

# **Coimisiún na Scrúduithe Stáit** State Examinations Commission

**Leaving Certificate 2022** 

**Marking Scheme** 

Home Economics - Scientific and Social

**Ordinary Level** 

#### Note to teachers and students on the use of published marking schemes

Marking schemes published by the State Examinations Commission are not intended to be standalone documents. They are an essential resource for examiners who receive training in the correct interpretation and application of the scheme. This training involves, among other things, marking samples of student work and discussing the marks awarded, so as to clarify the correct application of the scheme. The work of examiners is subsequently monitored by Advising Examiners to ensure consistent and accurate application of the marking scheme. This process is overseen by the Chief Examiner, usually assisted by a Chief Advising Examiner. The Chief Examiner is the final authority regarding whether or not the marking scheme has been correctly applied to any piece of candidate work.

Marking schemes are working documents. While a draft marking scheme is prepared in advance of the examination, the scheme is not finalised until examiners have applied it to candidates' work and the feedback from all examiners has been collated and considered in light of the full range of responses of candidates, the overall level of difficulty of the examination and the need to maintain consistency in standards from year to year. This published document contains the finalised scheme, as it was applied to all candidates' work.

In the case of marking schemes that include model solutions or answers, it should be noted that these are not intended to be exhaustive. Variations and alternatives may also be acceptable. Examiners must consider all answers on their merits, and will have consulted with their Advising Examiners when in doubt.

#### **Future Marking Schemes**

Assumptions about future marking schemes on the basis of past schemes should be avoided. While the underlying assessment principles remain the same, the details of the marking of a particular type of question may change in the context of the contribution of that question to the overall examination in a given year. The Chief Examiner in any given year has the responsibility to determine how best to ensure the fair and accurate assessment of candidates' work and to ensure consistency in the standard of the assessment from year to year. Accordingly, aspects of the structure, detail and application of the marking scheme for a particular examination are subject to change from one year to the next without notice.

## Home Economics - Scientific and Social

## **Ordinary Level**

## **Marking Scheme**

*Instructions to candidates* 

Section A 30 marks

Answer **five** questions in this section.

Each question carries 6 marks.

Section B 130 marks

Answer **Question 1** and **one** question from questions 2, 3, 4 and 5.

Question 1 is worth 80 marks.

Questions 2, 3, 4, and 5 are worth 50 marks each.

Section C 40 or 80 marks

Answer one elective question or Question 4 (core) to include part (a) and either

part (b) or (c).

If you submitted Textiles, Fashion and Design coursework for examination, you

may only attempt Question 2 from this section.

In developing the marking schemes the following should be noted:

- In many cases only key phrases are given which contain information and ideas that must appear in the candidate's answer in order to merit the assigned marks.
- The descriptions, methods and definitions in the scheme are not exhaustive and alternative valid answers are acceptable. If you are unsure of the validity of an alternative answer, contact your advising examiner.
- The detail required in any answer is determined by the context and the manner in which the question is asked, and by the number of marks assigned to the answer in the examination paper. Requirements and mark allocations may, therefore, vary from year to year.
- Words, expressions or phrases must be correctly used in context and not contradicted, and where there is evidence of incorrect use or contradiction, the marks may not be awarded.

#### Grading Table - 240/200

Grade	Elective 1, 3 and C4 Elective	
1	216 - 240	180 -200
2	192 - 215	160-179
3	168 - 191	140-159
4	144 -167	120-139
5	120-143	100 -119
6	96 - 119	80 - 99
7	72 - 95	60 -79
8	< 71	< 59

## **Annotations-Home Economics 2022**

Annotated marks should be placed near the correct/partial correct response. Colours of annotations may vary.

Annotation	Explanation
0	Zero marks awarded
✓ <sub>1</sub>	One mark awarded
✓ <sub>2</sub>	Two marks awarded
<b>~</b> 3	Three marks awarded
✓ <sub>4</sub>	Four marks awarded
<b>~</b> 5	Five marks awarded
<b>~</b> 6	Six marks awarded
<b>✓</b> <sub>7</sub>	Seven marks awarded
<b>✓</b> 8	Eight marks awarded
}	Blank page
F	Excess point awarded full marks
Р	Excess point awarded partial marks
<	Point/work not attempted
Α	discount mark
P1	deduct 1 mark

P2	deduct 2 marks
Р3	deduct 3 marks
P4	Deduct 4 marks
P5	deduct 5 marks
P6	deduct 6 marks
Р7	deduct 7 marks
P8	deduct 8 marks
P9	deduct 9 marks
P10	deduct 10 marks
MMS	Modified marking Scheme

In Section C, candidates are required to answer one question in this section. Question C2 relates to the Textile, Fashion and Design elective. Where a candidate answers C2 and another question from C1, C3, or C4, the examiner applies a discount mark so that only the greatest mark is counted towards the paper total. The annotation A is used to indicate that a discount mark is being applied. For example, to apply a discount mark of -23 an examiner would place the A, P10, P10, P3, to apply -10 -10, -3 = total -23.

# Answer any **five** questions from this section. Each question carries 6 marks.

1. Indicate with a tick  $(\checkmark)$  whether **each** of the following statements is true or false.

## **3 @ 2 marks** (graded 2:0)

	True	False
A high salt diet can cause high blood pressure	✓	
1 gram of fat provides 20 kilocalories of energy		✓
Coronary heart disease is caused by a build-up of cholesterol on artery walls	<b>√</b>	

**2.** State **two** functions of lipids (fats).

## 2 functions @ 2 marks (graded 2:0)

(i) Heat; energy; excess lipids are stored as adipose tissue; insulating the body; acting as an energy reserve; protect delicate organs;
(ii) Supply fat soluble vitamins A, D, E, K; source of essential fatty acids; delays the feeling of hunger; needed to build cell walls; etc.

Name **one** dietary source of lipids (fats).

## 1 sources @ 2 marks (graded 2:0)

- (i) Meat; eggs; oily fish; dairy products; soya beans; avocado; olives;
- (ii) Nuts and nut oils; vegetable oils; fish liver oils; margarine; seeds; etc.
- **3.** Give **one** example of **each** type of sauce listed below.

## 3 examples @ 2 marks (graded 2:1:0)

Types / Class of sauces	Example
Roux based sauce	White; cheese; parsley; béchamel; brown sauce; etc.
Egg based sauce	Mayonnaise; custard; hollandaise; etc.
Sweet sauce	Chocolate; toffee; caramel; butterscotch; apple; orange; cranberry; raspberry coulis; etc.

**4.** Using the words listed below, complete the following statements in relation to fruit and vegetables.

## **3 @ 2 marks** (graded 2:0)

blanched in-season vitamin C

Citrus fruits are a rich source of vitamin C.

Vegetables are blanched before freezing.

When vegetables are *in-season* they are rich in flavour.

**5.** Give **two** different examples of dishes cooked using the cooking methods named below.

## 2 examples @ 2 marks (graded 2:1:0) + 2 examples @ 1 mark (graded 1:0)

Cooking method	Dishes				Dishes		
Baking	(i) Apple crumble; sponge cake; fish pie; soda bread;	(ii) Lasagne; pizza; pasta bake; muffins; etc.					
Grilling	(i) Chicken satay; vegetable kebabs; beef burgers;	(ii) Fruit skewers; bruschetta; etc.					

**6.** Outline **three** meal planning guidelines to be followed for a person recovering from illness.

## 3 @ 2 marks (graded 2:1:0)

(i) Easy to digest food; appetising; energy intake reduced; smaller portion size;
 lightly seasoned foods; fruit and vegetables; fibre rich foods to prevent constipation;
 (ii) Concentrated source of protein needed to repair damaged tissue;
 regular mealtimes; avoid strong spicy foods; iron rich foods to prevent anaemia;
 (iii) Balanced meals; avoid frying foods; avoid oily/greasy foods;
 plenty of fluids; foods rich in vitamin C to assist healing; etc.

7. Indicate with a tick  $(\checkmark)$  whether **each** of the following statements is true or false.

## **3 @ 2 marks** (graded 2:0)

	True	False
Packaging protects food from becoming damaged or contaminated	<b>√</b>	
Paper packaging is moisture proof		✓
All food packaging is biodegradable and recyclable		✓

**8.** Outline **three** factors that parents should consider when making food choices for pre-school children.

#### 3 @ 2 marks (graded 2:1:0)

- (i) Include variety of foods; follow food pyramid; fruit and vegetables; starchy foods; protein foods; dairy products;
  cost; food processing; portion size; easy to handle foods;
  (ii) Nutritional awareness; health status; allergies; activity levels; hobbies; sensory aspects of food; food packaging; food labelling;
  (iii) Sustainability; peers; family; lifestyle; add interest to the lunch box with variety of breads, pasta shapes; get child involved in packing lunch; food availability; marketing; food trends; etc.
- **9.** State the guidelines that should be followed to ensure the safe preparation of food under **each** of the headings below.

#### **3 @ 2 marks** (graded 2:1:0)

**Food storage** store raw and cooked foods separately; store perishable foods below 5°C; store frozen foods at -18°C; store foods in suitable containers; store dry foods in a cool, dry, well-ventilated cupboard; remove vegetables and fruit from plastic wrapping; follow storage instructions on food labels; check use by/best before dates; etc.

**Personal hygiene** wash hands before handling food; avoid coughing and sneezing near food; aprons must be clean; cuts must be covered with a bright coloured plaster; nails are clean and short; remove jewellery; etc.

**Reheating food** food must be heated to a high temperature to destroy bacteria; high risk foods such as stews and gravies require heating to 100°C; reheat foods once only; etc.

**10.** Give **one** example of **each** class of food additives.

3 @ 2 marks (graded 2:1:0)

Class of Food Additives	Example
Flavourings	Sugar; salt; spices; herbs; artificial flavourings; monosodium glutamate; etc.
Preservatives	Sugar; salt; vinegar; smoke; sulphur dioxide; potassium sorbate; etc.
Sweeteners	Fructose; sugar; honey; glucose syrup; aspartame; saccharin; sorbitol; mannitol; etc.

**11.** State **two** advantages of buying goods on credit.

## 2 @ 2 marks (graded 2:1:0)

(i) Pay for large bills; buy expensive items; cover cost of unexpected expenses;
 do not need to carry around large amounts of cash;
 (ii) Encourages consumers to spend money; creating jobs; credit cards widely accepted;
 take advantage of sales; etc.

Suggest one form of credit suitable for buying a car.

## 1 @ 2 marks (graded 2:1:0)

Loan; hire purchase; PCP (personal contract plans); credit card; etc.

**12.** Indicate with a tick  $(\checkmark)$  whether **each** of the following statements is true or false.

## 3 @ 2 marks (graded 2:0)

	True	False
Pay as you earn (PAYE) is income tax taken from a person's gross pay	<b>~</b>	
Pay Related Social Insurance (PRSI) is a compulsory deduction paid by employers and employees	<b>√</b>	
Net income is money earned before any deductions are made		✓

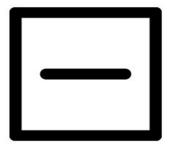
Outi	line <b>three</b> factors to be considered when choosing household textile items.
	<b>3 @ 2 marks</b> (graded 2:1:0)
(i)	Properties of fabric e.g. stain resistant; suitability of fabric for purpose;
	cost; personal likes and dislikes; current fashion trends;
(ii)	Aesthetic appeal; appearance; drapes well; weight; absorbency;
	texture; lustre; colour; pattern; durability; moth proof; colour fast;
(iii)	Care and cleaning, wash/dry clean; stain resistant; fade resistant;

14. What information does each of the following fabric care symbols convey to the consumer?2 @ 3 marks (graded 3:2:0)

safety e.g. flame retardant; natural or synthetic; etc.



Do not bleach.		



(www.persilproclean.com)

Dry flat.				

#### **Section B**

Answer **Question 1** and **one** question from questions 2, 3, 4 and 5. Question 1 is worth 80 marks. Questions 2, 3, 4 and 5 are worth 50 marks each.

#### Question 1

'Milk is a staple food in the diets of Irish children.' (www.nationaldairycouncil.ie)

The table below shows the nutritional content of whole milk and super milk fat-free per 100ml.

Type of Milk	Energy (kcal)	Protein	Carbohydrates	Fat	Calcium	Vitamin B12
Whole Milk	64 kcal	3.4 g	4.7 g	3.5 g	119 mg	0.4 μg
Super Milk Fat-free	35 kcal	3.3 g	5.0 g	0.2 g	160 mg	0.4 μg

(www.avonmore.ie)

(a) Using the information presented in the table above, state which milk you would recommend for a teenager.

Give **four** reasons for your choice.

(20 marks)

## Name 4 marks (graded 4:0), 4 reasons @ 4 marks (graded 4:2:0)

Whole milk: higher kcal content; higher fat content; fat for heat and energy; fat is easy to digest; saturated fat can increase risk of CHD; higher protein content; protein for growth and repair; lower carbohydrate content; CHO for heat and energy; lower amount of calcium; calcium for strong bones and teeth; vitamin  $B_{12}$  for production of red blood cells, metabolism of folic acid, fatty acids and formation of myelin sheath around nerves; etc.

**Super milk fat-free:** lower kcal content; lower fat content; lower protein content; protein for growth and repair; lower carbohydrate content; CHO for heat and energy; higher amount of calcium; calcium for bones and teeth; vitamin  $B_{12}$  for production of red blood cells, metabolism of folic acid, fatty acids and formation of myelin sheath around nerves; prevents anaemia; etc.

(b) Outline three interesting ways of including dairy products into a teenager's diet. (12 marks)

### 3 ways @ 4 marks (graded 4:2:0)

Milk in cereal; milkshakes, smoothies; coffees made on milk; milk served with meals; as a snack; dishes containing white sauces; added to soup; batters; milk based desserts; added to baked goods; Yoghurt as a snack; in milkshakes, smoothies; as topping for desserts; dips for curries; dressings for salads; garnish for soup; topping for baked potatoes; Cheese in salads; filling in sandwich/baked potatoes; topping for pasta; added to main course dishes; added to mashed potatoes; cheese sauces for cauliflower; cheeseboard as a dessert; cheesecake; added to baked goods; etc. accept butter; ice-cream; etc.

- (c) Give an account of calcium under each of the following headings:
  - functions in the body

#### 3 functions @ 4 marks (graded 4:2:0)

Strong bones; healthy teeth; clotting of blood; muscle contractions; normal nerve function; membrane permeability; regulate cell metabolism; etc.

dietary sources

#### **3 sources @ 4 marks** (graded 4:2:0)

Hard water; dairy products; canned fish; green leafy vegetables; fortified bread; white flour; eggs; oily fish; bottled water; fortified juices; soya milk; fortified breakfast cereals; etc.

effect of deficiency.

(28 marks)

#### 1 effect @ 4 marks (graded 4:2:0)

Rickets; osteomalacia; osteoporosis; dental decay; muscle spasm; poor blood clotting; disturbances in functioning of nerve cells; etc.

(d) Discuss four factors to be considered when buying and storing dairy products in order to reduce food waste. (20 marks)

# 4 factors @ 5 marks (graded 5:3:0) (1 reference to buying, 1 reference to storing, plus 2 others)

**Buying:** shop using list; buy from clean, hygienic shop; check use by dates; check packaging/lid to ensure its intact; ensure dairy products are stored at correct temperature; buy near the end of shopping trip; buy in useable/small quantities; etc.

**Storing:** store dairy products in fridge 4°C; use in rotation; follow 'use by' dates as indicated on packaging; keep milk in original carton/container; keep dairy products covered or store in sealed containers and away from strong smelling foods; do not over-fill refrigerator; wrap cheese loosely in parchment/wax paper to prevent it drying out; etc.

'Six in ten primary school children are not eating enough fibre.' (www.bordbia.ie)

(a) Give an account of (i) the nutritional and (ii) the dietetic value of cereals. (20 marks)

#### 4 points @ 5 marks (graded 5:3:0)

#### (1 reference to nutritional value, 1 reference to dietetic value, plus 2 others)

**Nutritive:** LBV protein; carbohydrate; wholegrains are a source of fibre; unsaturated fatty acids; source of B group vitamins; vitamin E; calcium; iron and phosphorus; low water content; etc. **Dietetic:** protein for growth and repair; starch for energy, useful in the diet of active people; whole grains contain dietary fibre which prevents constipation; fat is polyunsaturated, does not contribute to the build-up of cholesterol; versatile; inexpensive to buy; easy to use; gluten cannot be digested by coeliacs; can be used in both sweet and savoury dishes; quick to cook, saving energy costs; etc.

(b) Plan a high fibre menu (3 meals, to include a packed lunch) for one day for a school-going child.

(18 marks)

### 3 meals @ 6 marks

(Menu: 2 courses @ 2 marks + 1 beverage @ 2 marks (graded 2:1:0)) X 3

#### Sample menus

Breakfast	Packed lunch	Dinner
Orange juice  ***  Wholegrain cereal with milk	Brown roll with chicken and cheese  ***	Vegetable soup with brown bread ***
*** Strawberry yoghurt  *** Glass of milk	Apple *** Bottle of water	Spaghetti Bolognese with brown pasta *** Glass of milk

(c) Outline the effects of heat on cereals.

(12 marks)

#### 3 effects @ 4 marks (graded 4:2:0)

Moist heat causes starch grains to swell, burst and absorb cooking liquid, e.g. boiled rice; dry heat causes starch grains to swell, burst and absorb fat, e.g. popcorn; cellulose softens, making it easier to digest; protein coagulates and sets; some vitamin B is lost; dextrinisation of starch; caramelisation of sugar causes surface browning; etc.

Home food preservation helps to reduces food waste.

(a) Give an account of **one** method of home food preservation.

Refer to:

• name of preservation method Name: 3 marks (graded 3:2:0)

suitable foods
 3 foods @ 3 marks (graded 3:0)

• steps to carry out method of preservation. 4 steps @ 3 marks (graded 3:2:0)

(24 marks)

Name of preservation method: heat treatments, e.g. jam/chutney making, chemical preservation, pickling, drying, freezing, etc. Suitable foods: fruit: apples, oranges, strawberries, plums, apricots, etc. vegetables: carrots, peas, beans, tomatoes, onions, cauliflower, broccoli; meat and fish; baked foods; soups and sauces; cooked meals; etc. Steps to carry out method of preservation: jam/chutney making: wash and sterilise jars; prepare fruit and vegetables according to type; use heavy based saucepan; simmer to release pectin; add sugar; lemon juice can be added to increase acidity; boil until setting point is reached; test; skim; pot; seal; label; store; etc. Bottling: heat jars of fruit/vegetables in a water bath; seal jars when hot; forms a vacuum on cooling that creates a seal; label; store; etc. Drying: herbs are tying them in bundles; dry in a warm area; package; label; store; etc. Freezing: blanch according to type; put into moisture proof packaging; remove air; seal; label; freeze at -25°C; store -18°C; etc.

**(b)** Describe **four** safety guidelines to follow when preserving food in the home. (16 marks)

#### 4 guidelines @ 4 marks (graded 4:2:0)

Take care when using sharp knives, graters, blades of food processor; use saucepans with heat resistant handles; use oven gloves when handling hot jars/lids, removing trays from the oven; keep handles of saucepans turned inwards; do not overfill jars; wash hands before handling food; avoid coughing/sneezing over food; cover hair with a hair net; wear protective clothing; cover cuts with a waterproof dressing; handle food as little as possible; do not overload electrical sockets; avoid trailing flexes; switch off appliances when not in use; do not handle electrical appliances with wet hands; use separate surfaces when preparing raw and cooked foods; etc.

(c) State **two** ways food labelling benefits the consumer when purchasing processed foods. (10marks)

## 2 ways @ 5 marks (graded 5:3:0)

Informs consumer on properties of processed food; can make an informed choice; information on nutrients, allergens, additives, genetic modifications; etc. ingredients listed in descending order of weight; net quantity; country of origin; use by date, best before date; instructions on cooking, storing; name and address of manufacturer; quality assurance e.g. Bord Bia mark; organic produce; fair trade; etc.

'When you buy a product or a service you have a number of rights under Irish legislation.'

(www.citizensinformation.ie)

(a) Name and explain four consumers rights when buying household appliances. (16 marks)

## 4 rights @ 4 marks (graded 4:2:0)

Value for money; right to honest and truthful information; right to choice of goods and services; right to quality; right to safety; services completed to high standard by qualified person; using good quality materials; right to redress; etc.

- **(b)** Set out the results of a study you have carried out on a small electrical kitchen appliance. Refer to:
  - type of appliance
  - guidelines for use
  - guidelines for care and cleaning.

(24 marks)

#### 1 type @ 3 marks (graded 3:2:0)

**Type of appliance:** microwave; kettle; food processer; sandwich maker/contact grill; toaster; juicer/smoothie maker; air fryer; slow cooker; coffee maker; food mixer; blender; etc.

## 4 guidelines @ 3 marks (graded 3:2:0)

**Guidelines for use:** follow manufacturer's instructions; assemble correctly; use correct speed/temperature; use correct attachments; don't overfill appliance; stop appliance at intervals; move up through speeds; don't operate with wet hands; avoid trailing flexes; do not overload sockets; switch off appliances when not in use; always buy good quality equipment; etc.

#### 3 guidelines @ 3 marks (graded 3:2:0)

**Guidelines for care and cleaning:** unplug before cleaning; wash removable parts in hot soapy water; dry fully; be careful when removing, washing and drying blades, discs, sharp components of appliance; never immerse motor/electrical section in water; clean flex with damp cloth; avoid using abrasives; store appliance with lid off; descale kettle regularly; etc.

(c) Explain **two** benefits to the consumer of the EU energy label on electrical appliances. (10 marks)

#### 2 benefits @ 5 marks (graded 5:3:0)

Enables consumers to choose appliances based on their energy efficiency, helps consumers reduce energy bills; choose more sustainable products, reducing impact of product on the environment; QR link to an EU wide database allows consumers to find out more details about the product; appliances are rated on an A-G scale; A and B rated appliances are the most energy efficient; etc.

Marriage is a popular lifestyle choice for couples in Irish society.

(a) Discuss the rights and responsibilities of a couple within a marriage relationship. (20 marks)

#### 4 points @ 5 marks (graded 5:3:0)

**Rights:** to each other's company; live together as partners; monogamous relationship; to be faithful/loyal to each other; couples are entitled to have sexual relations with each other to consummate the marriage; spouses can inherit from each other (Succession Act, 1965); etc. **Responsibilities:** provide financial support for partner and children; joint guardianship and responsibility of children; legal duty to provide for the physical, emotional, social, moral, and educational needs of children; work on the relationship to ensure it is functioning; show commitment to marriage; etc.

- **(b)** Give an account of the following options available to married couples who are separating:
  - legal separation
  - divorce. (20 marks)

## 4 points @ 5 marks (graded 5:3:0)

#### (1 reference to legal separation, 1 reference to divorce, plus 2 others)

**Legal separation:** Deed of Separation/legal separation agreement; legal binding written contract; responsibility and care of dependent children; maintenance; arrangements regarding ownership and occupation of the family home; trained mediator available to negotiate terms; must be drawn up by solicitor; helps couples avoid court proceedings; etc. **Divorce:** allows both partners to terminate their existing marriage legally; solicitor will inform couples of available counselling and mediation services; spouses have lived apart for two of the previous three years; have no prospect of reconciliation; satisfy the court that provision has been made for spouses and dependent children; court may give additional orders regarding child custody and access, property, maintenance; gives spouses right to remarry; divorce hearing is held in the family circuit court; etc.

(c) Describe two different cultural variations in marital arrangements. (10 marks)

#### 2 cultural variations @ 5 marks (graded 5:3:0)

Age: in Ireland, minimum age for marriage is 18, age restriction varies from country to country; etc. Choice of Spouse: some societies place restrictions on marital unions based on religion, social class, or relationship between the individuals; etc. Arranged marriages: parents decide on their child's spouse based on background and suitability; popular in the travelling community; etc. Number of Partners/Spouses: monogamy; polygamy; polygyny; polyandry; etc. Same sex marriage: legal in Ireland; etc. Wedding customs: Jewish weddings are held under canopy which symbolises couple's future home; etc. Types of ceremony: religious, civil, secular, interfaith, humanist; etc. Location: church, mosque, synagogue; registry office; temporary registration of hotel; beach; garden, can be obtained; etc.

## **Section C**

## **Elective 1 - Home Design and Management - 80 marks**

Candidates selecting this elective must answer 1(a) and either 1(b) or 1(c).

1. (a) A popular open plan kitchen/living space is shown below.



(www.roomsketcher.com)

(i) Evaluate the suitability of this kitchen/living space for a family with children.

(20 marks)

#### 4 points @ 5 marks (graded 5:3:0)

Large space to meet family needs; floor covering easy to clean; same flooring throughout, no transition strip that could be trip hazard; room divided into distinct zones; sufficient storage space in kitchen; modern in design; kitchen table can be used for completion of homework when other family members prepare dinner; can watch children playing in living room while preparing food; plenty kitchen units; extractor fan over hob; adequate seating; good amount of natural light entering room; useful to have more worktop space on far side of hob; not enough chairs at kitchen table for all family members to eat together; need additional seating at breakfast counter; lacking storage for toys in living room; etc.

(ii) Discuss three factors that should be considered when planning a lighting system for an open plan kitchen/living room. (15 marks)

#### **3 factors @ 5 marks** (graded 5:3:0)

Function of the room; sufficient light to avoid eye strain; amount of natural light entering the room; size and shape of room; colour scheme; ambience; focal point of room; flexibility e.g. moveable lamps; LED lighting to save energy; avoiding glare on TV; safety; easy maintenance; ease of access to replace bulbs; etc.

(iii) Give details of **three** types of contemporary lighting in the home. (15 marks)

### 3 types @ 5 marks (graded 5:3:0)

Recess ceiling lights; hanging pendants; rise and fall lights; ceramic and plaster-based wall lights; under counter and cabinet lights; picture display lights; LED lighting; track lighting; spotlights; mood lighting; rope lighting; use of smart technology to turn on/off lights; etc.

#### and

- **1. (b)** 'As people get older, they often spend more time in their homes.' (Age Friendly Ireland)
- (i) Discuss three factors that influence the choice of housing for an older person. (15 marks)

## 3 factors @ 5 marks (graded 5:3:0)

Compact; comfortable; single storey house; may prefer living in small village or town; easy access to amenities, services, and public transport; ramp at entrance points; wide doorways; chairlift may be necessary; good lighting to avoid falls; adapted kitchen facilities; downstairs bedroom; adapted bathroom facilities; non-slip flooring; even floor surface throughout house; safe and efficient heating system; monitored alarm system; front door spyhole and keychain; small outdoor area; outdoor lighting; assistive technology; sensors for remote health monitoring; etc.

(ii) Outline three ways an older person can reduce their home energy bills.

(15 marks)

#### **3 ways @ 5 marks** (graded 5:3:0)

Energy efficient appliances; do not leave appliances on standby; well insulated house; timer and thermostats on heating/hot water systems; lag hot water cylinder and pipes; double/triple glazed and low emissivity windows; lining on curtains; solar energy; zone heating; use LED bulbs; use sensors on outside lights; consider night saver electricity; fix dripping taps; etc.

or

- **1. (c)** 'Electricity can be dangerous if not used properly.' (www.safeelectric.ie)
- (i) Describe how the following electrical safety devices provide protection when using electricity in the home.

(a) miniature circuit breakers 1 point @ 5 marks (graded 5:3:0)

(b) earth wire. 1 point @ 5 marks (graded 5:3:0) (10 marks)

Miniature circuit breaker: safety feature; contain trip switches that interrupt the circuit and disconnect the current when a fault occurs, or the circuit is overloaded; trip switches can be reset when the fault has been rectified; MCBs contain RCDs (residual current device) providing additional protection; etc. accept labelled diagram; Earth wire: if a fault develops allowing the live wire to come in contact with metal such as casing of a washing machine, anyone who touches the appliance would be in danger of electrocution, the earth wire prevents such accidents by carrying electricity from the faulty appliance safely to earth; etc.

(ii) Outline **four** guidelines to follow for the safe use of electricity in the home. (20 marks)

## 4 guidelines @ 5 marks (graded 5:3:0)

Do not overload sockets; avoid using adapters; avoid trailing flexes; switch off appliances when not in use; unplug appliances before cleaning; keep appliances in good working order; do not handle appliances, sockets, plugs with wet hands; buy good quality appliances; do not bring electrical appliances into the bathroom; etc.

## **Elective 2 - Textiles, Fashion and Design - 40 marks**

Candidates selecting this elective must answer 2(a) and either 2(b) or 2(c).

**2. (a)** 'Athleisure wear is the fashion trend that can be worn anywhere anytime.' (www.squatwolf.com)



(www.pinterest.com)

(i) Comment on the suitability of the athleisure wear outfits shown above. Refer to:

comfort 1 point @ 6 marks (graded 6:3:0)
function 1 point @ 6 marks (graded 6:3:0)
design features. 1 point @ 6 marks (graded 6:3:0) (18 marks)

**Comfort:** stretch fabric allows for ease of movement; round neck t-shirts not restrictive; zipped jacket, more comfortable when unzipped, can be removed easily; flat shoes, comfortable with soft sole; etc.

**Function:** suitable for activities; durable; versatile; will maintain shape; will not crease; suited to warm and cold weather; etc.

**Design features:** monochromatic and complimenting colour schemes; layering adds interest to outfits; pull-string waist band; central opening of jackets with zip detail; pockets; white t-shirt; cuffs on sleeves; casual shoes; etc.

(ii) Suggest **one** accessory that could enhance the appeal of the athleisurewear outfits **and** give a reason for your choice. (7 marks)

## Name: 3 marks (graded 3:2:0), 1 reason @ 4 marks (graded 4:2:0)

Adding jewellery; changing colour of socks or trainers to brighten them; changing colour of laces in trainers to create contrast; wearing a hat/cap for warmth; wearing a belt to emphasise waist; scarf around the neck, gloves on hands for warmth; crossover bag to carry personal items; etc.

#### and

- **2. (b)** Man-made fabrics have many uses including clothing, household items and industrial products.
- (i) Write a profile of **one** man-made fabric under **each** of the following headings:
  - how the fabric is constructed

### 3 points @ 2 marks (graded 2:1:0)

Weaving: warp stretched on a loom, weft passed over and under warp from one side to another; as the weft threads come down the outside edges of the warp threads, a selvedge edge is formed which prevents fraying; etc. accept knitting; crochet; lace making; macramé; bonding; etc.

• properties. (9 marks)

1st property @ 2 marks (graded 2:0) and 2nd property @ 1 mark (graded 1:0)

Viscose: drapes well; very absorbent; soft; comfortable to wear; dyes well; becomes weak when wet; creases easily, poor insulator of heat; prone to damage by mildew and acids; etc. Acetate: drape well; creases easily; moth and mildew resistant; prone to static electricity build up; etc. Polyester: not absorbent; prone to static electricity build-up; strong; crease resistant; resistant to alkalis, solvents, moulds, mildew; damaged by acids; not resistant to prolonged sunlight; etc. Nylon: drapes well; lightweight; strong; crease resistant; easy to dye; elastic; not absorbent; mildew and mould resistant; alkali resistant; produces static electricity; damaged by sunlight/acids; flammable; etc. Acrylic: prone to static electricity build-up; strong; crease resistant; drapes well; good insulation, warm to wear; acid, mildew and mould resistant; sensitive to heat; etc.

(ii) Give **two** advantages of using man-made fibres/fabric in everyday wear. (6 marks)

#### 2 advantages @ 3 marks (graded 3:2:0)

Durable; absorbs sweat; breathable; easy to wash and dry; lightweight, comfortable, and soft to wear; stretches easily; retains original shape after washing; easy to launder; quick to dry; no ironing required; cheap to buy; dyes easily; wrinkle resistant; resistant to mildew and moths; fashionable; etc.

or

- **2. (c)** Wardrobes are bulging, yet we continue to buy more clothes.
- (i) Discuss three factors that influence teenagers' clothing choices. (9 marks)

#### 3 factors @ 3 marks (graded 3:2:0)

Colour and style; ethical choices; peers; social media/media; cultural influences; function; cost; comfort; availability of clothes; trends; technological developments; world events; sports events; etc.

(ii) Evaluate how social media contributes to current fashion trends. (6 marks)

#### **2 points @ 3 marks** (graded 3:2:0)

Informs of latest fashion trends; leads consumer to adapt fashion trends quicker increasing sales of fashion items; fashion companies give influencers clothes samples to wear and promote; influencers review clothes; encourage/discourage people to buy them; bloggers give feedback on clothes; etc.

#### Elective 3 – Social Studies – 80 marks

Candidates selecting this elective must answer 3(a) and either 3(b) or 3(c).

- **3. (a)** 'A quarter of those in poverty are children.' (Social Justice Ireland, 2021)
- (i) Define 'poverty'.

## 1 point @ 4 marks (graded 4:2:0)

Being without adequate food, clothing or shelter; income and resources are inadequate and do not allow people have a standard of living that is acceptable in Irish society; having little or no wealth; inadequate income and resources, may exclude and marginalise people from participating in activities that are considered the norm for people in society; etc.

Explain **each** of the following:

• relative poverty **2 points @ 3 marks** (graded 3:2:0)

absolute poverty.
 2 points @ 3 marks (graded 3:2:0)
 (16 marks)

**Relative poverty:** living below what society recognises as a basic standard of living; living below the poverty line which is defined as 50% of the average household income; this reduces standard of living, prevents people from partaking in activities considered normal in society; people endure income poverty and deprivation/lack of provisions e.g. a winter coat; etc.

**Absolute poverty:** a household income is below a certain level, which makes it impossible for a person or family to meet the basic needs of life; not having enough food, clothing, warmth or shelter; struggling to stay alive on limited resources; difficulty in solving the problem; may include homeless people; etc.

(ii) Describe **four** reasons why poverty continues to be a feature in modern Irish society.

(20 marks)

#### 4 reasons @ 5 marks (graded 5:3:0)

Social problems; social policy; economic recession and unemployment; increase in one-parent/blended families; large families; increase in the cost of living; lack of education; low income; housing costs and shortages; dependency on state benefits; etc.

(iii) Name **and** give details of **one** voluntary organisation that provides support to families at risk of poverty.

(14 marks)

#### Name: 4 marks (graded 4:2:0), 2 details @ 5 marks (graded 5:3:0)

**St. Vincent de Paul**: provides for the most vulnerable members in a community; gives financial assistance to people in need; provides person to person contact to discuss problems; members visit needy families; do shopping for the elderly; provide housing; holiday breaks; homework clubs; hostels and social housing projects; care for the homeless; day care centres for older people; education grants; fund raising; charity shops; etc. **Simon Community**: provides support; emergency shelter, temporary accommodation; rough sleeper team; soup kitchens/soup runs; addiction treatment options; assistance with food and clothes; provides counselling and education services; social clubs; etc. **Focus Ireland**: provides services for people who are homeless or at risk of homelessness; provide tenancy supports; provides training in personal and life skills; information on job opportunities; provides drop in coffee shops, emergency accommodation; etc. Lions Club; Rotary Club; Respond; DePaul community; Inner city helping homeless; etc.

#### and

- **3. (b)** 'Communities are the life blood of rural Ireland.' (www.gov.ie)
- (i) Discuss three reasons why people are moving from rural areas to urban areas.

(15 marks)

#### **3 reasons @ 5 marks** (graded 5:3:0)

Technological developments in agriculture reducing number of jobs available; more employment opportunities; large multinational companies in urban areas; young professionals moving to urban areas; more services, amenities available; more educational opportunities; greater range of leisure/entertainment facilities; etc.

(ii) Explain how the movement from rural areas to urban areas has impacted family life.

(15 marks)

#### 3 points @ 5 marks (graded 5:3:0)

**Rural areas:** decrease in population; social isolation; more elderly people; fewer younger people; closure of essential services; less amenities; more unemployment; less government funding for transport systems; marriage and birth rates fall; support from extended family reduced; etc. **Urban areas:** more services and amenities available; increased competition for jobs; traffic congestion; increase in air and noise pollution; increase in house prices; education facilities with long waiting lists; unemployment blackspots; increase in social problems; etc.

or

- **3. (c)** 'Deciding on childcare is a big decision for any parent.' (www.citizeninformation.ie)
- (i) Give an account of **three** factors parents should consider when choosing a childcare facility for their child.

(15 marks)

### 3 factors @ 5 marks (graded 5:3:0)

Cost; environment of childcare setting; age/needs of child; special needs of child; proximity to home/work; experience and qualification of staff; first aid training; after school care requirements; opening/closing hours; flexibility/school holidays; personal preferences; reliability; etc.

(ii) Describe how attending pre-school can promote a child's development.

(15 marks)

#### **3 points @ 5 marks** (graded 5:3:0)

Socialisation, form relationships with other children; form relationships outside of home; learn to interact with others; learn to behave in respectful way; become independent and confident; develop physically by playing games; develop fine and gross motor skills; develop imagination and creativity; intellectual development helped by stimulating environment; helps develop decision making skills; good preparation for primary school; etc.

## **Question 4 - Core - 80 marks**

Candidates selecting this question must answer 4(a) and either 4(b) or 4(c).

- **4. (a)** 'Fish has a reputation for being one of the healthiest foods we can eat.' (www.bbc.com)
- (i) Give an account of (i) the nutritive value and (ii) the dietetic value of fish. (20 marks)

#### 5 points @ 4 marks (graded 4:2:0)

### (1 reference to nutritional value, 1 reference to dietetic value, plus 3 others)

**Nutritional value:** HBV protein, proteins are collagen, myosin, actin; unsaturated fat; omega 3 fatty acids in oily fish; no carbohydrates; vitamin B; vitamin C in oysters; vitamin A and vitamin D in oily fish; source of iodine, potassium, phosphorus, zinc; calcium in tinned fish; non-haem iron in shellfish and sardines; etc.

**Dietetic value:** easy to digest, suitable for elderly; protein for growth in children and adolescents; healthy muscles and repair for all age groups; polyunsaturated fat, omega 3 fatty acids help to reduce CHD; white fish suitable for low calorie diets; no carbohydrates so should be served with carbohydrate foods; versatile; different cooking methods can be used; available processed out of season; cooks quickly, saves time and fuel; etc.

- (ii) Outline:
  - the guidelines to follow when buying fresh fish

### 3 guidelines @ 3 marks (graded 3:2:0)

Buy from clean and hygienic retailer; check use by date on pre-packaged fish; fish presented on crushed ice; flesh should be firm and elastic; skin should be shiny, moist, unbroken and slime free; scales should be tightly attached to fish not flaking/falling off; bright and bulging eyes; gills bright red/pink; no bruising/discolouration on flesh evident; shellfish heavy for size; mollusc shells closed; crustaceans alive; smell of the sea evident; buy near end of shopping trip; etc.

the effects of cooking on fish.

(18 marks)

#### **3 effects @ 3 marks** (graded 3:2:0)

Protein coagulates/sets; colour change from transparent to opaque; some B group vitamins destroyed; other vitamins and minerals lost into cooking liquid; bacteria and parasites destroyed; flavour develops as extractives released; collagen changes to gelatine, fish becomes more digestible; becomes tough and rubbery if overcooked; etc.

(iii) Name one method of processing fish to extend its shelf life and give one advantage and one disadvantage of the method named. (12 marks)

1 method @ 4 mark (graded 4:0), 1 advantage @ 4 marks, 1 disadvantage @ 4 marks (graded 4:2:0) Freezing: Advantages: little loss of nutrients; simple and safe method of preservation; allows for bulk buying; etc. Disadvantages: need packaging; cost of running freezer; etc.

Canning: Advantages: softens the bones; long shelf life; etc. Disadvantages: salt added; texture softened; etc. Smoking: Advantages: has a distinctive smoked flavour; etc. Disadvantage: colourings and flavourings added; etc.

#### and

- **4. (b)** Retailers use a variety of techniques to increase consumer spending.
- (i) Give details of three ways retailers can encourage consumers to purchase goods. (15 marks)

#### **3 ways @ 5 marks each** (graded 5:3:0)

Store layout, size can influence amount of time spent in store; location of goods in defined departments; displays that target consumers; comfortable heating and ventilation; floor arrows to guide consumers pass maximum number of products; etc. In-store stimuli, lighting; background music; aromas; etc. product placement, essentials at back of store; sweets products/magazines; etc. near checkouts; product association e.g. pasta and sauces together; fruit, vegetables near entrance; heavy items near entrance; etc. shelf position, luxuries at eye level; etc. Pricing, items priced at  $\{4.99\}$  are perceived cheaper than  $\{5\}$ ; special offers; etc. merchandising, free samples; loss leaders; loyalty cards; etc.

(ii) Outline the procedure a consumer should follow when making a complaint about a faulty product.

#### (15 marks)

#### **5 points @ 3 marks** (graded 3:2:0)

Return to the retailer; bring receipt as proof of purchase; complain promptly to the supplier if there is a fault with a service; speak to the manager; outline the complaint; state what should be done about the faulty goods or service; if the response is unsatisfactory, complaint should be made in writing; letter should include, description of the goods/service, copy of receipt, where and when it was bought, and redress sought; register with the Small Claims Court if unresolved; etc.

or

- **4. (c)** The successful organisation of the family unit depends on good management skills.
- (i) Discuss how the following factors may affect the management of the home:

• dual roles **1 point @ 5 marks** (graded 5:3:0)

• stages in life cycle **1 point @ 5 marks** (graded 5:3:0)

• employment patterns. **1 point @ 5 marks** (graded 5:3:0) (15 marks)

**Dual roles:** if both parents work outside the home both are provider and home maker, so different management system is needed; parents have dual roles of earner and homemaker; parents must provide love and comfort as well as disciplining their children; etc.

**Stages in life cycle:** younger children have different needs to older children, as children get older they can contribute to home management and become involved in decision making; older people have limited finance, different pastimes which affect management; later only one partner may be working so income is smaller; etc.

**Employment patterns:** number of family members working, one working the other engaged in childminding, or both working and children in crèche; whether employment is inside or outside the home, type of employment, hours of employment, job sharing, flexitime, can assist with childcare; etc.

(ii) Describe **three** ways in which technology has contributed to the efficient management of the home.

(15 marks)

## 3 ways @ 5 marks (graded 5:3:0)

Workload is reduced e.g. washing machines; time is saved e.g. food processors; tasks performed with increased efficiency e.g. steam cleaner; security technology gives peace of mind; automation enables appliances to turn on or off while away from home; communication technology gives easier and quicker access to information; entertainment e.g. game consoles; etc. cooking food e.g. induction hob; zone heating systems; broadband assists working from home; apps for budgeting; etc.



## Home Economics - Scientific and Social

## **Food Studies Coursework**

# Marking Scheme

In developing the marking schemes the following should be noted:

- In many cases only key phrases are given which contain information and ideas that must appear in the candidate's answer in order to merit the assigned marks
- The descriptions, methods and definitions in the scheme are not exhaustive and alternative valid answers are acceptable
- The detail required in any answer is determined by the context and the manner in which the question is asked, and by the number of marks assigned to the answer in the examination paper. Requirements and mark allocations may, therefore, vary from year to year.
- Words, expressions or phrases must be correctly used in context and not contradicted, and where there is evidence of incorrect use or contradiction, the marks may not be awarded. Information must be presented under the appropriate headings.

## **Grading Table**

Grade	Mark bands
1	144-160
2	128-143
3	112-127
4	96-111
5	80-95
6	64-79
7	48-63
8	≤ 47

## Food Studies Practical Coursework General Marking Criteria

Investigation: Analysis/Research 32 marks

## **Research and Analysis**

(24 marks)

# **Band A 19 – 24 marks** (very good - excellent) **Investigation**

- shows evidence of a **thorough exploration** and **comprehensive analysis** of **all** 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 13 – 18 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 7 - 12 marks** (basic - 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 - 6 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.

All Assignments: menu for day/2 two course meals/1 dish/2 dishes/2 products.

(4 marks)

**If dish prepared is not investigated** - 1/- 2/- 4 marks in Investigation.

(menu: - starter/dessert = 1 mark, main course = 1 mark)

suitable meals/dishes/products having regard to factors identified and analysed in the investigation **Menus/main course/dishes must be balanced** – accept 3 out of 4 food groups.

Sources: 2 sources @ 2 marks (graded 2:1:0)

(4 marks)

#### **Resources:**

- ingredients (2 marks), quantities (2 marks), costing (2 marks), equipment (2 marks)
- Area of practice E product/s (2marks), equipment (6marks)

### Implementation 28 marks

Outline of the procedure followed to include food preparation processes, cooking time, temperature, serving/presentation, tasting/evaluation.

(16 marks)

(information/account should be in candidate's own words)

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

**All essential 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 9 - 12 marks** (very competent - good)

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

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

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

#### **Band D 1 - 4 marks** (very basic - limited)

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

• Key factors considered 2 points @ 4 marks (graded 4:2:0) (8 marks) (must relate to specific dish/test)

**Identification** (2 marks) and **clear explanation of importance** (2 marks) of **two factors** considered which were **critical to the success of the dish/test.** 

• Safety/Hygiene 2 points @ 2 marks (graded 2:1:0) (4 marks) (must relate to specific ingredients being used/dish being cooked)

**Identification** (1 mark) and **explanation** (1 mark) of **one** key safety issue **and one** key hygiene issue considered when preparing and cooking dish/conducting test.

Evaluation 3 points @ 4 marks 12 marks

Evaluate the assignment in terms of: (graded 4:3:2:0)

## **Implementation**

**Band A - 4 marks** - identified and analysed specific strengths/challenges in carrying out the task, modifications, where suggested, were clearly justified, critical analysis of use of resources/planning.

**Band B - 3 marks** - identified strengths/challenges in carrying out task, some justification of proposed modifications, limited analysis of use of resources/planning.

**Band C - 2 marks** - some attempt made at identifying strengths/challenges in completion of task, modifications where suggested not justified, reference made to use of resources/planning.

#### **Specific requirements** of the assignment

**Band A - 4 marks** - draws informed conclusions in relation to the key requirements of the assignment.

Band B - 3 marks - draws limited conclusions in relation to the key requirements of the assignment.

Band C - 2 marks - summarises outcomes in relation to the as

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

#### **Assignment 1**

Good nutrition helps individuals involved and interested in sports maximise power and endurance as well as overall performance and health. (Irish Nutrition & Dietetic Institute)

Research and elaborate on the nutritional needs and the meal planning guidelines that should be considered when planning meals for individuals involved in sport.

Having regard to the factors identified in your research, suggest a range of menus (two courses) suitable for the main meal of the day for this group of people.

Prepare, cook and serve one of the main courses from your research.

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

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

- dietary/nutritional needs of individuals involved in sport
- relevant meal planning guidelines with specific reference to **individuals involved in sport**
- range of menus (2 x two courses) suitable for the main meal of the day

## Investigation

**Dietary/nutritional requirements**: nutritional balance; current nutritional guidelines re nutrient and food intake; daily requirements of macro/micro nutrients including protein/carbohydrate/fat/iron/calcium requirements as appropriate for individuals who participate in sport; recommended daily allowance/reference intake; interrelationship of minerals and vitamins e.g. Vitamin C/iron absorption; vitamin D/calcium absorption; vitamin B group for release of energy; possible variations in energy requirements; low GI carbohydrate foods; energy balance vis a vis activity levels; unrefined carbohydrates; anti-oxidants; use of meal supplements e.g. drinks; food supplements; etc.

**Meal planning guidelines:** use of food pyramid to ensure balance; regular eating patterns; balance food intake with physical activity; calorie intake; variety of food; healthy food choices; healthy cooking methods; avoid foods high in saturated fat, salt and sugar; specific dietary conditions; portion sizes; avoid skipping meals; healthy snacks; fortified foods; low GI foods provide a sustained source of energy and high GI foods to restore energy after exercise; use organic foods; use of milk powder to boost calcium, protein and calorie content; replace water lost during exercise; resource issues; planning meals in advance; avoid highly spiced and unfamiliar foods before training/matches; etc.

#### Dishes selected

- range of two course menus (2) for the main meal of the day
   2 menus x 2 marks (1 mark for each course) (graded 4:3:2:1:0)
- must meet the nutritional requirements for individuals involved in sport
- must be a main course from the menu.

**Evaluation (a)** implementation and **(b)** the specific requirements of the assignment Analysis of findings from research regarding the dietary/nutritional needs for individuals involved in sport. Meal planning guidelines – range of foods/dishes suitable when planning meals for individuals involved in sport, how the selected dish meets the requirements as identified in the investigation; etc.

#### Assignment 2

It is estimated that 300,000 people in Ireland have Osteoporosis. (Irish Osteoporosis Society)

Carry out research on osteoporosis with reference to: (i) the factors that affect bone health and (ii) the signs/symptoms that a person may have osteoporosis.

Investigate and elaborate on the nutritional needs and the factors that should be considered when planning and preparing meals for people concerned about their bone health.

Having regard to the factors identified in your research, suggest a menu (three meals) for one day suitable for this group of people.

Prepare, cook and serve the main course of the main meal of the day.

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

#### Key requirements of the assignment:

- the factors that affect bone health
- the signs/symptoms that a person may have osteoporosis
- dietary/nutritional needs of **people concerned about their bone health**
- meal planning guidelines for **people concerned about their bone health**
- menu for one day (three meals)

#### Investigation

Factors that affect bone health: family history; calcium, vitamin D, phosphorous; normal sex hormones; early onset menopause; adequate calories; weight bearing exercise; smoking; alcohol; poor diet; weight loss diets; eating disorders such as anorexia and bulimia; excessive consumption of fizzy drinks; high caffeine intake; intolerance/allergies to dairy products; long term use of medication; excessive exercise; accept the factors that affect calcium absorption, (sources of) phytic acid, oxalic acid, fibre, tannins can hinder calcium absorption; etc.

**Signs/symptoms that a person may have osteoporosis:** broken bone from a trip or fall from a standing position or less; upper, middle or low back pain especially if the pain is intermittent; loss of height; change in body shape; rounded shoulders; hump on the upper back; unexplained broken bones; brittle bones; etc.

**Dietary/nutritional needs:** nutritional balance; current nutritional guidelines re nutrient and food intake; daily requirements of macro/micro nutrients including protein/carbohydrates/fat/iron/calcium requirements as appropriate for people who are concerned about bone health; recommended daily allowance/reference intake; interrelationship of minerals and vitamins e.g. vitamin C/calcium absorption, vitamin D/calcium absorption, calcium/phosphorous; energy balance vis a vis activity levels; etc.

**Meal planning guidelines:** use food pyramid to ensure balance; calorie intake; balance food intake with physical activity; variety of food; healthy food choices; protein to help absorption of calcium; healthy cooking methods; avoid foods high in saturated fat, salt and sugar; cut down on convenience foods; include organic foods; specific dietary conditions; portion sizes; avoid skipping meals; healthy snacks; fortified foods; avoid legumes and cereals that contain phytic and/or oxalic acid; avoid caffeine drinks; use of fortified milk substitutes for vegans; include rich sources of dairy products in the diet; etc.

#### Dishes selected

- menu for one day- 3 meals breakfast = 1 mark, main meal = 2 marks, lunch/supper = 1 mark (graded 4:3:2:1:0)
- must meet the nutritional requirements for people concerned about their bone health
- must be a main course from the menu.

**Evaluation (a)** implementation and **(b)** the specific requirements of the assignment Analysis of findings regarding the nutritional needs of people concerned about bone health. Meal planning guidelines – range of foods/dishes suitable when planning meals for people concerned about their bone health, how the selected dish meets the requirements as identified in the investigation; etc.

#### **Area of Practice B: Food Preparation and Cooking Processes**

#### **Assignment 3**

Pastry is a mixture of simple ingredients, using the correct technique is essential to achieve successful results.

Carry out research on rough puff or choux pastry having regard to

- uses in sweet and savoury dishes
- method of making the chosen pastry to include the underlying principles involved

Prepare, cook and serve one dish (using either homemade rough puff or choux pastry) that you have researched.

Evaluate the assignment in terms of (a) implementation and (b) the advantages and/or the disadvantages of making the chosen pastry.

2022

## Key requirements of the assignment:

- uses in sweet and savoury dishes
- the method of making rough puff or choux pastry
- the underlying principles involved in making rough puff or choux pastry
- chosen dish either sweet or savoury

#### Investigation

**Uses:** Expect a selection of sweet and savoury dishes for either rough puff or choux pastry.

#### Rough puff pastry: Method and underlying principles

Sieve flour and salt into a bowl; cut the fat into cubes about 2cm in size, mix into the flour without rubbing in; add lemon juice and water to make a fairly stiff dough; place on to a lightly floured board and roll into a long strip 30cm X 10cm; mark into 3 sections, fold bottom third up and top third down over it, then turn pastry to the right and seal the edges with a rolling pin; start rolling by pressing gently 3 or 4 times over the centre of the pastry oblong, then roll into a strip again and repeat folding 4 times; chill in the refrigerator for 30 minutes before use; roll and shape for dish being made; dampen baking tin; bake in a hot oven reduce after 10 minutes; etc.

**Underlying principles** use strong flour with high gluten content; use lemon juice to help soften the gluten; **air** is trapped during sieving, rolling and folding, expands when heated causing the pastry to rise; water in the butter turns to **steam** producing large steam bubbles pushing the pastry layers apart; bake in a **hot oven**; heat causes gelatinisation of the starch; starch changes to dextrin forming a crust on pastry; etc

## **Choux pastry: Method and underlying principles**

Sieve flour onto a plate or kitchen foil; place water and fat into a saucepan, heat gently until the fat melts and bring it to the boil; remove from the heat and tip the flour into the hot liquid all at once; beat thoroughly until the mixture is smooth and forms a ball; allow to cool; beat in the eggs a tablespoon at a time, beating well after each addition until the mixture is thick and shiny; add enough eggs to achieve a piping consistency; put into a piping bag and allow to stand; pipe/spoon into required shape onto a dampened baking tray; bake at 220°C; slit to release steam, cool on a wire tray; etc.

#### **Underlying principles**

air sieving, beating air forms small air bubbles, in turn form large air bubbles, on heating expands and rise the mixture; gluten in strong flour will allow dough to rise, and strengthens the dough; lemon juice softens the gluten giving greater elasticity; flour is added quickly to the hot liquid which is quickly absorbed by the flour which thickens the mixture by gelatinisation; bake in a hot oven, the starch in the flour changes to dextrins causing browning; the steam from the heated butter and water creates steam bubbles causing mixture to rise in the heat; protein in the eggs coagulate to bind the mixture;

Dish selected – sweet or a savoury dish made from either rough puff or choux pastry researched 1 dish @ 4 marks. (Sweet or savoury dish accepted here) (graded 4:2:0)

**Evaluation (a)** implementation of the chosen pastry dish **(b)** the advantages and/or the disadvantages of making this type of pastry.

#### Area of Practice C: Food Technology

#### **Assignment 4**

Artisan products have become a fast growing niche market in the food enterprise sector as a result of discerning consumers looking for quality produce.

Carry out research on the types of biscuits (cookies) currently popular with the consumers. Investigate two methods of making homemade biscuits.

Explain the underlying principles involved in each case.

Prepare and bake one type of biscuit using one of the methods that you have investigated. Describe the packaging you would recommend for the product having regard to keeping the product hygienic and presenting it attractively.

Evaluate the assignment in terms of (a) implementation (b) practicability of making homemade biscuits and (c) cost in comparison to a similar commercial product. 2022

#### Key requirements of the assignment:

- research the types of biscuits(cookies) currently popular with consumers
- Investigate two different methods of making homemade biscuits
- underlying principles involved in each case
- packaging recommended for the product

#### Investigation

**Types of cookies/biscuits currently popular:** different brands; different types; variations of basic types; cookies with unusual ingredients and interesting combinations of ingredients; etc.

## Methods and underlying principles - homemade biscuits

**Rubbing in:** fat cut into small pieces and rubbed lightly into flour; mixture lifted above the bowl to help incorporate **air**; mixture should resemble fine breadcrumbs; cornflour used to give a short texture; mixture kneaded until smooth; rolled thinly and baked quickly to be crisp and short; heat of the oven sets the gluten/ mixture; the **air** expands on **heating**; the sugar caramelises on heating; the protein and sugars combine to brown the biscuit through maillard reaction; etc.

**Creaming:** fat and sugar are beaten/creamed together until mixture is light in colour, fluffy in texture, increased in volume and sugar dissolved; the small **air** bubbles produced are stabilised by the sugar; more air is introduced by beating the eggs into the fat and sugar mixture; eggs are added at low speed to avoid curdling; sieved flour is added to introduce more air, the mixture rises from air bubbles expanding from the **heat** of the oven, steam generated from liquid ingredients and from **CO**<sub>2</sub> resulting from the use of raising agents; heat of the oven sets the mixture; the moisture allows the flour to hydrate and the starch grains burst on heating and absorbs the moisture to gelatinise; the cooked starch holds the biscuit together; the heat of the oven set the gluten/mixture; etc.

**All-in-one:** all the ingredients are beaten together; use a soft fat to allow **air** to be incorporated easily; during baking the raising agent reacts with the liquid from the egg to produce  $CO_2$  and steam causing the biscuits to rise; the **heat** of oven sets the mixture/gluten; etc.

**Whisking:** eggs and sugar are whisked together; **air** is incorporated into the mixture; flour is folded in carefully; **heat** of the oven expands the gas, set mixture rises; the **heat** of oven sets the mixture/gluten etc.

**Melting:** fat, sugar and liquid (treacle, honey) are heated gently; cooled and added to the dry ingredients (flour, raising agent); beaten together with the egg; baking powder/bread soda added, when moistened produce **CO<sub>2</sub>** causing the mixture to rise when heated; **heat** of oven sets the mixture/gluten; sugar and protein are heated and brown due to maillard reaction; etc.

**Suitable packaging:** decorative boxes; airtight tins; glass jars; gift bags; plastic containers; polythene wrap; decorative or stick-on labels; etc. **if no packaging investigated -3 marks** 

**Dishes selected –** name biscuit -method investigated in the research. (graded 4:2:0)

**Evaluation (a)** implementation of chosen biscuits **(b)** the practicability of making homemade biscuits *-resource issues i.e. time, skills, equipment, packaging, storage* **(c)** cost comparison between the homemade product and a similar commercial product; *etc.* 

## **Area of Practice E: Comparative Analysis including Sensory Analysis**

#### **Assignment 5**

The Sugar Sweetened Drinks Tax is a measure to incentivise consumers to opt for healthier drinks while encouraging industry to reduce added sugar content.

Investigate the range of drinks to which the Sugar Sweetened Drinks Tax applies.

Carry out research on soft drinks that have a regular **and** a low/zero sugar option. State the amount of sugar in each of the soft drink options.

Choose one commercial soft drink that has both a regular and a low/zero sugar option.

Carry out a Duo-Trio Test to determine if testers can differentiate between the two products. Present the results obtained from the test.

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

2022

## Key requirements of the assignment:

- investigate the range of drinks to which the **Sugar Sweetened Drinks Tax** applies (regular **and** a low/zero sugar option)
- **Duo-Trio Test** description, aim and possible outcomes
- conditions to be controlled during testing must be analysed and relevant to the test
- select **one** commercial soft drink of your choice

Investigation (24 marks)

Research/investigation drinks appropriate to the assignment *i.e.* soft drinks that have a regular and a low/zero sugar option (sugar content in each option)

The tax applies to drinks which have added sugar and a total sugar content of five grams or more per 100 millilitres i.e. flavoured waters; carbonated drinks; energy or sports drinks; juice based drinks; drinks containing milk fats with less than 119mg of calcium per 100ml; soya, cereal, seed or nut based drinks with less than 119mg of calcium per 100ml; non-alcoholic drinks; etc.

### Duo-Trio Test

**Description:** tester is presented with three samples; two samples are coded and one is identified as the reference; tester is asked to identify the sample that is different from the reference; etc.

**Aim of test:** to find out if there is a detectable difference in taste between the regular soft drink and the low sugar/zero sugar alternative; etc.

**Outcome**: the number of testers who can identify the sample that is different from the control/reference will be determined; how many testers can detect a difference between the two versions of chosen soft drink i.e. regular and low/zero sugar option; etc.

#### Identification of the conditions to be controlled during the testing

Conditions specific to the assignment e.g. size, shape and colour of containers used for testing; temperature of samples; similar quantities in each sample; coding of samples; random presentation order; timing; where testing takes place; dietary considerations; etc.

#### Selected dish/product and selection criteria

Selected products – chosen soft drink regular and low/zero sugar option

(2 products @ 2 marks) (graded 2:1:0) 4 marks

Sources of Information: 2 @ 2 marks (graded 2:1:0) 4 marks

#### **Preparation and Planning**

• Resources = (2 marks) (graded 2:1:0)

- 8 marks
- Main equipment needed to carry out assignment (6 marks) (graded 6:5:4:3:2:1:0)

**Duo-trio test:** Based on 6 testers: 6 trays with codes  $R \square 0$ ; 6 glasses of water; 18 coded containers; 12 samples of regular soft drink; 6 samples of soft drink low/zero sugar option; 6 score-cards; 1 record sheet; 6 pens; etc.

Implementation 16 marks

## Procedure followed when carrying out this aspect of the assignment:

The full sequence of implementation should be given and findings should be presented for the test

**Duo-trio test:** (based on 6 testers) set up 6 trays numbered 1-6; coded all the same R,  $\square \lozenge$ ; pour product samples in paper cups; R= full sugar drink x 6 A= full sugar drink x 6 B= low sugar drink x 6; label score cards 1- 6 and record sheet; set up 6 trays using balance presentation order; carry out duo-trio test; collect scorecards; transfer results onto record sheet; reveal codes; present and evaluate results; tidy and wash up; etc.

Full sugar drink is to be the reference R/control; the coding on all the trays is to be the same e.g.  $R \square \emptyset$  symbols; it is the drinks that will vary on each tray- presentation order below only the drinks in  $\square$  and  $\emptyset$  will change;

Tray	AAB	
1	R□◊	

Tray	ABA
2	R□◊

Tray	AAB	
3	R□◊	

Tray	ABA	
4	R□◊	

Tray	AAB	
5	R□◊	

Tray	ABA	
6	R□◊	

each tray has 3 paper cups; one paper cup labelled with symbol R; one paper cup with symbol  $\Box$ ; one paper cup with symbol  $\Diamond$ ; testers are asked to start from the left and taste the R sample followed by the 2 coded samples in the order given; they should circle the sample that is different from R; the score-cards are collected by recorder and results transferred onto prepared record sheet; when recording results the letter that corresponds with the symbol selected is circled on each scorecard and appropriate column is ticked; correct responses are counted, codes are revealed; results presented - on bar chart or pie chart; results evaluated; etc. The record sheet indicates C prink C full sugar drink, C prink C = low sugar and also has the order followed for each tray seen above.

• Key factors to ensure success of the test (2 @ 4 marks each) (graded 4:2:0) 8 marks Key factors must refer to the test carried out and can include conditions controlled during testing; coding; same and sufficient amounts; glass of water/or dry cracker included to cleanse the palate; importance of silence during testing; random presentation order; non-bias codes; different people setting up; testers not present when setting up; etc.

#### Safety and hygiene

Safety: 1 point @ 2 marks (graded 2:1:0) Hygiene: 1 point @ 2 marks (graded 2:1:0) 4 marks
Safety: testers with allergies – soft drinks with additives/e numbers; diabetics; etc.
Good hygiene practice with regard to: preparation/testing area; handling of samples; disposable cups; etc.

Evaluation (3 points @ 4 marks) (graded 4:3:2:0) 12 marks

#### Implementation

Evaluate the implementation of the test with reference to the key factors to ensure its success; problems encountered and suggested solutions; etc.

#### Specific requirements of the assignment

Results should be evaluated and conclusions drawn; accept an analysis of the factors that may have contributed to the test results obtained i.e. why testers could/could not identify the sample that was different; etc

## Appendix 1 - General Instructions for examiners in relation to the awarding of marks.

- Examination requirements:
   Candidates are required to complete and present a record of any four assignments for examination. 2 assignments for 2022 as a result of adjustments.
- 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.

  In relation to Assignments 3, 4, and 5 evaluation of specific requirements will also 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/product prepared has not been identified in the investigation*, but fulfils the requirements of the assignment, deduct the relevant marks awarded (-1/-2/-4) under meals/dishes/products in investigation.
- 6. Dish selected shows few process skills mark pro-rata
- 7. **Dish selected not fully compliant** with requirements e.g.
  - an *uncooked dish* selected where a cooked dish specified Assignment 1,2,3, 4
  - dish not suitable for assignment requirements Assignment 1 and 2
  - the investigated method not used in making the chosen dish Assignment 3 and 4
  - dish selected includes over use of convenience foods.

Deduct 8 marks from total mark awarded for assignment and insert explanation as highlighted above.

- 8. **A dish that does not meet the requirements of the assignment** e.g. a dessert dish prepared instead of a main course dish; no marks to be awarded for the dish.
- **N.B.** Examiners must consult advising examiners when applying a scenario.

