

# FOOD STUDIES

Paper 9336/01

Theory

## General comments

All candidates answered the required number of questions in each section. Many, however, did not pay sufficient attention to the mark allocation and concentrated on one particular part of the essay for too long meaning that they did not have enough time for the remainder of the essay or ran out of time in their last essay. It is vital that candidates take note of the marks and allocate the appropriate amount of time for each section. Sufficient time must be given to the final essay.

It would be helpful if candidates did not tie the answer sheets together so tightly as this makes them difficult to mark since on opening the papers they occasionally become torn.

### Question 1

- (a) On the whole, this question was well answered. Most candidates were able to give three or four ways in which the body uses energy. These tended to be simplistic e.g. movement, breathing. Good answers included basal metabolism, chemical reactions and electrical energy.
- (b) Some candidates became confused and concentrated on activity as the main reason for different energy requirements. Good answers needed to include the effects of climate, function of glands, thermogenic effect of food.
- (c) This section was well answered by nearly all candidates. Most gained full marks. They were specific in naming enzymes correctly and pairing with functions.

### Question 2

- (a) Very few candidates were able to list sufficient fruit group classifications without which marks for the individual fruits could not be awarded. Local classifications were accepted.
- (b) In questions which deal with nutritional importance, candidates must give a wide variety of nutrients. Many candidates concentrated on one vitamin (primarily Vitamin C) and failed to include starch, sugar, protein, fat, calcium, iron, NSP, thus missing out on the opportunity to gain high marks in this question.
- (c) Again, candidates failed to obtain the full range of marks by focusing only on limited factors, such as colour and flavour in particular. This was disappointing as there were many alternatives which would have led to higher marks being awarded, e.g. high water content, variety of texture, numerous ways of cooking, preservation.

### Question 3

- (a) Almost without exception, candidates concentrated on this sub-section of the question to the detriment of **sections (b) and (c)**. Candidates scored highly within this part of the question, but went on to either lose marks for the remaining parts of the question or, more frequently, simply did not leave enough time to do justice to **sections (b) and (c)**, or in some cases left insufficient time to answer competently the final essay question they had selected. Candidates repeated information in describing the structure and in identifying the properties. They often named examples in each part of this section, therefore, wasted valuable time.
- (b) Poorer candidates tended to be able to describe briefly the importance of NSP in the body, e.g. absorption of water, soft stools, whereas good candidates went beyond this, mentioning lowering blood cholesterol and blood sugar. **Part (ii)** was very poorly answered as the candidates tended

only to give only one or two reasons (e.g. eating white bread, polished rice) whereas the better candidates have included a wider range of examples in order to achieve the highest mark for this question.

- (c) This section was reasonably well answered, although candidates tended to dwell on the effect of excess glucose and failed to mention excess dietary fibre or NSP. Poorer candidates invariably became muddled and discussed the effect of excess fat in the diet and therefore included irrelevant information.

#### Question 4

- (a) This question was not very well answered in general as many candidates did not relate the dietary needs specifically to adolescents but gave general dietary functions, e.g. with calcium many mentioned osteomalacia or osteoporosis which are diseases of the elderly.
- (b) This was reasonably well done. Good candidates reflected both sides of how a diet can be unbalanced, i.e. they explained both dietary excesses and deficiencies e.g. obesity and anorexia. They also included present day problems of adolescent diets such as snacking between meals, the availability of junk foods and the effects of working mothers.
- (c) Nearly all candidates were able to state a lack of iron caused anaemia and that girls were susceptible due to menstruation but many did not expand upon this point. Better answers included the lack of folic acid and lack of cobalamin both cause types of anaemia. They also mentioned haem and non-haem iron and the reduction of ferric to the ferrous form and the importance of vitamin C in this reaction. In discussing the prevention of anaemia in **part (ii)** many candidates did not mention the foodstuffs which contain iron, vitamin C, folic acid or cobalamin. Good answers did include sources.

#### Question 5

- (a) Candidates on the whole tended to focus on the nutritive value and failed to address the composition element. Candidates failed to discuss a range of nutrients, tending to focus on only e.g. protein and fat. It was also important to discuss the functions of the nutrients, which also tended to be omitted by the poorer candidates.
- (b) Good candidates discussed the PH of both egg white and yolk, the production of hydrogen sulphide as well as air space increasing, membranes weakening and thick white becoming thinner.
- (c) Good candidates discussed the coagulation of egg white and egg yolk as well as the production of iron sulphide.
- (d) Candidates tended to score highly in this section as they were able to discuss the role of an emulsifier and give an example, as well as being able to give a brief explanation of foam formation, therefore it was relatively easy to gain full marks.

#### Question 6

- (a) On the whole this question needed to be answered in greater depth than candidates seemed to appreciate, which indicated that they had perhaps not considered the mark allocated to this sub-section. In particular, poorer candidates concentrated on one type of fat, flour and sugar and were therefore limited in their available marks.
- (b) Candidates tended to answer this question very poorly. They concentrated on discussing only air as a raising agent in rich cake mixtures, failing to appreciate that discussion of steam and carbon dioxide was also required in order to be eligible for the whole range of marks.
- (c) It was disappointing that candidates were unable to answer this question in depth, as the question simply required descriptions of convection and conduction.
- (d) It was again disappointing that many candidates failed to read the question carefully, suggesting that the cake could be frozen by placing it in a refrigerator. Good candidates discussed the temperature of fast freezing and avoiding damage to cell walls of fruits as well as open freezing then packing in a rigid box, however these answers were in the minority.

- (e) This section was well answered as candidates were able to give a range of reasons.

**Question 7**

- (a) It was relatively easy to attain top marks on this question, although it did appear from the relatively small number of candidates who attempted the question that many entrants had been deterred from the question when making their choice of essays. It was again apparent that in some cases candidates had failed to look at the mark allocation and simply did not include sufficient points for each sub-section to gain full marks.
- (b) This question was not well answered in general. Again, candidates had clearly not recognised that this section was worth 10 marks, and simply failed to include sufficient points to achieve a high mark. Candidates tended to discuss natural food colourings in more depth and only briefly mentioning artificial food colourings. Some candidates confused colourings with flavourings.

**Question 8**

- (a) This question was well answered when candidates had allowed themselves sufficient time, given the 20 mark allocation, to do their answer justice. The good answers included a wide range of factors and could discuss each factor in depth.
- (b) Again, this question was well answered. Good candidates explained how the information on food labels can help the consumer, whereas poorer answers only listed information found on the label.

# FOOD STUDIES

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Paper 9336/02

Practical

## General Comments

The quality of most of the work presented for examination was good. Setting out of work was generally clear and candidates seemed to have had sufficient time to complete all part of the written work. Sometimes the pages of a candidate's work were assembled in the wrong order. This in itself is not a problem but can become confusing when pages are stapled together and the Examiner has to assemble each individual page in a logical order. This year there were several instances where the order of work was not in a logical order and occasionally the written work was not assembled in order. It is the responsibility of each candidate to ensure that scripts are correctly ordered. It is helpful if the work of each candidate is fastened together with a paper clip or staple. This does not always occur and there is always the chance that pages are lost or separated. It is essential that each page be identified with the candidate's number and Centre number. Many candidates do not identify the Test number chosen although a box is provided for the purpose at the top of the carbonised sheets. The Examiner should not have to try to determine the number of the test from the candidate's choice and written work.

Teachers who mark practical Tests are reminded that only the Results and Method of Work are to be marked locally. **Section A**, which is composed of Choice, Time Plan and Written Answer are marked in the UK. Some teachers mark the candidates' papers; this is not required and makes marking difficult for Overseas Examiners when marks are already on the script.

Teachers are also reminded that the mark scheme published by CIE must be followed accurately. The maximum mark for each dish is clearly stated and is not negotiable. Candidates who choose simple dishes must have the maximum mark for each dish reduced; these marks do not then become available for allocation to other dishes. In some Centres additional marks were given to dish (b) although the Mark Scheme clearly shows that 8 marks are the maximum. There is still a tendency in some Centres to mark dishes out of the maximum mark available when clearly this should not be the case; some chosen dishes are sometimes simple and teachers should show discretion. Candidates who choose skilful dishes will need to have the full range of marks available to them. The maximum mark possible and the mark awarded must be shown clearly on Individual Mark Sheets. Occasionally it seems that Teachers allocated marks to dishes at the end of the Practical Test so that unsuccessful dishes are marked out of a low mark and other dishes have been scored generously. If a dish has not been made or has not been served, that dish should receive nil out of the maximum mark planned. Those marks cannot be available for other dishes. Sometimes the Teacher's comments suggest that a dish is inedible; it may be burnt or undercooked, for example. Plans of work often indicate that a dish has been prepared too late and insufficient time has been allowed for cooking, cooling and decorating. It is not realistic, therefore, to give half marks or more to that dish. Perhaps no marks would be most appropriate.

Detailed comments must be written on each Individual Mark Sheet to justify marks awarded. It is not appropriate to simply state that a candidate's work was excellent throughout. It is sometimes difficult to understand a comment such as 'could not be faulted'. Each dish should be commented on according to colour, flavour and decoration or garnish so that the Examiner can understand the decision to award a particular mark. It is unlikely that each dish chosen is worthy of full marks. It is equally important that detailed comments are made on planning, hygiene, oven management and so on. Again, it is not realistic to award full marks for Method of Work particularly if it can be seen that a candidate is not planning to make skilful dishes. Comments referring to candidate's desire to do well or that they deserve to do well cannot be given any weight. The most important comments are those relating to the work carried out during the Practical Test.

Time Plans were generally good and gave clear information on methods of preparation, oven temperatures, cooking times and methods of serving. Improvements can still be made to the Preparation section during which candidates plan to carry out tasks such as greasing and lining tins, grating cheese, chopping vegetables and preheating ovens. Sometimes candidates chose insufficient work for thirty minutes;

sometimes they chose too much, or included the first stages of making a dish. This should not be done because it cannot be considered to be preparation. Candidates from at least one Centre did not include times in their Time Plans; they used intervals of time to indicate the time estimated for a stage of preparation, for example 20 minutes, followed by 15 minutes for the next stage and so on. This is not helpful during the practical Examination because candidates need to see their progress against real time. The Time Plan is a guide so actual times are essential. Some candidates have difficulty 'dovetailing' processes; all stages of a dish are written at once without breaks for cooking and cooling. Such plans are confusing during the Practical Test for both candidates and Examiners.

The section of written work requiring candidates to give practical reasons for choice was often well done. It was often noted that ingredients were in season, inexpensive and readily available; sometimes garden produce was used. Many candidates mentioned the use of labour-saving equipment or the fact that certain dishes did not require the use of an oven, making oven management easier. Some dishes were chosen because they were skilful or because they were attractive or colourful, others because they could be served cold or required little time in the oven. All of these are valid points and were credited where appropriate. It is not relevant to state that dishes could be made in advance and frozen, or to indicate which individuals would particularly enjoy them. This section gives candidates the opportunity to explain their reasons for the choice of dishes for the Practical Test bearing in mind the time available and the constraints of the test chosen.

Many candidates were able to give excellent accounts of the nutritive value of the dish chosen in **Section (b)** of the test. Some candidates misread the question and considered the nutritional value of all of the dishes. Sometimes the information given was too vague; it is not enough to state that, for example, the dish contained protein. It was expected that candidates would state that egg contains High Biological Value protein which is used for growth. Precise information is expected at Advanced level and credit will not be given to general nutritional statements. Words like vitamins and minerals should not be used; named vitamins and minerals are expected. The nutrient, its source and one of its functions should be given. Calculations were not asked for.

### **Comments on specific questions**

#### **Question 1**

This was a popular question and candidates chose a variety of ingredients to flavour dishes. Fruit, vegetables, herbs and spices were often included in dishes, as were chocolate, coffee and nuts. Few candidates chose to illustrate variety of flavour by used methods of cooking such as frying, grilling or roasting. Occasionally there was repetition because the same fruit or vegetable was used in more than one dish but generally the choice of dishes was good.

The opportunity was usually taken to demonstrate a wide range of skills, most of which were appropriate for Advanced Level. Most candidates gave comprehensive lists of ingredients, which can be used to flavour dishes. There were many good accounts of the use of artificial flavourings in food but some answers lacked detail. It was hoped that candidates would note that they are chemicals, which may be harmful. Their long-term effects are not known. It was well known that their use must be indicated on food labels and that only small quantities should be used. Their use in convenience foods was usually noted and reference was sometimes made to the fact that they may replace flavourings lost during processing. Saccharine was given as an example in many accounts.

#### **Question 2**

Although the question stated that convenience foods are available in many forms, it was disappointing to note that many candidates used the same type of convenience food in more than one of their dishes. It was hoped that dishes would include canned, frozen, dried and ready to eat foods. The scope of the question was wide and gave candidates the opportunity to demonstrate very skilful dishes. Sometimes frozen fish or meat was chosen. This in itself is not a problem but candidates rarely stated on their shopping list the type of meat or fish required. It is not helpful to order 300 g fish or 250 g meat. More detail is essential.

The convenience foods available locally were classified well and the advantages and disadvantages of using convenience foods were well known.

### Question 3

This was a popular question and most candidates demonstrated the use of a range of ingredients. Unfortunately, many chose to make a cheesecake using gelatine. This is, of course, a meat product and would not satisfy the requirements of the test. Although it is possible to buy a vegetarian equivalent, none of the candidates who chose this test did so.

The nutrients in meat were usually identified accurately and other sources of the named nutrients suggested. Unfortunately some answers were too brief. It was expected that the nutrients identified would include HBV protein, fat, iron, vitamins A and D and thiamine.

There were many excellent accounts of the reasons for following a diet, which does not include meat, fish or their products. The most frequently given reasons included religion, a belief that such a diet is healthier because meat contains saturated fat, moral issues relating to animal cruelty, the cost of meat and the fact that it may be more economical to use land for crops rather than to feed animals. All valid points were credited and candidates generally scored well.

The range of skilful dishes chosen to show the use of fresh or preserved fruit was very wide. Many candidates chose to make some variety of cheesecake, others used dried fruit in savarin. The dish could have been either savoury or sweet although most dishes chosen were sweet dishes. The range of appropriate dishes chosen was wide and most dishes had the potential to demonstrate a high degree of skill.

# FOOD STUDIES

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Paper 9336/03  
Unsupervised Work

## General Comments

Most of the Individual Studies were well presented and were clearly the result of many hours of work. The results were very interesting and the studies themselves were valuable pieces of work. Occasionally the topic chosen was too broad and did not lend itself to a study of this nature. If the subject was, for example, Fish, there was no scope for original research since vast amounts of information is already in the public domain. Sometimes parameters were not well defined although the boundaries were clearly set in the majority of studies. Some candidates did not identify the group that was the focus of their study and failed to appreciate that the results of their research could not be generalised. In some of the weakest studies the information produced bore little or no relation to the title; in others conclusions were drawn for which there was no evidence. Candidates should be reminded that the title of their study should be an accurate reflection of its content. It was most helpful when the framework set out in the Mark Scheme was followed. It considers each section in a logical way and guides the candidate through the investigation. This is available to all Centres since it is part of the document, which contains the syllabus. Candidates should be encouraged to study it carefully and to refer to it throughout their investigation. In several instances, whole areas were ignored so the available marks were lost.

## Choice / Reasons for Choice

Every Individual Study was appropriate to the syllabus but, as previously noted, parameters were not always clearly defined. A title such as 'The Calcium Content of the Mid-day Meal of Elderly People' is much too wide. If the study is to be carried out on a number of people in a particular area the title should reflect this. An appropriate title could then be 'A study of the Calcium Content of the Mid-day Meal for Residents of Sunnyside House'. Similarly, if research has been carried out amongst candidates of a particular class in School, this should be reflected in the title. It is important that the limitations of the investigation are appreciated. Some studies did not lend themselves to a range of investigative methods so candidates limited the marks available to them. Candidates should be encouraged to choose a topic, which could lend itself to several methods of data collection. Most candidates gave at least one reason for their choice of subject; better candidates gave several reasons.

## Planning

This was a weak area for some candidates. It is important that the aims and objectives of the study are set out because towards the end of the study, it is important that candidates consider whether their goals have been achieved. Objectives should be tasks to carry out in order to reach the goal (the aim). Sometimes the objectives were not operations which could be carried out so did not help the candidate to formulate a Plan of Work. Many candidates set out a proposed plan, indicating what they hoped to achieve each month. This was supported by a diary of activities kept throughout the study, indicating times when it was necessary to make changes to the proposed plan. Details of each method of data collection should be included in the plan since it is important to justify each method selected. When, for example, questionnaires are used, candidates should clearly state how respondents are selected. If interviews are to be carried out, candidates should state reasons for selecting particular individuals. This section should show that candidates are logical in their planning and have chosen the methods of data collection most suitable for their study. It is important to note that most candidates were able to justify their chosen methods.

## Theoretical Research

As in previous years, this was the weakest section of many of the studies. In some instances there was too much information; all the available information on a particular topic was included. Some candidates paid little attention to this part of the investigation. It is hoped that candidates will use whatever means possible to research their chosen topic. Newspapers, magazines, the Internet and textbooks are the most obvious sources of material. The most successful candidates used their information to write an informative account,

acknowledging sources wherever appropriate. Others merely copied work from books without acknowledging sources. It is usually very apparent when this has been done because the style is very different from that found in the rest of the study; sometimes the text is recognised by the Examiner as being from a particular textbook although the source is not acknowledged.

Sometimes candidates list books in the Bibliography, which are not appropriate for Advanced Level work. Although there is no recommended length for this section, it should be remembered that none of the text is the candidate's own work; the candidate's task is to select and summarise information appropriate to their study, setting out the context into which their study will fit. The mark achieved for this section should reflect the candidate's skill at collecting, summarising and presenting the information already available.

### Investigative Methods

The most successful candidates used a wide range of investigative methods of data collection. Those who chose five or six different methods could achieve high scores. Possible methods are suggested in the Scheme of Assessment and there is an indication of the range of marks available according to the number of methods chosen. Those who chose only one or two methods severely limited the marks they could score in this section. Some candidates visited factories; some carried out taste testing and surveyed local shops and markets. Questionnaires were often undertaken, interviews were popular and observations were carried out. Photographs were often used as a record of events and add interest. It was expected that for each method of investigation there would be an indication of where, when, why and with whom the investigations were carried out. Most candidates correctly included a blank copy of the questionnaire used but interview questions were seldom included. A number of candidates included all of the completed questionnaires. They are not part of the study; they merely provided information from which conclusions are drawn and should not be part of the report. Copies of letters sent and received were usually included in the appendix together with letters of request supported by the School. Several candidates indicated on their plan that specific investigations were to be carried out, possibly an interview or a market survey. No evidence of such investigations appeared in the report and no reference was made to them. If, for any reason, planned work cannot be carried out, reference should be made to this in the Evaluation section in which candidates are encouraged to discuss the strengths and weaknesses of their investigation. It is a matter of some concern that candidates continue to plan and carry out interviews with busy professional people and seem to ask questions for which answers are readily available. At least one candidate listed questions concerning the symptoms of anaemia and possible remedies. Professionals should be asked questions that do not have obvious answers. It is the experience of carrying out interviews that is important, not the status of the interviewee. Candidates should not expect to visit hospitals and clinics to talk to patients; confidentiality must always be respected. Questions on family income should not be included in questionnaires for the same reason. A few candidates carried out research in nurseries or kindergartens. They explained how children were weighed and measured and conclusions drawn. In one study a candidate planned to assess children for symptoms of a deficiency disease. Clearly this is unacceptable; parents would not expect this and the candidate would have neither the authority nor the expertise for this work. Teachers must be aware of what their candidates plan to do during visits to other organisations and be prepared to intervene where necessary.

### Collation of Data Collected

This section is as important as the previous section since each of the methods of data collection must be considered in turn. The information gathered from each method should be presented in a method, which is clear and easy to understand. Candidates usually presented data well, demonstrating their skill in computer graphics. They used graphs, spreadsheets, pie charts, histograms and photographs. The best studies used a variety of methods to show their findings. Many candidates seemed to use as many different ways as possible of presenting data on their computer. Consistency is to be encouraged. Sometimes prose would have been better than a chart to show simple information. An example of this is when the number of males and females taking part in an investigation are shown in a pie chart or a histogram when a simple sentence would have given the same information. Some studies lacked explanations; data was presented without even a few sentences to summarise findings. Some charts lacked a title and a key. Many candidates failed to present data on all of the questions asked in a questionnaire; sometimes an interview was summarised in a few sentences. Conclusions can only be drawn if they are supported by facts.

### Analysis / Conclusions / Recommendations

This section was often dealt with in a very superficial way. It is essential that candidates present an accurate summary of the evidence they have collected and that this be set out separately. It should not be presented along with data. It is an opportunity for candidates to interpret the information collected and from this they

are required to draw conclusions and to make recommendations. Candidates frequently stated that they showed the existence of a particular situation without any supporting evidence. Sometimes candidates drew conclusions when there was no evidence in their study to support them. The conclusions drawn should be used by candidates to make recommendations. They should not be a list of suggestions that are already in the public domain such as a list of ways to reduce fat or sugar consumption. They could be suggestions for further research or could be strategies at government, local or individual level. Whatever form the recommendations take, they should be seen to follow logically from the findings of the study. Weaker candidates often listed recommendations that showed little connection to their study.

### Evaluation

This is an important section, worth 10% of the final mark for the study. Many candidates gave little thought to this part of the study; some omitted it altogether. One of the first considerations when evaluating the study should have been to state whether the aims and objectives had been achieved. Many candidates did make reference to these but the majority did not. The study should be evaluated as a means of achieving the aim. If particular methods were not successful reasons should have been noted; similarly, success should have been celebrated. Candidates often gave good accounts of ways of improving their work. Sometimes they mentioned that the time allowed for certain processes was not enough, they noted that questionnaires were often returned late or not at all, and they often noted that the collation of data had been time consuming and tedious. Many suggested a more realistic time scale than the one in their original plan. Most candidates gave excellent accounts of the personal benefits of their investigation. They often noted an increase in confidence or a greater ability to undertake independent study. Several noted that they had enjoyed meeting people of other backgrounds. It was apparent that the study gave many candidates the opportunity to improve their computer skills. All of these are important benefits and credit was given for mentioning them where appropriate.

### Presentation

The presentation of the studies was of a very high standard and candidates should be congratulated on their achievements. The general appeal was good and all of the studies were interesting. The front covers of some of the studies demonstrated flair and creativity. Content lists, acknowledgements and bibliography were usually included although sometimes pages were not numbered. Most candidates included a diary of activities. Occasionally candidates used more than one font style; this should be avoided. Similarly, sometimes a large print size was used. Again, this is not recommended. Candidates must ensure that font size and font style is consistent throughout.