

# FOOD AND NUTRITION

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| <p><b>Paper 0648/11</b><br/><b>Theory</b></p> |
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## **Key messages**

- Candidates must read the questions carefully to ensure that they understand what is required from the introductory words and sentences in the stem of the question.
- In order to do well, it is important that candidates give reasons, well discussed explanations and examples in questions where more credit is available.
- Candidates should be encouraged to provide clear, concise responses using correct technical language.

## **General comments**

It was pleasing to note that there were several candidates who produced answers of a very good standard, demonstrating a thorough understanding of the subject matter and an ability to apply their knowledge. Reasons, examples and discussion were given where appropriate.

The weaker candidates showed that they were able to recall basic facts but did not give required explanations or examples. Some answers had little relevance as lots of information was written on a topic without careful consideration of what was actually being asked in the question. There were some non-response questions for a few candidates, but on the whole, the paper was attempted by all candidates.

## **Comments on specific questions**

### **Section A**

#### **Question 1**

- (a) Many candidates were able to name iodide as the nutrient which is lacking if the body has goitre.
- (b) It was not so well known that vitamin B<sub>3</sub> is the nutrient which is lacking if the body has pellagra.
- (c) It was not so well known that protein is the nutrient which is lacking if the body has marasmus.
- (d) The majority of candidates were able to name iron as the nutrient which is lacking if the body has anaemia.
- (e) It was well known that vitamin A is the nutrient which is lacking if the body has night blindness.

#### **Question 2**

- (a) The majority of candidates were able to name at least two sources of vitamin C which could be used in a fruit smoothie. Credit was not given for naming sources from the same category as the question asked for different sources so answers which included four types of citrus fruit could only be awarded one mark.
- (b) The majority of candidates showed good knowledge of the functions of vitamin C. Most popular responses were absorption of iron, support the immune system, maintain healthy skin, keeps gums healthy and helps build strong bones and teeth.

### Question 3

- (a) A very high proportion of candidates correctly named chicken as the main source of protein in the sandwich.
- (b) Many candidates were able to correctly identify at least two protein foods which could be used so a vegan could eat the sandwich. Credit was not given for naming sources from the same category as the question asked for different sources, so suggesting hummus, falafel and chickpeas could only be awarded one mark.
- (c) Many candidates were credited with full marks for suggesting the addition of a vegetable or fruit, or changes to the type of bread, such as using wholemeal or seeded bread, could increase the fibre content of the sandwich.
- (d) Candidates did not score as highly as anticipated in this question. Most candidates noted that fibre prevents constipation and bowel disorders. Some showed their knowledge of the benefits of increasing fibre in the diet by including the information that fibre absorbs water, making faeces soft and bulky and easier to expel. Few mentioned the satiety effect of fibre or the fact that it lowers blood cholesterol, lowers the risk of CHD and is useful in helping to prevent diabetes.
- (e) A good proportion of candidates were able to name at least one enzyme involved in the digestion of the bread in the sandwich.
- (f) A good proportion of candidates were able to name at least one enzyme involved in the digestion of the chicken in the sandwich.
- (g) The answers to this question indicated a lack of knowledge of starchy foods that a person with coeliac disease could eat. Many candidates only gained half the available marks with the most popular answer being corn in some form, potato, rice, yam and cassava. Many suggested pasta in some form showing a lack of awareness of pasta being made from wheat.
- (h) Those who gained a mark for this question correctly answered that food should be eaten by the use-by date to ensure it is safe to eat or to reduce the risk of food poisoning. Very few mentioned the fact that the sandwich contains chicken and chicken is a high risk or perishable food. References to the food being expired or inedible were not credited. There was a noticeable use of poor technical language, such as bad, rotten, gone off, in responses to this question.
- (i) A few candidates scored quite highly in answer to this question and were able to give several reasons for why foods are packaged. The most popular answers referred to preventing damage during transport, preventing contamination by bacteria or pests, increasing the shelf life of the product, informing the consumer through labelling and attracting consumers to purchase the product.

### Section B

#### Question 4

- (a) This question was generally answered well showing a great deal of knowledge regarding the nutritional benefits of including fish in the diet. Some candidates did not read the question carefully and did not justify the named nutrient with a function which meant they could not receive the full mark even though the nutrient was correct. Some included information irrelevant to nutritional benefits.
- (b) There were many accurate points suggested to look for when buying fresh fish. It was known that the eyes of the fish should be bright or not sunken, there should be plenty of firmly attached scales, the fish should smell fresh, the skin should be moist and the gills must be bright red. Many candidates were able to gain full marks for this part of the question.
- (c) (i) A good proportion of candidates were able to name at least one white fish which could be used to make the fish cakes. Most popular responses were haddock, bream and hake.  
(ii) Many candidates were able to correctly suggest at least two herbs which could be used to add flavour to the fish cakes. Most popular responses were basil, coriander, parsley and thyme.

- (d)(i) This question was generally answered well showing a great deal of knowledge of the advantages of shallow frying as a method of cooking. Correct responses included producing food with a crisp texture and attractive colour and that frying is a quick method of cooking and uses less oil than deep frying.
- (ii) Guidelines to follow when shallow frying was a well-known topic. Correct answers stated that fat or oil is at the correct temperature before frying and the oil should only come half way up food being cooked, food should be placed into the fat with care to avoid splashing, pans of oil should not be left unattended. Many wrote about food and equipment being dry to prevent spitting of oil and some candidates noted that the food must be carefully turned with heat resistant utensils to ensure even cooking. There were many possible answers and full marks were often awarded for this section.
- (e) Most candidates were able to correctly identify several different points to consider when choosing a pan for shallow frying. Answers covered a wide range of points including being a good size to suit the family, easy to clean with perhaps a non-stick coating, made of a suitable material such as aluminium or stainless steel, insulated handle, priced to suit budget, from a reliable brand with a guarantee. It was encouraging to note that most candidates wrote full sentences rather than one-word answers.

### Question 5

A few candidates scored quite highly in answer to this question and were able to give several reasons for serving sauces with meals together with appropriate examples. Some candidates mistakenly thought that a sauce and a dressing or condiment were interchangeable, however, a sauce is a hot accompaniment to a dish whereas a dressing is cold. Some candidates needed to think more carefully about their examples; spaghetti with a cheese sauce does not improve colour whereas a tomato sauce would. Some candidates simply did not give an example so lost marks.

### Question 6

- (a) Many candidates were able to correctly name one bacteria which can cause food poisoning. Most popular responses were e-coli, listeria and salmonella.
- (b) The vast majority of candidates scored highly here by correctly listing symptoms of food poisoning.

### Question 7

The majority of candidates attempted this question and provided good answers showing awareness of food safety rules which help delay food spoilage when using a refrigerator. It was expected that answers would include the advice to cover foods, store raw meat below cooked foods at the bottom of refrigerator, avoid putting hot food into the refrigerator, use foods in rotation, maintain the refrigerator at the correct temperature, not open the door too often and clean and defrost the inside regularly.

### Section C

Candidates are expected to answer the questions in this section in an essay style, using correct terminology and specialist language, where appropriate. It is essential that when answering questions of this nature candidates read the requirements of the question carefully to give a balanced response that addresses all areas of the question equally.

### Question 8

This was the least popular of the essay questions. Responses varied in completion length which is a concern as this is a question where candidates can score highly by demonstrating appropriate recall of knowledge and understanding. Candidates were asked to discuss the importance and uses of soya beans and their products in the preparation of meals. It was expected that answers would include nutritional facts about soya and its value as a food commodity as well as specific examples of the many and varied ways in which soya and its products can be incorporated into meals.

## Question 9

This question was the most popular choice in Section C.

Candidates were asked to discuss factors which need to be considered when planning and preparing meals to minimise the risk of family members suffering from obesity. This seemed to be the more popular choice of question though again responses varied in completion length. Occasionally bullet pointed lists were given which did not fulfil the requirements of a discussed answer. Those candidates who structured their answer well and included precise, relevant, well discussed answers achieved high marks. Some candidates noted that changes in the diet would help by avoiding snacking on high sugar and fatty foods but replacing with fruit and vegetables, reading labels and selecting low fat alternatives, replacing red meat with chicken or fish, having fewer takeaways and cooking meals at home so that people know what they contain, using cooking methods that did not include the use of fat and taking care with portion sizes. Very few candidates mentioned nutritional tools. Most mentioned considering age, occupation and levels of activity but some then gave a detailed discussion on the merits of exercise when the question asked for meal planning.

# FOOD AND NUTRITION

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| <p><b>Paper 0648/12</b><br/><b>Theory</b></p> |
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## **Key messages**

- In general, most candidates were able to produce factual answers to direct questions.
- Candidates need to have a full understanding of the requirements of different question types, e.g. name, state, describe, identify, discuss and explain, to establish the type of information required in the answers.
- It is important to provide clear, concise responses using correct technical language.

## **General comments**

There were some non-response questions for a few candidates, but on the whole the paper was attempted by all candidates.

It was pleasing to note that there were several candidates who produced answers of a good standard, demonstrating an understanding of the subject matter and an ability to apply their knowledge. Reasons, examples and discussion were generally given, where appropriate.

Candidates with lower marks showed that they were able to recall basic facts but did not give required explanations or examples suggesting that facts are learnt without being understood.

## **Comments on specific questions**

### **Section A**

#### **Question 1**

- (a) Very few candidates correctly named amino acids as the type of molecules which combine to form protein. Many incorrectly listed carbon, hydrogen, oxygen, nitrogen, phosphorus and sulfur which are the chemical elements from which proteins are formed.
- (b) It was expected that candidates would state that 10 amino acids are essential for children. Very few correct responses were seen.
- (c) Many candidates were able to name at least one good source of plant protein; cereals, legumes, pulses, and nuts, or an example from within the groups, were the more popular responses. Those candidates who did not achieve full marks provided answers from the same group of plant protein foods when the expectation was that different plant protein food categories would be given.
- (d) Most candidates correctly named examples of mechanical, chemical or electrical uses of energy or showed their knowledge of the energy requirements of the body through basal metabolism or growth. Occasionally responses came from the same category thus reducing the marks awarded and sometimes candidates repeated the question and included body temperature.
- (e) The majority of candidates showed their knowledge of the effect on the body when energy intake is continually greater than energy output by stating obesity, others correctly named CHD or high blood pressure.

- (f) Most candidates achieved at least one mark for stating that protein is denatured or coagulation occurs during heating. Some candidates correctly stated that the process was irreversible. A lot of candidates described the effect of heat on a particular protein product e.g. milk, eggs or meat which was not required by the question.

#### Question 2

- (a) Many candidates correctly stated that vitamin A would be needed to help prevent night blindness; retinol and beta-carotene were also given as correct answers.
- (b) Many candidates correctly stated that vitamin D or calcium would be needed to help prevent osteoporosis; some candidates correctly gave phosphorus.
- (c) It was not well known that folate, also known as folic acid or vitamin B<sub>9</sub>, is needed to help prevent the condition spina bifida. Many candidates appeared to guess the answer as numerous vitamins and minerals were listed.
- (d) Many candidates simply identified vitamin B as the nutrient needed to help prevent beri-beri which is incorrect. Only a few named vitamin B<sub>1</sub> or thiamine.
- (e) Many candidates correctly stated that iodide is needed to help prevent goitre.
- (f) Many candidates simply identified vitamin B as the nutrient needed to help prevent pellagra which is incorrect. Some accurately answered vitamin B<sub>3</sub> or nicotinic acid as being the nutrient required.

#### Question 3

- (a) A high proportion of candidates were unable to name the liver as the organ in the body which produces bile. Incorrect responses included the stomach, bile duct and pancreas. Some candidates did not attempt this question.
- (b) It was clear that not many candidates knew that pepsin and rennin are enzymes found in the stomach. Very few gained both available marks, some candidates simply named any enzyme they knew and others gave no response.
- (c) Very few candidates demonstrated full knowledge of the mouth and small intestine or duodenum being places in the digestive system where starch is digested.
- (d) Many candidates were unable to name amylase as the enzyme involved in the digestion of starch. Frequent incorrect answers included bile, glucose, and maltose.

#### Question 4

- (a) The answers to this question indicated a lack of knowledge of the fact that vitamin C is water-soluble thus cannot be stored and is easily lost from the body. A high proportion of candidates gave a function of vitamin C, failing to notice that the following question was based on the functions of vitamin C.
- (b) A good proportion of candidates were able to identify more than one function of vitamin C in the diet. Most responses correctly stated absorption of iron, building strong bones, acting as an antioxidant, keeping skin and gums healthy. Some appeared to guess answers and wrote the functions of other nutrients by listing repair, energy and warmth.
- (c) This question did not score as highly as expected. Some candidates named vegetables which are not a good source of vitamin C and many also included fruits.

#### Question 5

- (a) The majority of candidates were able to suggest a good range of fruits suitable for making kebabs. Only a few candidates repeated the fruit identified in the question indicating they had not read the question properly.

- (b)(i) Many candidates did not know the term used to describe the process of apples turning brown. It was expected that enzymic browning would be well known. Some candidates identified any process where something becomes brown e.g. caramelisation, Maillard browning, dextrinisation.
- (ii) The answers to this question indicated a lack of knowledge of the reason why enzymic browning occurs. Many responses focused on the kebabs being cooked so references to fruit being burnt, sugar in apple when heated turning brown. Very few candidates identified the effect of air or oxygen on the apples and some no responses were seen.
- (iii) The majority of candidates did not provide the expected responses of covering prepared apples with water or lemon juice or preparing and using immediately. Many candidates incorrectly referred to being careful when cooking the kebab and not burning the apple or choosing fruit that was not bruised or damaged.

## Section B

### Question 6

- (a)(i) The majority of candidates were able to correctly name a unit of measurement for energy.
- (ii) The majority of candidates were able to correctly name one group of people who need food which is high in energy. The most popular being athletes and manual workers and then children.
- (b) A good proportion of candidates were able to identify at least two ways to reduce the amount of cholesterol in the cheese sauce. The most popular responses were to reduce the amount of cheese and use low-fat or skimmed milk. Some responses indicated that candidates did not understand the term cholesterol as many suggested changing the butter to unsalted or changing the flour to wholemeal. Some candidates did not appear to understand that the correct proportions of the sauce ingredients are important for a successful outcome as many responses suggested reducing the amount of milk and butter. Some candidates gave general suggestions as to how cholesterol could be reduced in the diet with no reference to the cheese sauce.
- (c) Very few candidates named gelatinisation as the thickening process in a sauce. Many candidates incorrectly gave the roux method and others simply guessed any process with coagulation, pasteurisation, creaming, whisking, and melting being named.
- (d) It is important to read the question thoroughly as many candidates did not provide a reason for the guideline they had given. There was little reference made to checking flour regularly for weevils or practising stock rotation to ensure quality of flour. Many candidates advised putting flour in a container but not that the container should be sealed to prevent entry of dust, bacteria, insects, moisture and why these conditions could have an adverse effect on the flour. Many responses advised labelling flour and not to mix flour due to the different types not because one was old and could cause decay spreading from the old to the new.
- (e) It was clear that this method of sauce-making is not well known. The majority of candidates achieved only two marks when describing how to make a cheese sauce using the roux method with usually only the first two processes in the method correctly described. Answers should have clearly shown that first the butter was melted, then the flour was added and cooked till a pale sandy colour, the sauce was then removed from the heat and the milk gradually added, the sauce was then returned to the heat and brought to the boil until the starch gelatinises and lastly the cheese is added, off the heat.
- (f) Most candidates were able to name at least one dish which includes a cheese sauce, macaroni cheese being the most popular answer with lasagne, tuna bake and fish pie also seen. Incorrect responses included spaghetti, au gratin dishes and cheesecake.

### Question 7

- (a) A good proportion of candidates were able to correctly name at least one moist method of cooking. Most popular correct responses were boiling, steaming and stewing. Incorrect responses included whisking, creaming and roux.

- (b) A good proportion of candidates were able to correctly name at least one dry method of cooking. Most popular correct responses were grilling, frying and baking. Many incorrect responses again included cake making methods as well as microwave cooking.
- (c) Many candidates achieved at least one mark for this question but very few were able to clearly differentiate between conduction and radiation for full marks. A good answer would have been that conduction occurs through solids or liquids, by direct contact, heat causes molecules to vibrate, which in turn generates heat which passes through the food whereas radiation uses electromagnetic rays and heat travels in straight lines through space or vacuum from the source of radiation without a medium.
- (d) Most candidates correctly identified wood or plastic as materials used in the kitchen which are poor conductors of heat.
- (e) The majority of candidates were able to achieve two marks. The most popular responses named as methods of cooking which use convection were grilling, boiling, steaming, and baking.
- (f) The majority of candidates were able to achieve some marks though few achieved the full six marks available. Those who scored higher marks stated that the advantages of grilling were that it is a quick method of cooking so economical of fuel energy, flavour and texture are developed and it is a healthy method of cooking. Most frequent disadvantages listed were that it is easy to over or under cook food and it is a method that needs constant attention.
- (g) The majority of candidates were able to identify at least two correct benefits of marinating foods before grilling. The most popular answers were to add flavour, colour and tenderise meat.

### Question 8

In the main this question was not well answered with few candidates scoring the available marks. More able candidates wrote full sentences whilst the weaker ones gave one or two word responses and some did not even attempt to answer. There appeared to be a lack of familiarity with the term 'laminated worktop' as responses often referred to flooring, ventilation, kitchen design and how to select a work top. Sometimes responses suggested it was a product that was put on top of a work top possibly referring to a chopping board.

### Section C

Candidates are expected to answer questions in Section C in an essay style, using correct terminology and specialist language where appropriate. It is essential that when answering questions of this nature candidates read the requirements of the question carefully to give a balanced response that addresses all areas of the question equally.

### Question 9

The majority of candidates answered this question but responses varied from a short paragraph through to the use of all given pages. Answers need to be precise and relevant to the topic avoiding over-elaboration of certain points to the detriment of others.

Some candidates misinterpreted the focus of the question confusing packaging with labelling and subsequently identified and discussed reasons for a wealth of information found on packaged food, which although correct did not answer the question.

It was expected that candidates would identify and discuss how packaging can reduce waste by protecting from damage, spillage, contamination, spoilage, extend shelf life, act as a marketing aid, contain a prescribed amount of product as well as provide information.

The suitability of glass as a packaging material was not as well answered. Popular responses included the fact that glass is transparent so product can be seen, glass can be reused or recycled, it is heavy to carry and can be easily broken. Many candidates simply listed food products that could be put in glass containers.

### Question 10

Fewer candidates choose this question and many did not achieve high marks as answers often lacked clear examples and discussions of the points made. Answers need to be precise and relevant to the topic avoiding over-elaboration of certain points to the detriment of others. Some candidates concentrated on providing responses for one piece of equipment in favour of the other or gave responses focussing on other types of equipment to be found in a kitchen. The majority of candidates were able to give some relevant information as to the benefits and uses for each piece of equipment though marks were lost due to a lack of explanation for the points identified.

Some candidates had a misconception as to what a food processor is as references were made to cooking food in a processor. Among the possible advantages of a processor are the consistency of results such as grating, slicing, rubbing in which are not always possible to achieve by manual methods. The appliance does the work so it saves time and labour for busy people or those with disabilities, as well as it being safer than using sharp knives or graters.

Marks could have been awarded for stating the varied functions of a microwave such as defrosting, cooking and reheating. As food is heated quickly and no preheating of the oven is needed the kitchen does not get hot, they are economical on fuel and time so are useful for working families. Time is also saved as food can be cooked and served in the same dish, saving washing up. Marks were also available for mentioning that vegetables retain their colour and vitamin B and C and a microwave does not require oil so is a healthier method.

# FOOD AND NUTRITION

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| <p><b>Paper 0648/13</b><br/><b>Theory</b></p> |
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## **Key messages**

- Candidates must read the questions carefully to ensure that they understand what is required from the introductory words and sentences in the stem of the question.
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## **General comments**

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## **Comments on specific questions**

### **Section A**

#### **Question 1**

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- (d) The majority of candidates were able to name iron as the nutrient which is lacking if the body has anaemia.
- (e) It was well known that vitamin A is the nutrient which is lacking if the body has night blindness.

#### **Question 2**

- (a) The majority of candidates were able to name at least two sources of vitamin C which could be used in a fruit smoothie. Credit was not given for naming sources from the same category as the question asked for different sources so answers which included four types of citrus fruit could only be awarded one mark.
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### Question 3

- (a) A very high proportion of candidates correctly named chicken as the main source of protein in the sandwich.
- (b) Many candidates were able to correctly identify at least two protein foods which could be used so a vegan could eat the sandwich. Credit was not given for naming sources from the same category as the question asked for different sources, so suggesting hummus, falafel and chickpeas could only be awarded one mark.
- (c) Many candidates were credited with full marks for suggesting the addition of a vegetable or fruit, or changes to the type of bread, such as using wholemeal or seeded bread, could increase the fibre content of the sandwich.
- (d) Candidates did not score as highly as anticipated in this question. Most candidates noted that fibre prevents constipation and bowel disorders. Some showed their knowledge of the benefits of increasing fibre in the diet by including the information that fibre absorbs water, making faeces soft and bulky and easier to expel. Few mentioned the satiety effect of fibre or the fact that it lowers blood cholesterol, lowers the risk of CHD and is useful in helping to prevent diabetes.
- (e) A good proportion of candidates were able to name at least one enzyme involved in the digestion of the bread in the sandwich.
- (f) A good proportion of candidates were able to name at least one enzyme involved in the digestion of the chicken in the sandwich.
- (g) The answers to this question indicated a lack of knowledge of starchy foods that a person with coeliac disease could eat. Many candidates only gained half the available marks with the most popular answer being corn in some form, potato, rice, yam and cassava. Many suggested pasta in some form showing a lack of awareness of pasta being made from wheat.
- (h) Those who gained a mark for this question correctly answered that food should be eaten by the use-by date to ensure it is safe to eat or to reduce the risk of food poisoning. Very few mentioned the fact that the sandwich contains chicken and chicken is a high risk or perishable food. References to the food being expired or inedible were not credited. There was a noticeable use of poor technical language, such as bad, rotten, gone off, in responses to this question.
- (i) A few candidates scored quite highly in answer to this question and were able to give several reasons for why foods are packaged. The most popular answers referred to preventing damage during transport, preventing contamination by bacteria or pests, increasing the shelf life of the product, informing the consumer through labelling and attracting consumers to purchase the product.

### Section B

#### Question 4

- (a) This question was generally answered well showing a great deal of knowledge regarding the nutritional benefits of including fish in the diet. Some candidates did not read the question carefully and did not justify the named nutrient with a function which meant they could not receive the full mark even though the nutrient was correct. Some included information irrelevant to nutritional benefits.
- (b) There were many accurate points suggested to look for when buying fresh fish. It was known that the eyes of the fish should be bright or not sunken, there should be plenty of firmly attached scales, the fish should smell fresh, the skin should be moist and the gills must be bright red. Many candidates were able to gain full marks for this part of the question.
- (c) (i) A good proportion of candidates were able to name at least one white fish which could be used to make the fish cakes. Most popular responses were haddock, bream and hake.  
(ii) Many candidates were able to correctly suggest at least two herbs which could be used to add flavour to the fish cakes. Most popular responses were basil, coriander, parsley and thyme.

- (d)(i) This question was generally answered well showing a great deal of knowledge of the advantages of shallow frying as a method of cooking. Correct responses included producing food with a crisp texture and attractive colour and that frying is a quick method of cooking and uses less oil than deep frying.
- (ii) Guidelines to follow when shallow frying was a well-known topic. Correct answers stated that fat or oil is at the correct temperature before frying and the oil should only come half way up food being cooked, food should be placed into the fat with care to avoid splashing, pans of oil should not be left unattended. Many wrote about food and equipment being dry to prevent spitting of oil and some candidates noted that the food must be carefully turned with heat resistant utensils to ensure even cooking. There were many possible answers and full marks were often awarded for this section.
- (e) Most candidates were able to correctly identify several different points to consider when choosing a pan for shallow frying. Answers covered a wide range of points including being a good size to suit the family, easy to clean with perhaps a non-stick coating, made of a suitable material such as aluminium or stainless steel, insulated handle, priced to suit budget, from a reliable brand with a guarantee. It was encouraging to note that most candidates wrote full sentences rather than one-word answers.

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A few candidates scored quite highly in answer to this question and were able to give several reasons for serving sauces with meals together with appropriate examples. Some candidates mistakenly thought that a sauce and a dressing or condiment were interchangeable, however, a sauce is a hot accompaniment to a dish whereas a dressing is cold. Some candidates needed to think more carefully about their examples; spaghetti with a cheese sauce does not improve colour whereas a tomato sauce would. Some candidates simply did not give an example so lost marks.

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- (a) Many candidates were able to correctly name one bacteria which can cause food poisoning. Most popular responses were e-coli, listeria and salmonella.
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## Question 9

This question was the most popular choice in Section C.

Candidates were asked to discuss factors which need to be considered when planning and preparing meals to minimise the risk of family members suffering from obesity. This seemed to be the more popular choice of question though again responses varied in completion length. Occasionally bullet pointed lists were given which did not fulfil the requirements of a discussed answer. Those candidates who structured their answer well and included precise, relevant, well discussed answers achieved high marks. Some candidates noted that changes in the diet would help by avoiding snacking on high sugar and fatty foods but replacing with fruit and vegetables, reading labels and selecting low fat alternatives, replacing red meat with chicken or fish, having fewer takeaways and cooking meals at home so that people know what they contain, using cooking methods that did not include the use of fat and taking care with portion sizes. Very few candidates mentioned nutritional tools. Most mentioned considering age, occupation and levels of activity but some then gave a detailed discussion on the merits of exercise when the question asked for meal planning.

# FOOD AND NUTRITION

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**Paper 0648/02**  
**Practical Test**

## Key messages

- **The inclusion of photographs** as supporting evidence is now being received from the majority of centres. Centres should ensure that none of the dishes are obscured by table decorations, labels or coverings so that they are clearly visible. Candidates should not appear in photographs.
- **All centres** must complete and include the Practical Examiner's Report and checklist with the candidates' work. This can be found in the Confidential Instructions document. It includes a record of the dates when the planning and practical tests were carried out, a seating plan and the opportunity for the teacher to report any difficulties that may have occurred during the Test.
- For each examination session centres should download and use the most recent forms; these are available from the Samples database. The interactive summary mark sheets and working mark sheets that will automatically total the marks and scale correctly.
- In larger centres, where there is more than one Examiner involved in marking the practical tests, 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 Practical Test Handbook, available online from the Cambridge International website and 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. Marks awarded must reflect the comments given on the Examiner mark sheets and the annotations on candidates' planning sheets.

## General comments

Many centres required no adjustments to marks awarded, and most adjustments made were minimal. Only in a few cases were adjustments of more than 10 per cent required, where a small number of centres produced inaccurate or inconsistently marked work.

The most successful centres presented work of a good standard where candidates have been very well supported enabling them to show their achievement through well directed teaching and submit interesting and varied work which met the assessment criteria. However, in several centres, candidates often chose low skill dishes or ones which did not meet the requirements of the test. It is disappointing to see centres where candidates have made the same or similar dishes to one another regardless of the allocated test. The tests are differentiated to allow candidates to demonstrate their ability to interpret a brief, apply theoretical knowledge to the practical and to plan menus creatively. Candidates generally need more guidance and practice with menu planning and meeting nutritional needs so that they can accurately 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. This does rely on the expertise of their teachers. 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. These should then be annotated by the Examiner with marks awarded for each choice of dish. All of the planning should be clearly and concisely annotated using the key provided in the Handbook. Examiner annotation should be in a different coloured pen so that it stands out from the candidates' work.

Centres are reminded that 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

totalled, scaled and transferred to the summary sheet. These marks must be checked by another person for accuracy. Half marks should be avoided, where possible, as this can lead to over-marking the work. Where half marks do appear in the final total, these should be rounded down, not up. There is a useful conversion table in the Handbook as well as the interactive form on the website.

It is a requirement that all candidates' work must show evidence of marking, with annotation clearly written on the work to evidence how and where marks have been awarded or reduced. There were excellent examples of marking in many centres, with clear, accurate and helpful annotation. In a few centres, Examiners failed to annotate in sufficient detail – some did not provide any commentary at all – and this makes the moderation process extremely difficult. Detailed annotation both on the front sheets and within the work itself ensures that moderation is both fair and consistent. This series yielded a number of candidates not producing or not serving one or more of their planned dishes. Where this occurs, the reasons for the omission must be clearly recorded as marks are affected differently, depending on whether the dish was attempted and abandoned during preparation and cooking; or whether it was not attempted at all. 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.

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. Some candidates mistakenly planned two individual main course dishes that were not complementary to a specific meal and this resulted in menus that were too heavy in carbohydrate and/or protein.

Many candidates had tried hard to plan appropriate menus in response to the test questions and many centres were working in very difficult circumstances this year. Candidates had made a good effort to display their final dishes attractively. The main issues lie in the interpretation of the test requirements and ensuring the planning is more accurate. Candidates should be encouraged to make more 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. Candidates who are aiming for high grades should be making their dishes from scratch and keeping the use of convenience foods to a minimum unless the test asks for them. Centres are again reminded that drinks should not be made, unless specifically required and cannot be awarded any marks in the test.

Good practice was seen in centres where candidates listed their dishes clearly for **(a)** and **(b)** of the question and indicated which dishes include particular ingredients or methods required by the question. Examiners are reminded to indicate on the choices sheet how many marks have been awarded for each individual dish with justification given on the mark sheet. In the main, marks for choices were awarded accurately and fairly, with some exceptions. If a dish is awarded 4 marks for Choices, it should be marked out of 7 for Results; conversely any dish with marks reduced to a maximum of 3 in Choices for low skill level should then be marked out of maximum 5 for Results.

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; and where dovetailing is not evident, the maximum mark available for the time plan is 5. Time left at the end of a plan indicates a lack of skill in the dishes chosen or errors in timing for other processes.

The marks for the final results section were often a little generous considering the number of incorrect or low skill dishes. Where this is the case the total number of marks should be reduced. For incorrect dishes, a maximum of 3.5 marks and for low skill dishes 4 or 5 maximum should be awarded, depending on the dish.

Where candidates fail to make or serve a planned dish, marks for method of working as well as serving and appearance must also be reduced – marks cannot be transferred to other dishes.

## **Comments on specific questions**

### **Test 1**

Most centres chose this test. The best choices for the balanced meal rich in iron and vitamin C in **(a)** indicated a well-balanced meal that demonstrated a variety of textures and flavours that would provide good sources of the named nutrients. Many candidates planned suitable meals, which demonstrated good theoretical knowledge. Suitable dishes were generally chosen for **(b)** although many of these were low skilled dishes such as simple fruit salads. Dishes such as fruit tarts or flans would have involved a wider range of skills for this question.

### **Test 2**

This was a popular question and many candidates demonstrated a good range of skills. The best menus for **(a)** included a well-balanced meal that was rich in carbohydrates for energy, protein for growth and repair, along with relevant amounts of iron and calcium. For **(b)**, Some candidates chose dishes which did not really demonstrate sauce making. A sauce should be of pouring consistency so that it can be served with a dish. For the purposes of the Practical Test, the sauce chosen should also demonstrate sufficient skills. A sauce made using the roux or blended method are examples. A ganache that sets to a fairly solid consistency when served with a sponge cake is not a sauce. A few tablespoons of soya sauce added to shredded beef stir fry is not a sauce.

### **Test 3**

Another popular question where candidates chose correctly to show use of specific ingredients as listed in the question. Moderators noted generally well-chosen dishes with high levels of skills such as spinach quiche, fruit loaf, spaghetti Bolognese, nutties, lasagne or steamed sponge and custard, for example. Examiners are reminded to check that candidates' choices are correct; for example, 'gingernuts' were seen to demonstrate use of nuts and these biscuits do not generally contain nuts of any kind.

### **Test 4**

For both parts of the test, candidates needed to be careful not to repeat cheese in more than one dish. For **(a)**, a low-energy meal was required for these sedentary workers. Generally, candidates did make choices that were low in sugar and fat. Salads were popular and many were served with a protein food (prawns, chicken, eggs) and a home-made dressing such as mayonnaise or vinaigrette to increase the skill level, although in some cases this raised the energy content. Some candidates found it hard to demonstrate a high level of skills when choosing lower calorie dishes. One suggestion for a way to approach this type of test is to consider using ingredients with lower energy content, such as skimmed milk, low-fat cheese or reduced fat-crème fraîche for sauces; and sweeteners instead of sugar when making dishes for desserts. We would expect to see an increase in the fibre content of meals; pulses are a good choice to use in place of meat.

### **Test 5**

This was another popular choice where the majority of candidates demonstrated the methods correctly. It was good to see the microwave used for skilled dishes such as sponge pudding and a sauce. Good choices for baking were generally made, including decorated cakes or biscuits. For steaming, some excellent skills were shown in dishes that included sponges served with sauce, fish pie (with steamed fish, white roux sauce, piped potato). For grilling, the chosen dishes were sometimes low skilled such as grilled chicken or grilled fish. Candidates should be encouraged to think how they can increase the skill level of such dishes, for example by adding a home-made sauce, serving the dish with rice or other accompaniment. Skilled choices might be macaroni cheese, vegetable gratin (both can be grilled to brown the top). For shallow frying some choices used deep frying; however this was usually acknowledged by the Examiner when awarding marks for Choice and in Results. There was some misunderstanding of the term 'stewing', which is a long, slow, moist cooking method where food is cut into pieces and cooked in water, stock or sauce. The food and the cooking liquid are served together. All stews have a thickened consistency. Stewed foods may be cooked in a covered pan on the hob or in a covered dish/casserole in the oven. Examples of foods which might be cooked by stewing include:

- meat (goulash, beef/lamb stew, Bolognese sauce using minced beef)
- poultry (chicken fricassee, chicken casserole, curried chicken)
- vegetables (ratatouille)

- fruit (stewed apples/pears etc. to go into a pie or crumble).

### Test 6

Many centres allocated this question. Good choices for **(a)** demonstrated knowledge of the needs of pregnant women. Candidates chose dishes rich in iron, vitamin C, calcium and vitamin D. A few candidates mistakenly planned a main dish containing liver, which should not be eaten in pregnancy due to the high levels of vitamin A. For **(b)**, most candidates chose dishes that correctly demonstrated the use of yeast and pastry.

### Test 7

This question was chosen by a few centres. For **(a)**, the most successful candidates chose dishes that demonstrated skilful use of a range of vegetables. It was not a requirement for the dishes to be vegetarian providing the dish was skilful and contained a good quantity of the chosen vegetable. For example, shepherds' pie, which contains potato in almost equal quantities to any meat would be suitable. Vegetable soups or dhal needed a bread accompaniment to become a 'skilful dish'. For **(b)**, good choices included quiche or Scotch eggs, while many excellent examples of cakes using the whisking method were noted. Most candidates correctly chose a Swiss roll, sponge cake or Genoese cake for the whisking method and those who skilfully decorated the cakes with piped cream or similar, gained the most marks.

### Test 8

This was a popular choice and produced mixed results. For **(a)**, some candidates demonstrated a good understanding of the requirements of the vegetarian diet and it was good to see imaginative menus that used novel proteins, such as soya mince, to replace meat or dishes that used complementary proteins with pulses, grains, nuts and so on. Many candidates opted for safe choices of macaroni cheese or vegetables au gratin. For **(b)**, good examples of cakes made by the creaming method included Victoria sandwiches and chocolate cakes. Those cakes that were skilfully decorated gained the highest marks. The melting method was generally correctly demonstrated with Anzac or ginger biscuits, for example.