

FOOD STUDIES

Paper 9336/01
Theory

Key messages

The importance of reading questions carefully cannot be stressed enough. Candidates should focus on the command word in the question. Understanding of and recognition of the command word is critical to enable candidates to access the full mark range for the question. Candidates should be prepared to re-read a question as they plan their response. Careful question choice is also essential.

Candidates should make themselves aware of the mark allocation for each question.

General comments

All questions were attempted, with **Questions 5** and **7** being the least popular.

Comments on specific questions

Section A

Question 1

- (a) Most candidates could name the three monosaccharides, though few referred to them as hexoses with 6 carbon atoms or pentoses with 5. Better responses were seen in answers regarding polysaccharides and non-starch polysaccharides, where candidates were able to state some of their nutritional benefits.
- (b) Candidates knew the points about salivary amylase hydrolysing cooked starch and the optimum conditions for the enzyme to work, but few related this knowledge to the process occurring in the mouth.
- (c) (i) The term *unavailable carbohydrate* was not well understood.
- (ii) This was well answered and candidates often received full credit.
- (iii) While most candidates gave the example of glucose, few knew that the sugar molecule has a free aldehyde group.
- (d) Responses to this question were almost always accurate.

Question 2

- (a) Many candidates showed good knowledge of cystic fibrosis and showed understanding of the faulty gene. It was not necessary to describe the symptoms of the condition though many candidates did this.
- (b) (i) Iodised salt was often seen. Candidates must include reference to the sea if giving answers of fish or vegetables.
- (ii) Candidates showed very good knowledge on this question and all parts on the mark scheme were seen.

- (c) (i) This was answered accurately.
- (ii) A small number of candidates answered this question well, but on the whole candidates were not confident of the thermogenic effects of food.
- (d) (i) Most candidates were unable to recall these figures.
- (ii) Recall of this figure was almost always accurate. Candidates should be reminded to give their answer in litres and not cups.
- (e) Many candidates did not recognise that dietary needs relates to a wide range of factors and not just nutritional factors. To score well in this question, candidates needed to be able to show that they were thinking of primary school aged children. Candidates could have drawn from their own experience of being a younger child to help their answers to this question. This type of question needs knowledge but also application of that knowledge to access the full range of marks

Question 3

- (a) Few candidates were able to draw a chemical representation of a triglyceride. There was confusion about the basic details with some candidates writing that three glycerols, or three glucoses or three glycogens were bound to one fatty acid.
- (b) (i) Candidates showed good knowledge of appropriate fat choices.
- (c) To score well, knowledge of rancidity was essential and candidates needed to plan their response by making bullet points of the knowledge and looking for similarities and differences in the two types of rancidity. Candidates need to permit themselves time to plan and organise their responses. It was not possible to score full marks if the process of comparing and contrasting was not undertaken. 'Whereas', 'similarly' and 'on the contrary' are conjunctions that would be useful in this type of response.
- (d) Very few candidates made the simple statement that both are units of energy measurement. There was little evidence that candidates had an understanding that 1 calorie is a measurement of the amount of heat needed to heat 1 g of water to 1°C.
- (e) Many candidates explained the health benefits of complex carbohydrates in relation to digestion and bowel health. Responses seen did not mention the satiety benefit of complex carbohydrates and the reduction in snacking after eating complex carbohydrates.

Question 4

- (a) (i) Responses to this question were often accurate.
- (ii) This question was reasonably well answered and many candidates drew a rope-like structure. Few responses mentioned glycine, proline and hydroxyproline.
- (b) Accurate responses seen.
- (c) Accurate responses seen.
- (d) (i) Most candidates scored partial credit on this question, knowing that vitamin D is required for the formation of strong bones and to aid in the absorption of calcium. Few candidates scored the third mark for further knowledge of this vitamin's role.
- (ii) Accurate responses seen.
- (iii) Accurate responses seen.
- (iv) Good knowledge of calcium and zinc was seen.
- (e) Few candidates were able to show enough knowledge to gain full credit on this question, with none using the word *glycogenesis* in their response. Candidates knew that glycogen is formed when blood glucose levels are high, and they knew that glycogen is formed in the liver.

Section B

Question 5

- (a) Candidates did not display sufficient knowledge of how curing is carried out. Some candidates knew the word curing and were aware that a salt solution was needed.
- (b) Good examples of vacuum packed foods were seen in the responses to this question and most candidates knew that air is removed.
- (c) (i) There was a great deal of inaccuracy seen in the responses to this question. Very few candidates knew that lard is rendered pig fat.
(ii) This question was not well answered and candidates showed very little knowledge of the process of making white vegetable fat.
- (d) Very few candidates could write accurately about the method of making hot-water crust pastry. Candidates that had made this type of pastry before were better able to answer this question.
- (e) This question was answered well.

Question 6

- (a) Candidates were required to come to a conclusion about the success and worth of the impact of fair-trade practises. Most candidates did not evaluate as directed by the command word. Good knowledge of fair trade was evident.
- (b) (i) There were some good responses to this question. Few candidates showed the detailed knowledge of the temperatures and processes required to gain full marks.
(ii) In general, responses to this question showed that candidates had thought through why some oils are more expensive to produce than others.
- (c) Most candidates were able to explain the term self-sufficiency well. The best responses were those that recognised that countries as well as families could be self-sufficient. Candidates were good at outlining the advantages of self-sufficiency but less good at outlining the disadvantages.
- (d) (i) Many candidates showed a basic knowledge of irradiation but were unable to add detail about how it is carried out.
(ii) The most frequently seen response was that the long-term effect on consumers is unknown.

Question 7

- (a) Candidates needed to describe gelatinisation of starch and dissolving of sugar for moist heat, and caramelisation and dextrinisation for dry heat. Knowledge of gelatinisation was very good, whilst knowledge of caramelisation and dextrinisation was sometimes inaccurate. Most candidates did not include the effects of moist heat on sugar and did not mention dissolving at all.
- (b) Good knowledge of radiation as a form of heat transfer was rarely seen.
- (c) Many candidates showed good knowledge of homogenisation, but there were many candidates who described pasteurisation in their response.
- (d) Very few candidates answered this accurately. Those that did had almost certainly had experience of making a hollandaise sauce as they knew to trickle in the melted butter slowly.
- (e) This question was well answered and most candidates scored 3 or 4 marks.

Question 8

- (a) It was vital in this question to show accurate knowledge of the conditions required for the growth of microorganisms. Candidates who wrote 'temperature' as a necessary condition for the growth of microorganisms did not get a mark as it was necessary to write 'warm temperature' or 'room temperature' or any temperature within the danger zone. Some candidates focussed entirely on bacteria and did not consider yeast and moulds. Good knowledge of how yeast and moulds reproduce was rarely seen.
- (b) Good knowledge was shown in the responses to this question.
- (c) There were some excellent responses seen to this question.
- (d) Candidates did not show good knowledge of the different saucepan materials. There was a lot of repetition of the words 'strong' and 'not strong' and it was often applied to the wrong materials. Most candidates knew that aluminium is lightweight.
- (e) This question was not well answered. Most candidates thought that caramel is used to flavour products and did not mention that caramel is a brown colouring additive. There was some knowledge of aspartame shown but not of the additive propylene glycol monostearate. Candidates did not show that they were able to work out what the additives were likely to be needed for in a chocolate flavour dessert.
- (f) (i) The most frequently seen accurate response was 'to know the price'.
(ii) This was answered well.

FOOD STUDIES

<p>Paper 9336/02 Practical Test</p>

General comments

- The quality of the written answers was generally good. Scripts were set out clearly and candidates seemed to have had enough time to complete all sections of the paper.
- Time plans were generally very good and gave clear instructions on methods, cooking times and temperatures. Most candidates listed an appropriate amount of work to be carried out in the half-hour preparation time before the start of the Practical Test. There is still evidence that some candidates are not completing the practical work in the correct sequence meaning that savoury dishes that should be served hot at the end of the test are being kept warm for the duration of the test or that cakes that need to be cooled are too warm to decorate.
- The section of written work requiring candidates to give practical reasons for their choice of dishes was not answered very well by many candidates. Sometimes comments were made about the type of meal for which the dish would be suitable or perhaps suitable accompaniments for the dish. These are not practical reasons for choice. It was expected that candidates might mention that the cost was not high, again with examples e.g. chicken thighs may be cheaper than chicken breast. Sometimes it was noted that seasonal produce or garden produce would be used, in each instance examples are needed – candidates need to state which fruit/vegetables are in season or which ones are grown in their gardens. Other points could have been that a dish was to be served cold and did not require the use of an oven thus making oven management easier or that the use of labour-saving equipment was demonstrated with examples. There were numerous possible practical reasons why particular dishes could be included in a Practical Test and every point made by a candidate was carefully considered. Candidates should also discuss the skills that they are using e.g. the apple pie is made using shortcrust pastry, the cream buns are made using choux pastry, the pizza is made using a yeast mixture, the Victoria sandwich cake is made by the creaming method etc.
- Candidates were asked to comment on the nutritional value of the dish chosen in **part (b)** of the question.

There were some excellent accounts with most candidates listing and linking the foods to the nutrients and then stating the function of the nutrient.

Key messages

- Teachers who undertake the marking of the Practical Test are reminded that the mark scheme published by CIE must be followed accurately. Reference must be made to the list of dishes planned on page 1 of the Preparation Sheets. If a dish lacks skill, the dish must be marked accordingly. If a skill is repeated in other dishes, the marks must be reduced on the second and any subsequent occasions.
- Before the Practical Test, the examiner must prepare an Individual Mark Sheet for each candidate. The maximum mark available for each dish, together with the mark awarded, must be clearly indicated on the Individual Mark Sheet. Some candidates chose dishes that were not appropriate or were not sufficiently skilful for an Advanced Level Practical Test. Fried chicken and fried rice are examples of such dishes. If a candidate does choose a simple dish, the maximum mark possible for that dish must be reduced. Each dish should be awarded according to the degree of skill demonstrated. Teachers who are undertaking the examining of practical work must always follow this guidance. It is rare for any dish to be worth full marks and is certainly unlikely that all dishes prepared by a candidate will be worthy of full marks. Teachers must use their discretion and their professional judgement to ensure that the maximum mark for each candidate fairly reflects the complexity, or otherwise, of the dish.
- In all cases detailed comments were written to justify the marks awarded. Reference was made to the colour, flavour and texture of dishes.

- It was important that examiners gave as much information as possible on each candidate's Method of Work in order to justify the mark awarded. Candidates who demonstrate few skills cannot score high method marks and, in most cases, this was adhered to. To achieve high marks for the Method of Work candidates should be able to showcase at least seven or eight different skills.
- Hard copies of photographic evidence were provided in all cases.

Comments on specific questions

Question 1

Only one or two candidates chose this question. Candidates made dishes using meat or fish to show the use of myosin. Bread and cakes were made to show how gluten could be incorporated. Quiches and cheesecakes were made to show the use of caseinogen and lipovitellin.

Written answer

Unfortunately, neither part of this question was not well answered by any of the candidates and very few candidates scored any marks at all in either section.

Question 2

Candidates needed to show four ways of incorporating air into mixtures, the four main ways that the candidates chose were creaming, rubbing in, sifting, and rolling and folding. One or two candidates chose beating and made brownies or choux pastry.

Written Answer

This part of the question was not well answered, and very few candidates were able to give a good account of the changes that take place when whisked sponge is baked. Some candidates did mention coagulation of eggs, dextrinization and caramelisation. Some candidates gave the method of making the cake without mentioning the changes.

Some candidates named four ways of incorporating carbon dioxide into mixtures, but the question asked for the candidates to describe the ways and unfortunately very few candidates offered any descriptions. Although one or two candidates did mention the action of yeast.

Question 3

Candidates made cakes to show the creaming method, lasagne to show a roux sauce, quiches and fruit tarts to show rubbing in and pau to show the use of yeast.

Written Answer

Most candidates were able to list at least four correct nutrients found in wheat with the correct functions. Carbohydrate, protein, fats and iron were the main nutrients mentioned and discussed.

Many candidates mentioned dextrinization and a few mentioned gelatinisation of starch but only a few candidates mentioned the fermentation of yeast.

Dish to that includes a good source of iron.

Candidates made lasagne using beef and brownies using dark chocolate. Quite a few candidates made fish dishes using white fish, but this choice did not answer the question as white fish does not contain iron.

FOOD STUDIES

Paper 9336/03
Coursework Investigation

General comments

Choice and justification

There was a wide selection of topics which were mostly relevant and appropriate to the syllabus. The majority of the titles were written as a study or investigation. Ideally candidates should formulate the title as a question that can be tested and analysed. A question often encourages the written work to be better focussed. Reasons for choice were sometimes superficial and with little justification. Resources and methods were generally omitted from this section of the study.

Planning

Most candidates were able to give one aim, however it was often a repeat of the title. Objectives were often repetitive and there were very few sub-questions posed. Some plans provided very detailed information. The majority of candidates provided three or more investigative methods that were to be used, but only a few mentioned how their results were to be collated. Samples of questionnaires were not included in this section, but in the appendices. Candidates were inventive at adapting their methodology, using emails to contact their 'experts' or conducting face time interviews where they were able. Some questionnaires had to be adjusted as target groups were not always accessible.

Theoretical Research

Candidates should be reminded of the need to put all of their research into their own words. On the whole, sources of information and diagrams or photographs were acknowledged. Generally, all the theoretical research carried out was relevant to the studies. All the investigations submitted were missing a succinct summary at the end of the theoretical research. Candidates should be encouraged to draw together all the information they have gathered into a summary.

Investigative Skills and Data Handling

The vast majority of candidates had selected four methods for research. A few candidates had included objectives in this section that related directly to the method being used, rather than the overall objectives for the study. Information and data gathered tended to be mainly quantitative and there was insufficient evidence of pre-testing. Pre-testing was mentioned in some studies but there was no direct evidence it had actually been carried out. Questionnaires were generally well constructed and the results were presented in a range of charts and tables, one or two with no labelling though. Market surveys were often used but sometimes included photographs that were not annotated or labelled. Tasting panels often could have been used to a better effect with a little more thought to the scientific qualities of food as well as the aesthetic. Some of the nutritional analysis recorded 100 g of the recipe ingredients rather than the actual quantities used in the recipe, and therefore results were a little misleading. Interviews were carried out well.

Conclusions

These varied in quality, some being included with the questionnaires etc., and some being very basic. Some candidates made little reference to their research when making their conclusions and many candidates did not make any recommendations based on the research they had carried out.

Evaluation

Many candidates used this section as a self-evaluation rather than an evaluation relating back to the aims and objectives, plan of action and the methodology used. Many focused on their improved communication and computer skills, as well as their speed of typing.

Presentation

Most of the submitted unsupervised work was well presented, bound together appropriately and in a logical sequence. Candidates should ensure they are within the word limit for the piece.