



***COIMISIÚN NA SCRÚDUITHE STÁIT***

State Examinations Commission

**LEAVING CERTIFICATE**

**Home Economics  
Scientific and Social**

**Food Studies Practical – Coursework 2004**

**Marking Scheme**

<b>Grade</b>	<b>Mark bands</b>
<b>A</b>	<b>510 - 600</b>
<b>B</b>	<b>420 - 509</b>
<b>C</b>	<b>330 - 419</b>
<b>D</b>	<b>240 - 329</b>
<b>E</b>	<b>150 - 239</b>
<b>F</b>	<b>60 - 149</b>
<b>N.G.</b>	<b>&gt; 60</b>

# Food Studies Practical Coursework General Marking Criteria

(to be read in conjunction with Assignments)

## **Investigation: Analysis/Research - 24 marks**

**Research and analysis**

**= 16**

**Band A 13-16 marks (very good – excellent)**

*Investigation*

- shows evidence of a **thorough exploration** and **comprehensive analysis** of the issues and factors directly relevant to the key requirements of the assignment
- is accurate, derived from a range of sources and presented coherently
- uses evidence from research as basis for making relevant choices in relation to selection of menus/dishes/products

**Band B 9-12 marks (very competent – good)**

*Investigation*

- shows evidence of **exploration** and some **analysis** of the issues and factors which are generally relevant to the key requirements of the assignment
- is accurate, derived from a range of sources and presented coherently
- uses evidence from research as basis for making relevant choices in relation to selection of menus/dishes/products

**Band C 5-8 marks (basic to competent)**

*Investigation*

- shows evidence of **exploration** of the issues and factors which are generally relevant to the key requirements of the assignment
- is reasonably accurate, derived from a range of sources and presented coherently
- uses evidence from research as basis for making choices in relation to selection of menus/dishes/products

**Band D 0-4 marks (very basic – limited)**

*Investigation*

- shows evidence of a **very basic and limited understanding** of the key requirements of the assignment
- some or all of the information is vague and accurate only in parts, presentation lacks coherence
- uses evidence from research as basis for making choices in relation to selection of menus/dishes/products

**3 two course meals / 3 dishes / 3 products (3 x 2 marks)**

**= 6**

*suitable meals / dishes / products having regard to factors identified and analysed in the investigation*

*(one course – allow one mark max.)*

**Reasons / selection criteria -**

**= 2**

*clearly indicates criteria that determined choice of dishes or products selected to prepare, one relevant to each item **or***

*in relation to **AOP D** cooking process identified for each of the two selected dishes **or** accept reasons*

*(Sources – 1 mark for one or none; credit under preparation and planning)*

## **Practical Applications 1 and 2 - Preparation and Planning - 6 marks**

- Resources (ingredients incl. costing, equipment) = 3
  - *main ingredients, unit cost, key equipment used as determined by dish (expect cost for all except AOP E)*
- Time allocation / Work sequence = 3
  - Preparation, sequence of tasks within stated time, evaluation
  - Band A 3 marks - all key steps identified, correct sequence*
  - Band B 2 marks - some key steps identified or sequence incorrect*
  - Band C 1 mark - few key stages identified and sequence incorrect*

## **Practical Applications 1 and 2 - Implementation - 20 marks**

- Outline of the procedure followed to include food preparation processes = 10  
(Information / account should be in candidate's own words)

### **Band A 8 - 10 marks (very good – excellent)**

*All key stages in preparation of dish identified, summarised and presented in candidate's own words, in correct sequence with due reference to relevant food preparation process/es used*

### **Band B 5 - 7 marks (very competent – good)**

*Most key stages in preparation of dish identified, summarised and presented in correct sequence with due reference to relevant food preparation process/es used*

### **Band C 3 - 4 marks (basic to competent)**

*Some key stages in preparation of dish identified, summarised and presented in correct sequence with due reference to relevant food preparation process/es used*

### **Band D 0-2 marks (very basic – limited)**

*Few or any key stages in preparation of dish identified, summarised and presented in sequence with due reference to relevant food preparation process/es used*

- **Key factors considered** (must relate to making of specific dish / test) = 6  
*Identification (2) and clear explanation (1) of two factors considered which were critical to success of dish*
- **Safety and hygiene** (must relate to specific ingredients being used / dish being cooked) = 4  
*Identification (1) and explanation (1) of **one** key safety issue and **one** key hygiene issue considered when preparing and cooking dish / conducting test*

## **Practical Applications 1 and 2 - Evaluation - 12 marks**

Evaluate the assignment in terms of:

- **Implementation** (two points expected) = 6
  - Band A - 3 marks - identified and analysed specific weaknesses/strengths in carrying out the task, modifications, where suggested, were clearly justified, critical analysis of use of resources / planning*
  - Band B - 2 marks - identified weaknesses / strengths in carrying out task, some justification of proposed modifications, limited analysis of use of resources / planning*
  - Band C - 1 mark - some attempt made at identifying weaknesses **or** strengths in completion of task, modifications where suggested not justified, reference made to use of resources / planning*
- The **specific requirements** of the assignment (two points expected) = 6
  - Band A 3 marks - draws informed conclusions in relation to two key requirements of the assignment*
  - Band B 2 marks - draws limited conclusions in relation to two key requirements of the assignment*
  - Band C 1 mark - summarises two outcomes in relation to the assignment*

## **Area of Practice A – Application of Nutritional Principles**

### **Assignment 1**

***Special consideration should be given when planning meals for low-income families in order to ensure that their nutritional requirements are met.***

Identify and elaborate on the dietary requirements and the resource factors that should be considered when planning meals for a low-income family (two adults and two teenagers).

Bearing in mind these considerations, investigate a range of dishes suitable for the main meal of the day for this family.

Prepare, cook and serve and **two** of the main courses that you have investigated.

Evaluate the assignment in terms of **(a)** implementation and **(b)** the specific requirements of the assignment.

- Key requirements of the assignment
  - *Dietary/nutritional requirements with specific reference to a family of two adults and two teenagers*
  - *Meal planning guidelines with specific reference to resource factors / low income*

### **Investigation**

**Dietary / nutritional requirements** – *nutritional balance, daily requirements of macro / micro nutrients including protein / cho / fat / iron / calcium requirements as appropriate to adults and teenagers with reasons for possible variations, Vitamin C / iron absorption, Vitamin D / Calcium absorption, possible variations in energy requirements, energy balance vis a vis activity levels, current nutritional guidelines re nutrient and food intake etc.*

**Meal planning guidelines** – *use of food pyramid to ensure balance, variety of foods, personal likes and dislikes, resource issues (economics, time, skills) with particular reference to foods that are nutritionally adequate and relatively inexpensive – own brand foods, special offers, cheaper protein sources, foods in season; use of energy efficient methods of cooking, portion size etc.*

### **Evaluation** (specific requirements of assignment)

*Analysis of findings regarding the nutritional requirements of a family (2 adults and 2 teenagers), impact of limited resources (financial) on meal planning – range of foods / dishes suitable for low-income families etc., how the selected dish meets the requirements as identified in the investigation.*

## Assignment 2

***Vegetarianism has become increasingly popular with many different types of vegetarian diet to choose from.***

Examine some of the reasons why people chose a vegetarian diet. Research and elaborate on the key factors that should be considered when planning meals for a person who is a lacto-vegetarian **or** a vegan.

Bearing in mind these factors, select a range of dishes suitable for an evening meal for the vegetarian diet that you have investigated.

Prepare, cook and serve **two** of the main courses that you have selected.

Evaluate the assignment in terms of **(a)** implementation and **(b)** the specific requirements of the assignment.

Key requirements of the assignment

- Examination of the reasons people chose **vegetarian diets**
- Dietary/nutritional requirements with specific reference to **lacto-vegetarian or vegan diet**
- Meal planning guidelines with specific reference to **lacto-vegetarian or vegan diet**.

### Investigation

***Reasons people choose a vegetarian diet - religious beliefs, ethical reasons, health, economic fashion, family influence etc.***

***Dietary/nutritional requirements with specific reference to lacto-vegetarian or vegan diet e.g. good mix of pulse vegetables, Soya protein, quorn to supply protein for growth, complimentary value of proteins where mix of plant proteins are eaten together, calcium for bones sourced in dairy products for lacto-vegetarian and in vegan cheese and tofu for vegan, vitamin C should be increased to maximise absorption of iron, B12 available to lacto vegetarian from dairy products but must be sourced by vegans in foods fortified with it e.g. Soya drinks, breakfast cereals, carbohydrate for energy etc.***

***Identify vegan sources of Vit. D, Riboflavin, B12, Iron, Calcium, Zinc (most likely nutrient deficiencies in vegan diet) etc.***

***Meal planning guidelines with specific reference to lacto-vegetarian or vegan diet e.g. Soya protein (TVP), tofu, quorn as meat alternatives, Soya milk and yoghurt as alternative dairy products, replace animal fats with vegetable oils or margarine, gelatine with agar, meat stock cubes with vegetable cubes, use of food pyramid to plan a well balanced diet, introduce herbs and spices, variety of foods, likes and dislikes, wholegrain cereals require longer cooking time so additional preparation time is required etc.***

### Evaluation (specific requirements of assignment)

***Analysis of findings regarding what you learned from the investigation regarding why people choose a vegetarian diet, the special factors to be considered when meals for a lacto-vegetarian or a vegan to ensure nutritional adequacy, what foods are suitable, why dietary supplements are sometimes necessary, what special aspects of meal planning have to be considered etc., how the selected dish meets the requirements as identified in the investigation.***

### Assignment 3

***Coronary heart disease is a condition that requires a particular dietary regime as well as possible lifestyle changes.***

Identify and elaborate on the factors that should be considered when planning meals for people with this condition.

Bearing in mind these factors, investigate a range of dishes suitable for a person with coronary heart disease.

Prepare, cook and serve **two** of the main courses that you have investigated.

Evaluate the assignment in terms of **(a)** implementation and **(b)** the specific requirements of the assignment.

#### **Key requirements of the assignment**

- *dietary and nutritional requirements with particular reference to **CHD***
- *relevant meal planning guidelines*

#### **Investigation**

***Dietary/ nutritional requirements*** – *include protein from chicken, fish and pulse vegetables sources, fats – polyunsaturated, sufficient carbohydrate for energy and fibre to reduce the amount of fat and cholesterol absorbed, vitamin C and beta-carotene help maintain a healthy heart, role of functional foods etc.*

***Meal planning guidelines*** -. *decrease consumption of foods naturally rich in cholesterol and saturated fats, eat foods rich in polyunsaturated fats as they may counteract the effect of cholesterol on artery linings, use eggs that are rich in omega 3 essential fatty acids, choose low fat products, eat more fibre, reduce salt intake, read food labels and avoid processed foods that contain hidden fats and salt, use of food pyramid guidelines to plan a well balanced diet, likes and dislikes, use fat-free cooking methods, include functional foods in meal planning, where possible, modify traditional recipes e.g. replace salt with herbs and spices to add flavour, lifestyle changes etc.*

#### **Evaluation** (specific requirements of assignment)

*Analysis of findings regarding what you learned from the investigation regarding the foods to be included when planning meals for a person with CHD to ensure nutritional adequacy, what dishes are suitable, what special aspects of meal planning have to be considered, how the selected dish meets the requirements as identified in the investigation etc.*

## **Area of Practice B – Food Preparation and Processes**

### **Assignment 4**

***The variety of yeast breads available to the consumer has increased in recent years.***

Carry out research into the use of yeast as a raising agent in the making of a range of food items. Explain the underlying principle of yeast as a raising agent.

Prepare, cook and serve **two** food items (one sweet and one savoury) that you have investigated.

Evaluate the assignment in terms of **(a)** implementation, **(b)** ease of use of yeast and **(c)** palatability of **each** food item.

#### **Key requirements of the assignment**

- the use of yeast as a raising agent including principles
- the range of food items that can be made
- the key points / rules essential when using yeast

#### **Investigation**

**Brief description two types of yeast** – Fresh, Dried / Fast-Action Dried

*e.g. fresh yeast – creamy/beige colour, firm yet crumbly, beery smell lasts 2-3 weeks in fridge, blended with liquid and should become frothy before being added to flour, 15g fresh yeast to 450g flour.*

**Dried yeast** – available pre-packed sachets, lasts up to 6 months, more concentrated than fresh yeast 7g of dried = 15g fresh yeast, it is dehydrated active yeast that requires food, moisture and warmth before being added to flour, added to warm water with little sugar, appears frothy.

**Fast-action dried yeast** – most popular form, a blend of dried yeast and improvers such as vitamin C which help to speed up the fermentation process and reduce the required rising time, is added directly to flour mixture, 7g is required for 450g flour.

**Key points/rules** essential when using yeast e.g. – choice and quantity of ingredients, use of strong flour, excess sugar, salt and fat can slow down growth of yeast so care must be taken when weighing ingredient and to ensure correct balance, where fat is included as a significant part of recipe e.g. Chelsea buns a little extra yeast should be used, eggs (which also contain fat) entrap air in a mixture help to achieve a lighter end product, the longer the dough can be left to rise the less yeast will be needed initially etc

Vitamin C speeds up fermentation which reduces the rising time by one third, temperature 20 – 30 degrees C as yeast is destroyed at temperatures above 55 degrees, kneading helps to develop and stretch the gluten in the flour to help the dough rise, all yeast dough must be risen at least once before baking for fermentation to occur, knocking back to its original size to break down large bubbles of carbon dioxide into smaller even size bubbles, shaping of dough, proving in a warm place to double its size etc.

**Principle** - fermentation – process by which yeast breaks down sugar forming CO<sub>2</sub> and alcohol - enzymes diastase in flour converts starch to maltose, enzyme maltase in yeast converts maltose to glucose, enzyme invertase in yeast converts sucrose to glucose and fructose, enzyme zymase converts glucose and fructose to CO<sub>2</sub> and alcohol etc.

**Range of items/products** that can be produced e.g. white and brown bread, white and brown rolls, savoury breads, Chelsea buns, barm brack, hot cross buns etc

#### **Evaluation** (as specified in assignment)

- (a) implementation – 2 points
- (b) ease of use of yeast – 1 point
- (c) palatability – 1 point

what you learned from the assignment regarding the ease of use of yeast as a raising agent and the palatability of the yeast bread made when compared with commercially prepared products, how the selected dish meets the requirements as identified in the investigation etc.

## Area of Practice C: Food Technology

### Assignment 5

***A variety of fruits can be preserved by boiling and the addition of sugar.***

Investigate **(i)** the different fruits and combinations of fruits that can be preserved in this way, **(ii)** the different products that can be made and **(iii)** the underlying principles involved. Identify some of the possible problems that may arise when preserving fruit using the method investigated.

Prepare and pot **two** varieties of fruit preserves.

Evaluate the assignment in terms of **(a)** implementation, **(b)** cost effectiveness and **(c)** practicability.

Key requirements of the assignment

- *The preservation principles associated with the preservation of fruit by boiling and the addition of sugar*
- *Varieties of fruit and fruit combinations that can be preserved by boiling and the addition of sugar*
- *Range of preserves that can be made*
- *Possible problems that may arise*
- *Potting materials*

### Investigation

*The **preservation principles** associated with the preservation of **fruit by boiling** and the addition of **sugar** – fruit is brought to a temperature of 100 + degrees C to soften it and destroy enzymes and micro-organisms, sugar is added which inhibits the growth of microbes by surrounding the microbial cells with a concentrated solution that draws water out of the microbial cell by osmosis, sugar should be a 65% concentration, acid in fruit releases pectin also in the fruit which act as a setting agent for the preserve. Fruits low in pectin often combined with high pectin fruits to achieve a satisfactory set e.g. apple and blackberries.*

*Commercial pectin or preserving sugar that contains apple pectin can also be used.*

*Low acid fruits e.g. strawberries may require the addition of lemon juice.*

*Suitable packaging / containers for preserves*

***Varieties of fruit and fruit combinations** that can be preserved by boiling and the addition of sugar e.g. gooseberries, blackcurrants, apricots, apples, oranges, apples and blackberries, rhubarb and apples etc.*

***Range of preserves** that can be made – variety of jams, marmalades, jellies, fruit sauces, candied fruit, chutney etc.*

***Problems** that may arise e.g.*

***crystallisation** – cooked for too long, more than 65% sugar, insufficient acid to convert sugar to invert sugar, jam boiled prior to sugar being dissolved*

***fermentation** – concentration of sugar insufficient, overripe fruit, insufficient boiling time*

***preserve not set** – insufficient pectin/acid, over ripe fruit, incorrect proportion of ingredients, insufficient boiling*

***mould growth** – insufficient sugar, poor filling and covering of product, over ripe fruit **shrinkage***

***in jar** – inadequate covering, incorrect storage*

**Evaluation** (as specified in assignment)

*Implementation – 2 points; cost effectiveness – 1 point; practicability – one point*

*Cost effectiveness of making product selected when compared with commercial product of similar quality*

*Practicability of preserving fruit – resource issues – time, skills, equipment, storage etc.*



## Area of Practice D – Properties of a Food

### Assignment 6

The ability of starch to gelatinise is of culinary significance as it is the basis of many sauce, gravy and dessert recipes.

Define 'gelatinisation' and investigate its application in the making of sweet and savoury dishes. Select two dishes (one sweet and one savoury) and explain how the principle of gelatinisation is used when preparing and cooking each dish. Prepare, cook and serve the selected dishes. Evaluate the completed assignment in terms of (a) implementation and (b) the success in applying the principle of gelatinisation in the preparation/cooking of the selected dishes.

Key requirements of the assignment

- Definition of gelatinisation
- Application of gelatinisation in making sweet and savoury dishes

*Definition of “gelatinisation” – when mixed with liquid and heated, starch grains swell and burst and absorb moisture, resulting in thickening of the liquid.*

***Application of gelatinisation** in the preparation and cooking of dishes - starch grains are mixed with a liquid and heated to an initial temperature of 55 C-70 C where the granules (flour) swell/ burst and absorb the liquid, the granules move together and form a paste like solution which cooks, hydrogen bonds are formed and a gel like mixture follows – used in thickening of sauces, soups and gravies by the addition of flour or cornflour.*

*In dry heat the starch grains burst and absorb any moisture (fat) – used in the making of pastry and popcorn.*

*Examples of use (3 dishes) – choux pastry, dishes that include sauces thickened using a starchy substance – flour / cornflour/ arrowroot/ potatoes etc.*

**Evaluation** (as specified in assignment)

*Implementation – 2 points; success ..principle of gelatinisation – 2 points*

*How successful the gelatinisation of starch was in the making of the selected dish*

## Area of Practice E: Comparative Analysis

### Assignment 7

#### **Basic scone recipes can be modified by varying the proportion of ingredients used.**

Investigate a range of scone recipes and variations of it. Using a basic scone recipe of your choice, make **three** batches of scones modifying **the amount of sugar used in two of the batches**.

Carry out a series of **triangle tests** to determine if tasters can differentiate between the products.

Carry out a **preference test** among a group of students in your class to determine the preferred product.

Record and present the results obtained from the testing.

Evaluate the assignment in terms of (a) implementation and (b) the test results obtained.

Key requirements of the assignment

- *Investigate a range of scone recipes*
- *Investigate variations to scone recipes*
- *Give a brief description of triangle test and chosen preference test, the aims of each test and possible outcomes*
- *Specify the sugar modifications in three batches of scones*
- *Identify conditions to be controlled during the testing*

#### **Investigation**

- **Description of the intended testing technique, its aims and possible outcomes** = 16

*Brief description of a triangle test and chosen preference test, the aims and possible outcomes of both*

- **Investigation of dishes appropriate to the testing**

*Investigate a range of scone recipes e.g. recipes from different cook books and variations to scone recipes e.g. other ingredients added – cheese, fruit; variation in type of fat used / flour used – gluten free; variation in proportion of sugar; low fat milk etc*

- **Selected dishes and selection criteria** = 6

*Specify the sugar modifications in three batches of scones*

- **Identification of the conditions to be controlled during the testing** = 2

*Conditions specific to the assignment e.g. presentation of samples, temperature of samples, containers for testing, sample size, coding etc*

## Preparation and Planning

- **Resources** = 3  
= 3

*Main equipment needed to carry out assignment ...incl. ingredients, equipment for preparation of scones and the equipment for testing*

- **Time allocation / Work sequence** = 3  
= 3

*Sequence of tasks within appropriate time allocation to include main steps involved in testing, presentation and analysis of results, evaluation*

## Implementation = 10

= 10

- **Procedure followed when carrying out this aspect of the assignment, to include food preparation processes used**

*The full sequence of implementation should be given.*

*Findings should be presented for each of the tests.*

- **Key factors considered (any four @ 3 marks each)** = 6  
= 6

*Key factors considered in order to ensure success in this assignment e.g. sugar modifications, cooking time /temperature, conditions controlled during testing, balanced presentation etc.*

- **Safety and hygiene (one safety, one hygiene and 2 others)** = 4  
= 4

*Cooking scones – oven gloves, hot tins ...safety in handling*

*Good practice with regard to:*

*- preparation area and the testing area*

*- handling of samples – use of plastic gloves / food tongs*

## Evaluation

- **Implementation (4 points)** = 6  
= 6

*Evaluate efficiency of work sequence*

*Safety and hygiene issues considered*

*Problems encountered and suggested solutions*

- **Specific requirements of the assignment ( two points for each test)** = 6  
= 6

*Students should evaluate the results obtained for both the triangle test and the preference test and draw some conclusions.*

## *Appendix 1*

### ***General Instructions for examiners in relation to the awarding of marks.***

1. Examination requirements:

Candidates are required to complete and present a record of **six** assignments for examination.

In respect of **Areas of Practice**, candidates must complete

Area A - **Two** assignments

Area B - **One** assignment

Area C - **One** assignment

Area D - **One** assignment

**One** other assignment from either Area A or Area E

Where a **candidate completes six assignments and does not meet the examination requirements** as set out above, the examiner will mark the six assignments as presented and disallow the marks awarded for the assignment with the lowest mark from AOP A or E

2. Each Food Studies assignment must include different practical activities.  
Where a **candidate repeats a practical activity for a second assignment**, the examiner will mark the repeated practical as presented and disallow the marks awarded for the repeated practical activity with the lowest mark.
3. Where a **candidate completes the investigation and / or the preparation and planning and / or the evaluation aspects of an assignment and does not complete the implementation**, the examiner will mark the completed aspects of the assignment as presented. However, marks for **evaluation of implementation**, where attempted, will be disallowed.
4. Where a **candidate completes the preparation and planning and/or the implementation and /or the evaluation aspects of an assignment, and does not complete the investigation**, the examiner will mark the completed aspects of the assignment as presented. However, marks for **evaluation of specific requirements of assignment**, where attempted, will be disallowed.
5. Where the **dish or product prepared does not meet the requirements of the assignment** e.g. a meat dish is prepared for a vegetarian (assignment 2) **or** two sweet dishes are prepared instead of one sweet and one savoury (assignment 6) **or** fruit is preserved by freezing (assignment 5), marks will be disallowed as follows:  
Investigation – pro rata  
Preparation and planning for relevant practical application – all  
Implementation for relevant practical application – all  
Evaluation for relevant practical application – all.
6. Where the **dish / product prepared has not been identified in the investigation**, but fulfils the requirements of the assignment, deduct the relevant marks awarded under meals /dishes/products in investigation.