



Coimisiún na Scrúduithe Stáit
State Examinations Commission

Leaving Certificate 2019

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

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Marking Scheme

Instructions to Candidates

- Section A** There are **twelve questions** in this section.
Answer any **ten questions**.
Each question carries **6 marks**.
- Section B** There are **five questions** in this section.
Answer **Question 1 and any other two questions**.
Question 1 is worth **80 marks**.
Questions 2, 3, 4 and 5 are worth **50 marks** each.
- Section C** There are **three questions** in this section.
Answer **one** elective question, to include **part (a)** and either **part (b) or part (c)**.
Electives 1 and 3 are worth **80 marks** each.
Elective 2 is worth **40 marks**.

Grading Table 280/320

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.*

Grade	Elective 1 and 3	Elective 2
1	288-320	252-280
2	256-287	224-251
3	224-255	196-223
4	192-223	168-195
5	160-191	140-167
6	128-159	112-139
7	96 -127	84-111
8	< 95	< 83

Section A

Answer any **ten** questions from this section.

Each question is worth 6 marks.

Write your answers in the spaces provided.

1. Indicate with a tick (✓) whether **each** of the following statements is true or false. (6)

3 @ 2 marks (graded 2:0)

	True	False
Water is an essential component (part) of all body cells.	✓	
Water helps to regulate body temperature through perspiration.	✓	
Water prevents the digestion and absorption of food.		✓

2. Using the words listed below, complete the following statements in relation to vitamins. (6)

3 @ 2 marks (graded 2:0)

rhodopsin

rickets

ascorbic acid

A deficiency of vitamin D causes *rickets* in children.

Vitamin C is also known as *ascorbic acid*.

Vitamin A is required for the production of *rhodopsin* a pigment in the retina of the eye.

3. In relation to protein explain the property: (6)

Coagulation: **2 marks** (graded 2:1:0)

Heat causes protein to coagulate and set; egg white coagulates at 60°C; egg yolk coagulates at 68°C; moist heat changes collagen to gelatine; myoglobin in meat causes colour to change; agitation, mechanical action – whipping egg white will turn it to foam; enzyme rennin coagulates milk protein; etc.

Name **two** different dishes that show the property of coagulation.

Dishes: **2 @ 2 marks** (graded 2:1:0)

(i) *quiche; pavlova; meringues; soufflés; etc.*

(ii) *roast beef; lemon meringue pie; omelette; etc.*

4. Identify **three** changes in eating patterns in the Irish diet. (6)

Changes in eating patterns: **3 @ 2 marks** (graded 2:0)

- (i) *more people eating out; eating more fast foods; more ready meals consumed;*
- (ii) *family not eating main meal of day together; main meal eaten in the evening; people 'eating on the go';*
- (iii) *more processed/convenience foods eaten; eating more healthy/unhealthy foods; etc.*

5. Listed below are classes of fruit. Name **two** fruits in **each** class. (6)

Fruits: **6 @ 1 mark** (graded 1:0)

Classes of Fruit	Name of Fruit
Citrus fruit	1. <i>oranges; lemons; limes;</i>
	2. <i>grapefruit; clementine; etc.</i>
Dried fruit	1. <i>raisins; currants; sultanas;</i>
	2. <i>dates; prunes; figs; etc.</i>
Stone fruit	1. <i>plums; peaches; nectarines;</i>
	2. <i>avocado; cherries; etc.</i>

6. Give **three** dietary guidelines that help prevent bowel disease. (6)

Dietary guidelines: **3 @ 2 marks** (graded 2:0)

- (i) *eat whole cereals; brown bread; wholegrain rice;*
- (ii) *leave skins on fruit/vegetables; eat fruit/vegetables raw where possible;*
- (iii) *substitute processed snack foods with fresh fruit/dried fruit; increase intake of nuts/seeds; eat whole fruits instead of fruit juices; drink plenty of water; etc.*

7. Name **two** different types of pastry and suggest a suitable dish that can be made using **each** type. (6)

Types of Pastry: **2 @ 2 marks** (graded 2:0)

Dish: **2 @ 1 mark** (graded 1:0)

Type of Pastry	Suitable Dish
<i>choux; shortcrust; rough puff; puff;</i>	<i>eclairs; profiteroles; apple tart; quiche; sausage rolls; steak and kidney pie; croissants; vol au vents; etc.</i>
<i>flaky; filo; suet; rich shortcrust; etc.</i>	<i>mince pies; spring rolls; steamed puddings; samosas; etc.</i>

8. Indicate with a tick (✓) whether **each** of the following statements is true or false. (6)

3 @ 2 marks (graded 2:0)

	True	False
Grilling is a slow method of cooking food.		✓
Deep frying is cooking food immersed in hot fat.	✓	
Poaching is suitable for delicate foods e.g. eggs and fish.	✓	

9. Using the words listed below, complete the following statements in relation to household textiles. (6)

3 @ 2 marks (graded 2:0)

shrink

static

proban

Fabric conditioners reduce the build-up of **static** in synthetic fibres.

Wool fabric can **shrink** when washed at high temperatures.

Proban is a flame-retardant finish used on household textiles.

10. What **two** factors should be considered when choosing a saving scheme? (6)

Factors: **2 @ 2 marks** (graded 2:1:0)

- (i) *ease of access to funds; rate of interest; security of scheme - covered by Government Deposit Guarantee Scheme;*
- (ii) *tax free; subject to DIRT tax (Deposit Interest Retention Tax); etc.*

Name **one** saving scheme available to consumers.

Saving scheme: **2 marks** (graded 2:1:0)

Post Office: *deposit account; instalment savings scheme; saving bonds; saving certificates; National Solidarity Bond; etc.*

Banks/Building Societies: *demand deposit account; notice deposit account; special term account; etc.*

Credit Union: *saver account; junior saver account; etc.*

11. Explain the following terms: (6)

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

- (i) Gross Income
income earned before deductions are made; etc.
- (ii) Net Income
income after deductions are made; take home pay; etc.

12. What information does **each** of the following symbols convey to the consumer? (6)

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



Universal recycling symbol; goods and packaging contain recyclable materials; etc.



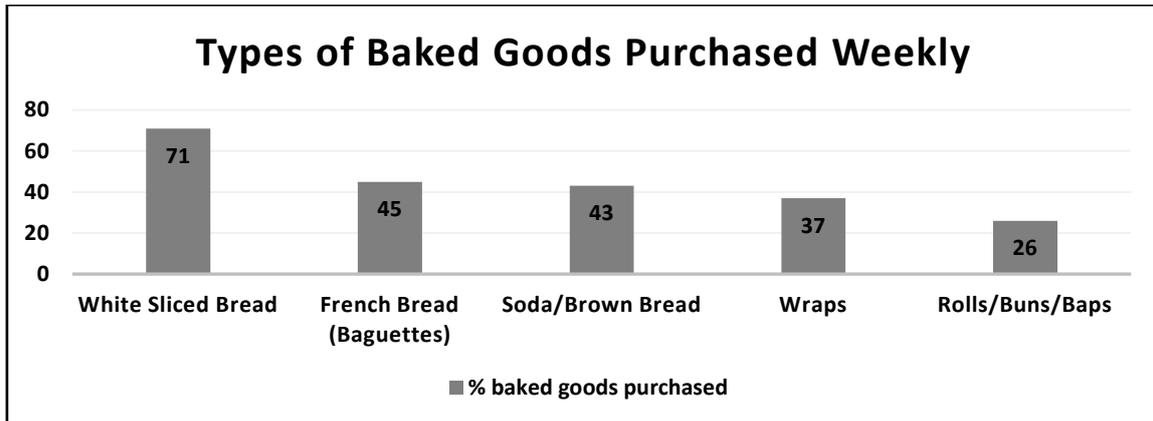
European Union eco label; products carrying this label cause minimum damage to the environment; etc.

Section B

Answer **Question 1** and any other **two** questions from this section.
Question 1 is worth 80 marks. Questions 2, 3, 4 and 5 are worth 50 marks each.

1. Bread is still considered a staple food in Ireland.

The table below shows the types of baked goods purchased by households on a weekly basis.



(Bord Bia, 2017)

- (a) Using the information presented in the table above:

- (i) comment on **four** of the baked goods purchased weekly by households **and** give reasons for their popularity. (20)

4 points @ 5 marks

Comment: **4 @ 2 marks** (graded 2:1:0), Reasons: **4 @ 3 marks** (graded 3:2:0)

Comment: comparison; reference to %; rank order; popularity; etc.

White Sliced Bread: cheap; easily available; versatile; high in carbohydrate; lacking in fibre; gluten free option available; etc. **French Bread (Baguettes):** cost; lacking in fibre; popular; versatile; etc. **Soda/Brown Bread:** traditional bread; contains fibre; cost; etc. **Wraps:** different varieties available; different sizes; versatile; etc. **Rolls/Buns/Baps:** cost; different varieties; versatile; available frozen; etc.

- (ii) suggest **one** modification (change) that could be made to **one** of the baked goods to make it healthier.

Give a reason for your choice. (5)

Modification: **3 marks** (graded 3:2:1:0)

Reason: **2 marks** (graded 2:0)

Use brown flour instead of white flour; add seeds to increase fibre content; use olive oil instead of butter; decorate tops of breads with mixed seeds; add chopped nuts, spinach, cheese, herbs, sundried tomatoes; etc.

(b) Give an account of carbohydrates under **each** of the following headings:

- classification (6)

3 classes @ 2 marks (graded 2:0)

*Monosaccharides; disaccharides; polysaccharides;
Sugar; starch; fibre/cellulose; etc.*

- dietary sources (12)

3 sources @ 4 marks (graded 4:0)

*Breakfast cereals; rice; pasta; potatoes; bread; fruit; vegetables; nuts; seeds; honey; cakes;
biscuits; sweets; popcorn; milk; sugar; etc.*

- functions in the body. (8)

2 functions @ 4 marks (graded 4:0)

*Heat; energy; stimulate peristalsis; prevents constipation; prevents bowel disorders; acts as
a protein sparer; insulation, excess carbohydrate stored as adipose tissue; glycogen reserve;
fibre gives a feeling of fullness; etc.*

(c) Suggest **three** ways people can reduce sugar in their diet. (9)

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

*Avoid fizzy drinks; do not add sugar to drinks; replace sugar with sweeteners; reduce cakes,
biscuits and sweets in diet; do not add sugar to cereals; replace sugary snacks with
fruit/vegetable sticks; eat whole fruits instead of smoothies/juices; modify recipes to reduce
sugar content; etc.*

(d) Below are **four** items of consumer information found on food packaging.
Explain the importance of **each** to the consumer:

- additives
- nutritional information
- list of ingredients
- storage instructions. (20)

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

Additives: *listed for consumers with possible allergic reactions; to prevent over consumption of
additives; etc.*

Nutritional information: *consumer will know exactly what they are eating; energy content in
kcal/kj; amount of protein, fat, carbohydrates, sugars, fibre and sodium; allergy information
to support coeliac/lactose intolerance/nut allergy; suitability for vegetarians /vegans; etc.*

List of ingredients: *consumer is able to see exactly what ingredients are used in the product;
quantities of ingredients used; consumers can make informed food choices; etc.*

Storage instructions: *details of how to store products to prevent spoilage; best before date;
use by date; etc.*

2. 'Almost 1.5 billion adults around the world are not getting enough exercise'.
(Irish Times, 2018)

- (a) Discuss **four** factors that determine a person's energy requirements. (20)

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

Age: young people require more energy; elderly require less energy; etc. **occupation:** those involved in heavy manual work require more energy; etc. **gender:** women require less energy than men; etc. **climate:** more energy required in colder climates; etc. **activity levels:** the more active people are, the more energy they need; etc. **size and body weight:** smaller people use less energy than larger people; etc. **pregnancy:** more energy is required for developing foetus; etc. **lactation:** additional energy required for breast milk production; etc. **health status:** during illness energy requirements often decrease due to lack of physical activity; etc. **physical injury:** more energy required to repair breaks/cuts; etc.

- (b) Having regard to current healthy eating guidelines, set out a menu (3 meals) for one day for a teenager who plays sport. (18)

3 menus @ 6 marks

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

Sample menus

Breakfast	Lunch	Dinner
<p>Mixed fresh fruit & raspberry yoghurt ***</p> <p>Porridge with full fat milk ***</p> <p>Poached eggs/ wholemeal toast Tea/coffee/water</p>	<p>Tuna and pasta salad ***</p> <p>Strawberry smoothie ***</p> <p>Mixed nuts</p> <p>Water</p>	<p>Vegetable soup & brown bread ***</p> <p>Chicken curry & brown rice ***</p> <p>Apple & blackberry crumble with natural yoghurt Milk/water</p>

- (c) In relation to energy:
- (i) outline the importance of balancing energy intake and energy output
 - (ii) explain *basal metabolic rate* (BMR). (12)

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

(1 point on balancing energy, 1 point on BMR + 1 other point)

Balancing energy intake and energy output: if energy intake exceeds energy output people gain weight; excess energy converted to fat and stored as adipose tissue; energy output exceeds energy intake people loose weight; to maintain the correct weight; etc.

Basal metabolic rate: is the minimum amount of energy required to maintain body functions when at rest; to keep internal organs working; to maintain body temperature; measured 12 hours after eating; when person is warm and completely at rest; determined by body weight, age, gender; etc.

3. 'In Ireland our farmhouse cheeses are unique to each producer'. (www.bordbia.ie)

(a) Give an account of (i) the nutritive value and (ii) the dietetic value of cheese. (20)

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

(2 references to nutritive value, 2 references to dietetic value + 1 other)

Nutritive value: source of HBV protein, essential amino acid for growth/repair of body cells; lacks carbohydrate; saturated fat for heat/energy; calcium for strong bones and teeth; vitamin A for healthy eyes; vitamin D which combines with calcium; vitamin B for release of energy; cheddar cheese contains salt; soft cheeses contain a high percentage of water; etc.

Dietetic value: lacks carbohydrate, serve with food rich in carbohydrates; important in the diet of children; high energy, high calorie food; versatile; can be difficult to digest; high saturated fat content; can be made from low fat milk; soft cheeses should be avoided by pregnant women to avoid the risk of food poisoning; etc.

(b) Outline:

(i) **three** different culinary uses of cheese

(ii) the effects of heat on cheese. (18)

3 culinary uses @ 3 marks (graded 3:2:0)

Culinary uses: sandwiches; snacks; baking; pastry; fillings for savoury and sweet dishes; sauces; desserts; cheeseboards; as a main ingredient in a dish; dips; fondue; to add flavour to dishes; toppings; garnishes; etc.

3 effects of heat @ 3 marks (graded 3:2:0)

Effects of heat: colour changes; protein coagulates/denatures; protein shrinks; fat melts, separates and becomes stringy; if overcooked it becomes tough and indigestible; little change in nutritive value; etc.

(c) State **three** reasons for the growing popularity of farmhouse cheeses in Ireland. (12)

3 reasons @ 4 marks (graded 4:2:0)

Available in local markets; provides local employment; different varieties available; family run businesses; high standards of hygiene; better quality; less processing; can be perceived to be more nutritious; promoted by TV chefs; etc.

4. 'Buying a house is one of the biggest financial decisions that a person can make in their lifetime'.
(www.daft.ie)

(a) Explain how **each** of the following would influence an individual when choosing a family home:

- availability **1 point @ 6 marks** (graded 6:4:0)
- location **1 point @ 6 marks** (graded 6:4:0)
- trends in housing development. **1 point @ 6 marks** (graded 6:4:0) (18)

Availability: money available; rental costs have increased, buying could be cheaper; high demand in urban areas; social housing; private housing; apartments; local authority housing lists; disability access; etc.

Location: proximity to work, schools, shops, crèche; local amenities in area; rural or urban area; proximity to family, friends; etc.

Trends in housing development: housing estates offer a range of house types; green open spaces; walled entrances; amenities; move away from single house developments; development of small gated estates; buying old houses for refurbishment; redevelopment of inner city houses; environmentally friendly houses; apartment living; etc.

(b) In relation to insurance:

(i) state **three** advantages of household insurance

(ii) outline **two** factors to be considered when choosing household insurance. (20)

3 advantages @ 4 marks (graded 4:2:0)

Provides peace of mind; protects assets e.g. valuables; protection against loss or injury due to burglary; fires; flooding; security; public liability included; etc.

2 factors @ 4 marks (graded 4:2:0)

Value for money; is the company secure; cost to insure your home for the amount it would cost to rebuild it; insure the contents for the amount it would cost to replace them; all risks policy cover; discounts available if the house has an alarm; monitored alarm; smoke detector; etc.

(c) Describe **three** ways to reduce pollution to promote a cleaner environment. (12)

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

Use renewable energy resources; avoid products with CFC's; choose pump action/ozone friendly products; use smokeless fuels; use public transport; use hybrid/electric cars; walk or cycle; buy energy efficient appliances; use phosphate free detergents; implement efficient sewage treatment system; reduce, reuse, recycle; etc.

5. 'Family plays a crucial role in modern society'. (www.betterhelp.com)

(a) (i) Describe **each** of the following functions of the family:

- economic function
- educational function
- physical function
- social function.

(16)

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

Economic: support children until they reach the age of 18 or 23 if in fulltime education; both parents may work; large families may work together as an economic unit; working families pay taxes and spend money in the economy; contribute to the county's economy; etc.

Educational: family is primary educator; beliefs and customs are passed from parents to children; should provide a stimulating environment; may teach children to read; demonstrate an interest in schoolwork by attending parent/teacher meetings; supervising homework; encouraging children around exams; provide praise, helping child to reach their full potential; etc.

Physical: provides basic needs e.g. food, clothes, shelter; protects vulnerable members by providing a safe environment; procreation/reproduction; etc.

Social: teaches social norms; what is acceptable in society; respect; teaching right from wrong; children learn how to behave in a socially acceptable way; through imitation and observation; children need consistent discipline to help them develop a set of values; etc.

(ii) Explain how the state assists with **one** family function. (4)

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

Physical: social welfare allowances; HSE e.g. public health nurse; Community Mothers and Family Support Programmes; etc. **Emotional:** Parent Plus Programmes; Parent & Toddler Groups; etc. **Social:** pre-school, primary, secondary school; judicial system; etc. **Educational:** pre-school; Early Childhood Care and Education Scheme (ECCE); primary and post primary schools; ISA's; special schools; HEAR; DARE; etc. **Economic:** social welfare; Disability & Carers Allowance; Back to School Clothing and Footwear Allowance; Child Benefit; Working family Payment (FIS); etc.

(b) Outline the importance of good communication within the family. (15)

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

Communication in the form of praise and encouragement can help self-esteem; family members will learn how others feel about issues; allows people to express their feelings; can help prevent stress; is necessary to ensure each person is heard; helps child to form relationships; helps in socialisation of the child; etc.

(c) Explain **three** ways of dealing with conflict between adolescents and adults. (15)

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

Avoid confrontation; communicate – talk; listen; compromise; take time out to calm down; ability to empathise, understand each other’s point of view; respect all points of view; both sides should have a clear understanding of what is expected; 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) 'There are a number of ways to make buildings blend in with their environment'.



(www.cbaarchitecture.ie)

- (i) Discuss **three** environmental factors that could influence a person's choice of house style. (15)

3 factors @ 5 marks (graded 5:2:0)

Large/velux windows to maximise light; stone walls to blend in with environment; solar panels for heating/hot water; roofs/window frames in colours complimenting the local colour; shape and size of house to fit in with surroundings; split level to blend in with the gradient of the site; landscaped garden for aesthetically pleasing house; etc.

- (ii) Elaborate on how **each** of the following influence house design:

- family requirements (present and future)
- energy efficiency
- technological developments
- cost.

(20)

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

Family requirements: *sufficient space for all family members; families with young children will need greater outdoor space; space for people with disabilities; 'granny' flat attached to house; etc.*

Energy efficiency: *double or treble glazed windows with low emissivity glass; insulation in walls, roof and doors; zoned heating system; use of renewable energy sources; use of thermostats, timers and energy efficient appliances; etc.*

Technological developments: *use of easy to clean stain resistant materials; sensor lighting; centralised vacuum cleaner system; thermostatic controls; monitored security system; electronic gates; integrated sound and lighting system; use of smart technology; etc.*

Cost: *the larger the house the greater the cost; site may need to be purchased; certain design features will add to the cost; landscaping; natural stone external walls are more expensive than plaster finish; etc.*

- (iii) List the steps to follow to obtain planning permission to build a house. (15)

5 steps @ 3 marks (graded 3:0)

Pre-planning meeting - what will be allowed in an area; architectural drawings showing building plans, materials to be used; notice in local paper; site notice near the proposed entrance; submit application to local authority; application fee €65.00; site map; application goes on planning register; can be inspected by the general public; planning officials visit site; local authority will inform applicant of decision; permission granted or refused; seek further clarification; if permission is refused an appeal can be lodged with An Bord Pleanála; etc.

and

- 1.(b) (i) Discuss **three** factors which should be considered when planning a lighting system for an open plan family kitchen/living room. (18)

3 factors @ 6 marks (graded 6:4:2:0)

Function of room; sufficient light to avoid eye strain; amount of natural light entering the room; use of both natural and artificial light; colour of the walls/furniture; size of room; ambience of room; focal point of room; mix of direct and indirect light; flexibility e.g. dimmer switches/moveable lamps; CFL/LED lighting to save energy; lighting to create different moods; avoiding glare; safety; easy maintenance; ease of access to replace bulbs; etc.

- (ii) Give details of **two** contemporary (modern) lighting developments suitable for a home. (12)

2 developments @ 6 marks

(Name: **3 marks** (graded 3:0), Details: **3 marks** (graded 3:2:0)) x 2

Sensor and motion activated lights; recess ceiling lights; rise and fall lights; ceramic and plaster-based wall lights; under counter and cabinet lights; picture display lights; LED lighting; CFL lighting; track lighting; spot lights; chandeliers; colour changing lighting; LED rope lighting; outdoor lighting with photovoltaic cells; outdoor lights; use of smart technology to turn on/off lights; etc.

or

- 1.(c) (i) Name **and** describe **one** type of heating system for a new house.

Refer to:

- | | |
|------------------------------|-----------------------------------|
| • type of heating system | Name: 3 marks (graded 3:0) |
| • fuel/energy source | 4 marks (graded 4:2:0) |
| • efficiency and convenience | 4 marks (graded 4:0) |

(15)

Type: full central heating: heats the whole house from a central source, wet and dry systems; etc. **partial central heating:** heats one area of the house; usually from a central point; requires another heat source; etc. **background heating:** heats the whole house at a lower temperature; must be supplemented with other heating source; etc. **local heating:** heats one room only with a local heater; etc. **passive solar heating:** uses natural heat from the sun to heat south and west facing rooms; large glass windows fitted; etc. **active solar heating:** uses the heat of the sun to heat home and water using solar panels; etc. **underfloor heating:** geothermal heat pumps use the constant temperature of the ground or water several feet below earth surface as a source of heating; etc. **Air to water heat exchanger;** etc.

Fuel/energy source: oil; gas; electricity; solid fuel; solar power; etc.

Efficiency and convenience: all rooms achieve the same level of thermal comfort; easy to operate; easy to install; can heat water; causes little harm to the environment; can be activated using a smart phone; etc.

(ii) Explain **three** benefits of using timers and/or thermostats in a heating system. (15)

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

Timers: can switch on the heating at predetermined times; ensures room is warm when required; less energy is wasted; heating is automatically turned on and off; can be used with a smart phone; etc.

Thermostats: automatically regulates temperature; will help save energy; allows greater control of home's temperature; 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) With so many more people taking part in leisure activities, manufacturers have become increasingly fashion conscious.



(www.lidl.co.uk)

- (i) Comment on the suitability of the leisure wear as shown above:
Refer to:

- comfort **2 points @ 3 marks** (graded 3:1:0)
- aesthetic appeal **2 points @ 3 marks** (graded 3:1:0)
- shape. **2 points @ 3 marks** (graded 3:1:0) (18)

Comfort: loose fitting tops; leggings easy to put on; suitable for all types of exercise; lycra material allowing for ease of movement; absorbs perspiration; keeps body cool during exercise; shorts suitable for warm weather; hairband to keep hair away from eyes; etc.

Aesthetic appeal: appeal to younger people; may not suit all shapes and sizes; colours; etc.

Shape: tight fitting leggings and tops; sleeveless for ease of movement; longer leggings are flattering; high and low-neck shape to suit different people; etc.

- (ii) Sketch **and** describe a leisurewear jacket to compliment the outfits. (7)

Sketch: **3 marks** (graded 3:1:0) Description: **4 marks** (graded 4:2:0)

Sketch: clearly labelled, should show detail of design features, i.e. line; shape; proportion; harmony; may include fabric, colour; etc.

Description: colour; design; line; proportion; shape; pockets; type of neckline; sleeves; zips; fabric; fabric finish; accessories; etc.

Accept description on sketch.

and

- 2.(b) Write a profile of a fabric made from manufactured fibres under the following headings:

- fibre production **2 points @ 3 marks** (graded 3:1:0)
- properties **3 properties @ 1 marks** (graded 1:0)
- fabric construction technique. **2 points @ 3 marks** (graded 3:1:0) (15)

Fibre production:

Viscose (rayon fibre): chemical process, cellulose becomes more soluble; shredded (white crumb) easier to process; aged using chemicals; placed in drum of chemicals to give characteristic yellow colour; crumb dissolved in caustic soda; viscose - allowed to stand to ripen; filtered to remove undissolved materials; forced through a spinneret; wet spinning – filament forced through a liquid to set; dry spinning – warm air dries the filament; continuous filament produced; cut into staple fibre; spun into yarn; etc.

Nylon: two chemicals called monomers are mixed in a 1:1 ratio; heated creating a long chain polymer; fibre is run onto a water-cooling revolving wheel, which cools the ribbon; drawn through a cold water tank where it solidifies; cut into chips; dried; melted; extruded from a small hole; solidify into nylon yard for spinning; etc.

Accept: Regenerated: Viscose; Acetate; tri-acetate; etc. **Synthetic:** Nylon; Polyester; Acrylic; etc.

Properties:

Viscose: drapes well; highly absorbent; soft; comfortable to wear; dyes well; becomes weak when wet; etc.

Nylon: drapes well; light to wear; strong; crease resistant; easy to dye; mildew resistant; etc.

Fabric construction technique:

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. **Knitting:** made up of a series of interlocking loops that result in a flexible construction; etc.

or

2.(c) 'Sales of patterns for both sewing and knitting have soared by 60% in recent years'.
(www.theguardian.co.uk)

(i) Discuss **three** points to be considered when selecting commercial patterns. (9)

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

Beginners should choose a simple pattern with few darts or seams; select easy to use/ simple to sew ranges; pattern size for skirts or pants is determined by hip measurement; dress, shirt, coat, jacket size is determined by bust or chest size; personal preference; cost; etc.

(ii) Explain the importance of **one** item of information found on a commercial pattern envelope. (6)

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

Standard body measurements; fabric quantity needed for each style and size; front and back views of the garments; finished garment measurements; advice for using plaids or diagonal fabrics; suggested fabrics; notions, button size, zipper length; extra requirements, interfacing, lining and trimmings; number of pattern pieces; etc.

Elective 3 – Social Studies (80 marks)

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

- 3.(a)** 'The numbers enrolled in higher education have been steadily increasing in recent years'.
(www.education.ie)

- (i)** Explain *adult and second-chance education*. (6)

2 points @ 3 marks (graded 3:0)

Aims to promote a culture of lifelong learning; creating opportunities for adults of all ages/ educational levels to go back to education; gain skills within a flexible learning environment; gain new qualifications; to improve skills for a career change; to keep up with technological advances in the workplace; etc.

- (ii)** Discuss **four** reasons for the increase in the number of students availing of third level education. (16)

4 reasons @ 4 marks (graded 4:2:0)

Families can afford to send children to college; students/parents value college education as a means of getting a well-paying job; wide range of courses available; colleges may be local to students; motivation; stimulation; DARE; HEAR; SUSI; TAP - TCD Access Programme; etc.

- (iii)** Outline **four** ways education prepares a young person for work. (16)

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

Literacy skills; numeracy skills; computer skills; develop qualities - respect for authority; punctuality; trustworthiness; responsibility; self-discipline; socialisation skills; work experience; etc.

- (iv)** How does the Protection of Young Persons (Employment) Act, 1996 protect the rights of the young worker? (12)

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

Protects the health of young workers; regulates the hours young people can work; regulates ages young people can work at; regulates rest breaks; holidays and days off; minimum wage must be paid to young people; etc.

and

- 3.(b)** Shorter working hours have resulted in increased leisure time.

- (i)** Outline **three** benefits to the family of having more leisure time. (15)

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

Helps relax and unwind from stresses of daily life; assists mental well-being; improves physical health; furthers social interaction; encourages positive relationships; assist the development of new skills; develops creative skills; improves self-esteem; encourages family bonding; improves communication and teamwork; alleviates boredom; good examples for children; etc.

(ii) Discuss how leisure activities help the development of the individual.

Refer to:

- physical development **5 marks** (graded 5:2:0)
- social development **5 marks** (graded 5:2:0)
- emotional development. **5 marks** (graded 5:2:0) (15)

Physical: improve physical strength; muscle mass; control weight, prevent obesity; fresh air strengthens the immune system; develops hand eye co-ordination; weight bearing exercises help prevent osteoporosis; etc.

Social: team-based activities - meet new people, making new friends; develop cooperation/communication skills; strengthens relationships in families; team sports develop leadership skills; gain confidence; develop listening skills; improve memory; etc.

Emotional: self-esteem and confidence are improved; may provide opportunity to relax and reduce stress; give a sense of belonging when part of a team; can encourage positive emotional development; benefit mental health and reduce risk of depression; lead to a sense of pride in one's achievements; etc.

or

3.(c) 'In Ireland today 780,000 people are living in poverty, a quarter of a million of whom are children'. (Social Justice Ireland, 2018)

(i) Outline **three** reasons why poverty continues to be a feature of Irish society. (15)

3 reasons @ 5 marks (graded 5:2:0)

Increased cost of housing; shortage of social housing; large families experience greater costs and expenses; one-parent families, one income households; high rates of unemployment; social problems, alcohol, drugs, gambling; lack of education; low paid jobs; cycle of poverty; etc.

(ii) Name **and** give details of **one** voluntary organisation that helps families who are experiencing poverty. (15)

Name: **3 marks** (graded 3:0), Details: **3 points @ 4 marks** (graded 4:2:0)

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; etc.

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HOME ECONOMICS – SCIENTIFIC AND SOCIAL

Food Studies Coursework Assignments

MARKING SCHEME

Grading Table

Grade	Mark Bands
1	288 - 320
2	256 - 287
3	224 - 255
4	192 - 223
5	160 - 191
6	128 - 159
7	96 - 127
8	< 95

To calculate the weighted mark, divide the raw mark awarded by 4.

Food Studies Practical Coursework General Marking Criteria

Investigation: Analysis/Research - 32 marks

Research and analysis

= 24

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

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

Preparation and Planning - 8 marks

Resources:

- ingredients (2 marks), quantities (2 marks), costing (2 marks), equipment (2 marks) = 8
- AOP E – product/s (2 marks), equipment (6 marks)

Implementation - 28 marks

Outline of the procedure followed to include food preparation processes, cooking time, temperature, serving/presentation, tasting/evaluation. = 16
(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
(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**.

- **Safety/Hygiene** 2 points @ 2 marks (graded 2:1:0) = 4
(must relate to specific ingredients being used/dish being cooked)
Identification (1mark) and explanation (1 mark) of **one** key safety issue **and one** key hygiene issue considered when preparing and cooking dish/conducting test.

Evaluation - 12 marks

3 points @ 4 marks = 12

Evaluate the assignment in terms of:

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.

The **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 assignment.

Area of Practice A: Application of Nutritional Principles

Assignment 1

Healthy eating guidelines encourage people to eat a wide variety of foods and the Food Pyramid is designed to make healthy eating choices easier.

With reference to the above statement, research and elaborate on the nutritional needs and the meal planning guidelines that should be considered when planning meals for a family on a limited food budget. Bearing in mind these considerations, suggest a range of menus (two courses) suitable for an evening meal for the family.

Prepare, cook and serve **one** of the main course dishes from your research.

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

2019

Key requirements of the assignment:

- *dietary/nutritional needs when planning meals with reference to **a family on a limited food budget***
- *relevant meal planning guidelines with reference to **a family on a limited food budget***
- *range of menus (two courses) for an evening meal to include chosen main course dish of the main meal of the day (from menu).*

Investigation

Dietary/nutritional requirements: *nutritional balance; daily requirements of macro/micro nutrients including protein/carbohydrate/fat/calcium/iron requirements as appropriate to the needs of a family, with a range of different dietary needs (age, activity, health status/special dietary requirements, etc.); Vitamin C/iron absorption; Vitamin D/calcium absorption; Vitamin B for energy and metabolism; high fibre; current nutritional guidelines re nutrient and food intake; possible variations in energy requirements; energy balance vis a vis activity levels; etc.*

Meal planning guidelines: *use food pyramid to ensure balance; variety of foods; eat regular meals; use foods in season; choose healthy snacks; choose cheaper protein food sources; use of meat extenders (TVP, etc.); portion sizes; cook extra portions for freezing; batch cook; resource issues with reference to foods that are nutritionally adequate and inexpensive; own brand foods; special offers; bulk buying; use of energy efficient cooking methods; full use of the oven; choose fortified foods; limit convenience foods; make your own bread, cakes etc.; bulk up meat and fish dishes with vegetables; use of leftovers; check use by and best before dates; personal likes and dislikes; use a weekly menu plan; use a shopping list; etc.*

Dishes selected

- range of menus (two courses) suitable for an evening meal
- must meet the nutritional requirements for a family on a limited food budget
- must be a main course dish (from menu).

Evaluation (specific requirements of assignment)

Analysis of findings regarding the nutritional requirements of a range of dishes/meals for a family on a limited food budget. Meal planning guidelines – range of dishes/meals suitable for a family on a limited food budget etc., how the selected dish meets the requirements as identified in the investigation; etc.

Assignment 2

Vegetarian diets that are appropriately planned can be nutritionally balanced and suitable for all stages of life. (www.indi.ie)

Identify **(i)** the different types of vegetarian diets and **(ii)** the reasons why people choose a vegetarian diet. Research and elaborate on the nutritional needs and the meal planning guidelines that should be considered when planning and preparing meals for a person who is a vegetarian.

Having regard to the factors identified in your research, select a specific vegetarian diet and suggest a range of main course dishes suitable for the main meal of the day.

Prepare, cook and serve **one** of the main course dishes that you have investigated.

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

2019

Key requirements of the assignment:

- *different types of vegetarian diets*
- *reasons why people choose a **vegetarian diet***
- *nutritional needs and meal planning guidelines for a person who is **a vegetarian***
- *identify a specific vegetarian diet*
- *range of main course dishes suitable for chosen vegetarian diet to include chosen main course dish (identified in research).*

Investigation

Types of vegetarian diets:

Vegan; lacto vegetarian; lacto-ovo vegetarian; ovo-vegetarian; pesco-vegetarian(pescatarian); pollo-vegetarian(pollotarian); flexitarian; fruitarians; etc.

Reasons why people choose a vegetarian diet:

Religious; ethical; sustainability; financial; family influence; peer influence; bloggers and influencers; social media; popularity; cost/food budget; health reasons; aesthetic; lose excess weight; etc.

Dietary/nutritional requirements:

Nutritional balance; daily requirements of macro/micro-nutrients including protein/fat/carbohydrate/iron/calcium requirements as appropriate; low GI/high fibre; increase phosphorous and zinc intake; Vitamin C/iron absorption; Vitamin D/calcium absorption; vitamin B12; current nutritional guidelines re nutrient and food intake; etc.

Meal planning guidelines:

Use of vegetarian food pyramid/food pyramid to ensure balanced meals; eat foods that provide complete proteins to include all amino acids in correct proportions; use vegetable stocks; avoid products with gelatine; choose alternate protein sources e.g. TVP, Quorn, tofu, etc.; mix cereals and legumes; include wholegrain cereals; include fortified foods/products; use dairy alternates e.g. soya, nut milks etc.; avoid processed foods; use herbs/spices to flavour foods; replace animal fats with vegetable fats; eat fermented (cultured)/probiotic foods; etc.

Dishes selected

- range of main course dishes suitable for chosen vegetarian diet identified
- must be a main course dish (*identified in research*).

Evaluation (specific requirements of assignment)

Analysis of findings regarding what you learned from the investigation regarding the management of vegetarian diets, factors to be considered to ensure nutritional adequacy for vegetarians; how the selected dish meets the requirements as identified in the investigation; etc.

Area of Practice B: Food Preparation and Processes

Assignment 3

A Soufflé is a light aerated mixture, which can be prepared in a variety of ways i.e. sweet or savoury, cooked or uncooked, hot or cold.

Carry out research on how soufflés are made and explain the underlying principles involved.

Identify a range of dishes that illustrate the skill of soufflé making.

Investigate and elaborate on the key points that should be considered to ensure success when making soufflés. Prepare, make and serve **one** of the dishes from your research.

Evaluate the assignment in terms of **(a)** implementation and **(b)** success in achieving a light aerated texture.

2019

Key requirements of the assignment:

- *research on how soufflés are made*
- *underlying principles involved in the making of soufflés*
- *range of dishes that illustrate the skill of soufflé making*
- *the key points that should be considered to ensure success when making soufflés*
- *chosen dish (identified in research).*

Investigation

How soufflés are made and the underlying principles involved:

Hot cooked/sweet/savoury: *can be cooked in a large or individual soufflé dishes, in swiss roll tin and rolled; on a frying pan - puffed omelette; baked (dry heat) or steamed (bain-marie); light aerated dish, rising depends on entrapping air and the expansion of air when heated; use of a white binding sauce or a panard; **gelatinisation** occurs when starch grains swell and burst and absorb liquid when heated; egg yolks added for richness and meat/fish/cheese/vegetables for flavour (savoury soufflé); fruit, coffee, chocolate etc. (hot sweet soufflé); egg white stiffly beaten and folded into the mixture to **aerate** it and create light texture; steam generated during cooking causing the air in the foam to expand resulting in the soufflé rising; egg white **coagulates** and sets; etc.*

Cold uncooked/sweet: *made using egg; gelatine used as a thickening agent; gelatine (powdered or leaf form) dissolved in hot water, added from a height in a steady stream to prevent streaking; absorbs large amounts of water to form a **gel**; sets on cooling; cream is lightly whipped and added to create a light texture; stiffly beaten egg white folded in to **aerate** the mixture; mixture allowed to partially set before adding chopped pieces of fruit, to prevent sinking to the bottom; cream and egg white give **volume and lightness** to the mixture; when set cold soufflé should hold its own weight over the top of the dish; etc.*

Range of dishes that illustrate the skill of soufflé making:

Hot cooked/sweet/savoury: *coffee; chocolate; orange; cheese; cauliflower; ham; mushroom; twice baked soufflé; etc.*

Cold uncooked/sweet: *strawberry; raspberry; lemon; lime; chocolate; etc.*

Key points that should be observed to ensure success when making soufflés:

All equipment must be spotlessly clean and dry; use eggs at room temperature; whisk egg whites in a clean grease free bowl; base mixture should be highly seasoned as egg whites dull flavours; use metal spoon to gently fold egg whites; mix the egg white into the base in stages; avoid using fats in flavourings; cool sauce before adding egg white; use a double band of greaseproof paper around top of dish; sponge gelatine in hot not boiling water; acids in fruit juices (pineapple) weaken setting power of gelatine; add chopped fruit to gelatine mixture when partially set; grease the dish; clean mixture from rim; the smaller the soufflé dish used the more uniformly cooked the mixture will be; preheat oven for hot soufflés 180°C - 200°C; if oven too hot soufflé will be cooked on outside and raw inside, if temperature too low soufflé will not rise; place the soufflé low in the oven to allow for expansion; avoid opening the oven door during baking; serve hot soufflés straight away; etc.

Dish selected – hot or cold soufflé (*identified in research*)

Evaluation (as specified in assignment)

(a) implementation **(b)** success in achieving a light aerated texture.

Area of Practice C: Food Technology

Assignment 4

Preserving fruit is a traditional way of celebrating the seasons and using up surplus fruit at home.

Carry out research on making jams, jellies or marmalades with reference to **each** of the following:

- the different fruits and combination of fruits that can be used
- the underlying principles involved and how the method of preservation is carried out
- the possible problems that may arise
- suitable containers and labelling.

Prepare, make and pot **one** type of preserve that you have investigated.

Evaluate the assignment in terms of **(a)** implementation **(b)** the practicability of making homemade preserves.

2019

Key requirements of the assignment:

- *research on different fruits and combinations of fruits that can be used*
- *the underlying principles involved and how the method of preservation is carried out*
- *possible problems that may arise*
- *suitable containers and labelling*
- *chosen product (identified in research).*

Investigation

Different fruits and combinations of fruits: **Jams:** *strawberries; blackberries; gooseberries; plums; damsons; cherries; apples; pears; apricots; etc.* **Jellies:** *blackcurrants; redcurrants; apples; rosehip; etc.* **Marmalades:** *oranges; lemons; limes; grapefruit; quinces; peaches; nectarines; etc.* **Accept:** *combinations of all fruits.*

Underlying principles involved and how the method of preservation is carried out: *heat softens the fruit and destroys enzymes and micro-organisms; pectin released; 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; 65% concentration of sugar is required; acid in the fruit releases pectin from the fruit which acts as a setting agent; fruit is **boiled/100°C+**; fruits low in pectin are combined with fruits high in pectin to achieve a satisfactory set; sterilisation of jars; etc.* **Jam:** *fruit washed, peeled, chopped; acid added; cooked with/without water; test for pectin; sugar added and dissolved over a gentle heat; boiled rapidly until setting point is reached; test for setting; skim off froth; pour into sterilised jars (sterilise in oven 140°C); cover; label; store; etc.* **Jellies:** *chop fruit and stew with lemon juice; strain fruit through a jelly bag/muslin; add water to juice; add sugar; test for setting; reduce boiling rate as setting point is approaching to avoid entrapping air bubbles; skim; pot; cover; label; store; etc.*

Marmalade: *scrub fruit; cut peel off fruit, remove pith, cut into shreds; put peel, acid and half water into saucepan, simmer until tender; cut up rest of fruit and pith, simmer with remaining water; strain through colander; add peel to strained pulp; boil off excess water; simmer until peel is soft; add sugar, boil until setting point is reached; test for setting; skim; cool slightly; pot; cover; label; store; etc.*

Accept: *all correct methods of making jams, jellies and marmalades.*

Possible problems that may arise: **product will not set:** *insufficient acid/pectin; fruit over ripe or insufficiently boiled; too little sugar; etc.* **crystallisation:** *product boiled before sugar is dissolved; overcooked; too much sugar; insufficient acid; etc.* **fermentation:** *insufficient boiling time; insufficient sugar, over ripe fruit; etc.* **fruit/rind on top:** *product not cooled before potting; etc.* **shrinkage:** *incorrect covering; incorrect storage; etc.* **mould growth:** *insufficient sugar; over ripe fruit; product not filled and covered correctly; etc.* **fruit sticks to the bottom of saucepan:** *pan not greased; etc.* **peel in marmalade tough:** *not cooked until soft; sugar added too soon; etc.* **cloudy jelly:** *avoid squeezing the jelly bag; etc.*

Suitable containers and labelling: *e.g. screw-top/clip glass jars; waxed discs; cellophane discs; freezer grade polythene; clean screw on lids; labels; etc.*

Dish selected - jam, jelly or marmalade (*identified in research*)

Evaluation (as specified in assignment)

(a) implementation **(b)** the practicability of making homemade preserves (*jams, jellies and marmalades*) resource issues – *equipment; skills; time; availability of ingredients; cost factor; etc.*

Area of Practice E: Comparative Analysis including Sensory Analysis

Assignment 5

The sale of smoothies has become increasingly popular in the last number of years.

Carry out research on the range of commercially prepared smoothies available with reference to brands, flavours, cost and sugar content.

Using **two** different brands of smoothie, both with the same flavour and different sugar contents.

Carry out a **triangle test** to determine if testers can detect which brand of smoothie has the highest sugar content. Present the results obtained from the test.

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

2019

Key requirements of the assignment:

- *research on the range of commercially prepared smoothies available with reference to brands, flavours, cost and sugar content*
- **triangle test**
- *conditions to be controlled during testing*
- **selected products** of your choice (*different brands of smoothie, same flavour and different sugar contents*).

Investigation

= 24

- Research/Investigation of products appropriate to the testing
i.e. investigate the range of commercially prepared smoothies available i.e. brands, flavours, cost and sugar content.

- **Triangle test**

Description: *tester is presented with three coded samples of smoothies (two samples are the same, one is different); the tester is asked to identify which sample is different; etc.*

Aim of test: *to determine if there is a detectable difference between the two brands of smoothies; etc.*

Possible outcomes: *to see if there is a detectable difference between the two smoothies; etc.*

Accept: *Difference Test i.e. Directional Paired Comparison Test; 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 of each sample; coding of samples; balanced presentation; hygiene; timing; where testing takes place; dietary considerations; etc.

- **Selected dish/product**

Selected products

= 4

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

= 4

Preparation and Planning

- **Resources**
- **Main equipment needed to carry out assignment**

= 8

Triangle Test: *6 trays; 6 glasses of water; 18 coded containers for smoothie samples; 9 samples of smoothie A; 9 samples of smoothie B; 6 score-cards; record sheet; pens; etc.*

Implementation

= 16

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 i.e.

Triangle Test (two products)

*Code 18 containers; 6 containers with symbol □, 6 containers with symbol ◇, 6 containers with symbol ○; put smoothie samples in each container; set up 6 trays numbered 1-6; each tray has one container labelled with symbol □, one container with symbol ◇, and one container with symbol ○; **must be balanced presentation order i.e. every possible combination of samples must be presented**, each sample product is offered an equal number of times i.e. 9 times, samples presented in random order and no tester gets samples presented in the same sequence; codes on each tray remain the same, product in the container changes each time; testers follow instructions on score card; circle on the score card which of the three samples is different (two of which are the same, one is different); samples may be re-tasted; scorecards are collected by recorder and results transferred onto a 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 and results presented; results can be presented on a bar chart or pie chart; tidy; wash up; evaluate results; etc.*

- **Key factors considered (any 2 @ 4 marks)** (graded 4:2:0)

= 8

*Key factors that may be considered in order to ensure success in this assignment include - **conditions controlled** during testing - coding; choice of smoothie used; sample temperature; uniformity of samples for testing; sufficient amounts; glass of water/or dry cracker included to cleanse the palate; importance of silence during testing; having 6 testers to ensure that every possible combination of samples has been offered; presentation of samples in random order so no tester gets samples presented in the same sequence; balanced presentation - each smoothie offered equal number of times - 9 times; codes on each tray remain the same; codes used should not induce any bias among testers; people involved in testing should not be involved in coding and arranging of samples or collating results; etc.*

(key factors must refer to the actual test carried out)

- **Safety and hygiene**

Safety: **1 point @ 2 marks** (graded 2:1:0) Hygiene: **1 point @ 2 marks** (graded 2:1:0)

= 4

Safety: *check date on smoothie to avoid the risk of food poisoning; storage of smoothies; testers with allergies – product with nuts etc.; special diets e.g. lactose intolerant, diabetes etc.; products with additives/ E numbers; etc.*

Hygiene: *good practice with regard to the preparation area and the testing area; handling of samples – use of plastic gloves/disposable glasses; etc.*

Evaluation (3 points @ 4 marks)

= 12

- **Implementation**

Testing procedures used; key factors when conducting the test; safety and hygiene issues considered; problems encountered and suggested solutions; evaluate efficiency of work sequence; etc.

- **Specific requirements of the assignment**

Students should evaluate the results obtained for the test and draw some conclusions.

The factors that may contribute to the test results obtained should be analysed e.g. 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.

1. Examination requirements:
Candidates are required to complete and present a record of any **four** assignments for examination.
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
 - 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.

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