putting the cake mixture into the paper cases and then into the oven, temperature of oven and time of baking was also given in some instances. A few candidates also started the instructions with steps on weighing the ingredients. Neither of these processes were asked for in the question so were not credited.
- (b) Many candidates could not be awarded credit for using an alternative word for flavour, which was given in the question, or repeating the same functions for each ingredient.
- (c) The majority of candidates managed to achieve all the credit available for this question concerning different ways of decorating the finished small cakes. Popular answers were cream, sprinkles, fruit and icing sugar.
- (d)(i) It was well known that sugar is the ingredient in the cakes which causes caramelisation.
- (ii) It was not well known that the effect of dextrinisation is the surface of the cake changes to a golden brown colour. Many candidates failed to identify the change in colour although they understood that dextrinisation was the effect of dry heat on starch.
- (e) Some candidates gave answers that were vague to this question. It was sometimes difficult to know whether an answer was referring to cake cases or cake tins.

Question 11

The wording of the question clearly asked candidates to identify a point to consider when choosing kitchen flooring and then give a reasoned explanation to gain full credit. Many candidates gave one or two word responses with no clear discussion or extension so could not be awarded full credit.

The most popular points mentioned were that floors should be waterproof, resistant to grease and stains, be easy to clean, not slippery and compliment the general kitchen décor.

Some candidates had discussed general kitchen design and layout or gave instructions on how to keep the kitchen clean with little reference to flooring.

Section C

Question 12

- (a) Many candidates discussed, in detail, the nutritional requirements of a child or on some occasions a range of different people including the elderly, pregnant women and convalescents. Although these points were usually correct, credit could not be awarded as this was not a requirement of the question. Some candidates also gave points regarding the packing of a lunch box to take to school when the question clearly says pre-school child.

Correct responses indicated the need to provide a variety of different foods which were colourful, attractively arranged or prepared into interesting shapes. Stronger answers advised serving food on child-friendly plates with their own child-sized cutlery or providing finger food which was easy to eat and being careful to remove bones and avoid overly spicy food.

Some candidates were able to identify several correct points to consider when planning meals for a pre-school child but they often did not include the required explanation or elaborate their answer with appropriate examples in order to achieve the full credit.

- (b) Some candidates focused on the prevention of food spoilage and did not acknowledge the focus of the question with regard to high temperature so restricted their ability to gain maximum credit. Some candidates wrote about conditions for the growth of bacteria, moulds and yeasts and different methods of preservation such as dehydration and even freezing which did not answer the question.

Some candidates were able to give one or two facts about processes using high temperature such as pasteurisation, jam making and cooking methods, and gave appropriate examples.

Since there are several methods of the use of high temperature to prevent food spoilage it was expected that answers would include a description of blanching which is used for both fruits and vegetables to stop the action of enzymes, the use of pasteurisation, sterilisation and UHT to destroy pathogenic bacteria in products such as milk, with reference to suitable temperatures and times for each process. Discussion of canning and bottling are also processes which use high temperature to destroy harmful microorganisms and could have been included.

FOOD AND NUTRITION

Paper 6065/02
Practical Test

Key messages

The inclusion of photographs as supporting evidence is now compulsory. One good quality, clear printed photograph of the candidates' finished dishes and table settings is required

Centres must ensure they are familiar with the instructions for this component. Five of the eight published tests are to be used in each centre, these are allocated to candidates in strict alphabetical order (by surname).

Centres should ensure that they are using the most up-to-date documents for administration of the practical tests.

Where there is more than one Examiner involved in marking the practical tests, rigorous internal moderation should take place. The sample provided for external moderation should then include marked work from each person involved in the marking process. When choosing a sample for moderation, the work of candidates with the lowest marks, the middle marks and the highest mark should be included, with an even spread of work in between. Work for each test allocated should be included. Where there are several candidates with the same scaled mark, more than one of these should be included.

Examiners should refer to the most recent version of the *Practical Test Handbook* to ensure that the mark scheme is accurately, rigorously and consistently applied across the cohort. All Examiners should refresh their knowledge of the instructions and mark scheme annually.

General comments

Many centres required no adjustments to marks awarded, and most adjustments made were minimal. The most successful centres presented work of a good standard where candidates had been well supported enabling them to show their achievement through well directed teaching, and submit interesting and varied work which met the assessment criteria.

Many candidates tried hard to plan appropriate menus in response to the test questions. They had made a good effort to display their final dishes attractively. Candidates need to be clear about the test requirements and ensure the planning is accurate. Candidates should be encouraged to make suitable choices which fulfil the test requirements and which demonstrate the use of a range of ingredients, skills and a variety of cooking methods. They need to make skilled and complex dishes which demonstrate their knowledge of consistencies and cooking methods and which require a range of manipulative skills. To gain the most credit candidates should be making their dishes from scratch and keeping the use of convenience foods to a minimum.

From the photographs included, it was pleasing to see many wonderful examples of colourful arrays of food with appropriately dressed tables and place setting for meals or other events. All candidates need to consider what the final overall presentation would look like and plan to make colourful dishes or use suitable and imaginative garnishes to enhance their tests.

Planning should include brief but accurate details of preparation and cooking methods, cooking times and oven temperatures. Candidates should indicate on their time plans how they will test that each item of food or recipe is cooked – for example they should state that a sponge cake would be baked until 'golden brown and springy to touch', pasta 'cooked until al dente'. There were many good examples of 'dovetailing'. This is a complex skill that allows candidates to show how, while one dish is cooking, another is being prepared or decorated. Candidates should use dovetailing to demonstrate the efficient use of time and to allow them to

make dishes of a higher skill level within the time allowed. Candidates need careful preparation for the practical test and they would benefit from some practice with cooking more than one dish at a time so the skill of dovetailing their work is developed prior to the test.

Candidates generally need more guidance and practice with menu planning and meeting nutritional needs so that they can answer the demands of the test allocated, whilst demonstrating sufficient skills in using a wide range of ingredients, manipulation of various mixtures and different cooking methods that make full and sensible use of the oven, grill and the top of the cooker. Candidates should show regard for the 'theme' of the test when planning their final displays; for example, food for a party needs a party table setting, whereas food for a main meal needs a different but appropriate setting, food for a packed meal needs to be served as such and so on. Candidates need to write their choices in order of the test and clearly indicate which dish is for which part of the test.

Centres are reminded that only one set of preparation sheets should be issued to each candidate and marks reduced where candidates use extra sheets. Preparation sheets should be fastened together with staples or treasury tags in the correct order along with the Examiners mark sheet and the photograph. Marks should be carefully totaled, scaled and transferred to the summary sheet and MS1. These marks must be checked by another person for accuracy. Where half marks appear in the final total, these should be rounded down, not up. There is a very useful conversion table in the Handbook, as well as the interactive form on the website.

Candidates' work must show evidence of marking, with annotation (in a different colour pen using the key provided in the Handbook) clearly written on the work to evidence how and where marks have been awarded. There were excellent examples of marking in many centres, with clear, accurate and helpful annotation. If candidates do not produce or serve one or more of their planned dishes, the reasons for the omission must be clearly recorded as credit is awarded differently depending on whether the dish was attempted and abandoned during preparation and cooking, or whether it was not attempted at all.

Centres should note that for the purposes of the practical test, a balanced main meal consists of two skilful dishes and at least two suitable accompaniments. The two skilful dishes can either be a starter and a main course, a main course and a dessert, or two complementary main dishes.

Comments on specific questions

Test 1

The best choices for the two-course vegetarian meal in part **(a)** produced a well-balanced meal that demonstrated a variety of textures and flavours. Candidates needed to take care not to include animal products such as gelatine or Oyster sauce. For part **(b)**, many chose flapjack to demonstrate a batch of biscuits by the melting method. This is not ideal as it is a low-skilled tray bake. Higher levels of skill were shown by candidates who made and shaped the biscuits. A variety of small cakes and tray bakes were produced and some of these were neatly decorated to gain full credit.

Test 2

In part **(a)**, cakes were a popular choice for 'baking': these need to be skillfully decorated for full credit. There were some good examples of shallow frying, although some dishes chosen for this, such as battered foods, were not suitable for this method and many candidates stir-fried rather than shallow fried. Some good examples of stews were produced, with the best results being hearty meat stews cooked slowly from the beginning of the test in order to allow meat to tenderise and flavours to develop. In part **(b)**, stronger candidates planned a pasta dish that did not require a roux sauce, such as pasta salads or bolognaise; saving the roux sauce element for a dish such as vegetable or fish gratin.

Test 3

For part **(a)**, four substantial dishes were required that provided a good supply of starchy carbohydrate and protein, were low in fat and plentiful in vitamins and minerals. Most candidates provided a good balance of savoury and sweet dishes. For part **(b)**, candidates generally made a large cake as required. Only partial credit was awarded if small cakes were planned and made. The cakes needed to be skillfully and neatly decorated to gain maximum credit.

Test 4

For part **(a)**, candidates needed to be careful not to repeat cheese in more than one dish. The dishes planned for demonstrating cheese or eggs could be savoury or sweet; candidates should ensure that the overall menu does not become unbalanced with too many sweet dishes. Dishes to demonstrate eggs were most successful when the eggs were a main component of the dish, rather than simply a glaze for pastry or bread. Most had planned this well, however, and saved the sweet dishes for part **(b)**, where there were some good examples of well-decorated cakes and beautifully risen scones.

Test 5

There were some good examples of well-balanced meals in part **(a)** where candidates had shown in their planning that they understood how to reduce fat and sugar in adapted recipes for weight loss. This shows good application of theoretical knowledge. For part **(b)**, suitable cold dishes for packed meals could include pastries, cakes, cookies, scones, filled bread rolls or similar dishes that were easy to store and transport.

Test 6

This question tested the candidates' knowledge of specific ingredients and there were many suitable choices made in response. The strongest work was from candidates who used the specified ingredient accurately as an integral part or main feature of the chosen dish. For this type of question, the dishes all need to be complex and skillful. Where candidates choose dishes that would normally be served as accompaniments, for example, this generally reduces that skill level and credit should be adjusted accordingly. Candidates must also take care not to repeat methods used in the different dishes. Pulses used were sometimes canned which reduced the skill shown. Some candidates used rice more than once, often making a pulse dish that included rice and then another dish to demonstrate use of rice. Candidates need to make it clear which ingredient was being demonstrated in a dish by clearly indicating this on their planning sheets.

Test 7

For part **(a)**, the meal for visitors allowed candidates good scope to be imaginative with their choices. Meals do need to be balanced and the main dishes as well as the accompaniments to be complementary. For part **(b)**, the choices for two baked dishes were mainly good and skillful, although these needed to be displayed on the table alongside their intended packaging.

Test 8

For part **(a)**, the strongest candidates were able to showcase a suitable range of skilled uses for each piece of equipment. Most candidates planned well in both sections of this question, although they needed to be careful not to repeat cheese in part **(a)** and then again for the scones in part **(b)**.