



Coimisiún na Scrúduithe Stáit
State Examinations Commission

Leaving Certificate 2018

Marking Scheme

Home Economics – Scientific and Social

Higher 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

Higher Level

Marking Scheme

280/320 marks

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**.

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.*

Section A

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

Each question is worth 6 marks.

Write your answers in the spaces provided.

1. Complete the table below in relation to the digestion of carbohydrates. (6)

Organ	Enzyme	Substrate	Product
Pancreas	<i>Amylase</i>	<i>Starch</i>	<i>Maltose</i>
Small Intestine	<i>Maltase</i>	<i>Maltose</i>	<i>Glucose</i>
	<i>Sucrase</i>	<i>Sucrose</i>	<i>Glucose / Fructose</i>
	<i>Lactase</i>	<i>Lactose</i>	<i>Glucose / Fructose</i>

2. State **three** functions of Vitamin C in the body. (6)

- (i) *formation of connective tissue/collage;*
- (ii) *critical for the immune system;*
- (iii) *helps absorption of iron and calcium; prevents scurvy; promotes healing of wounds; formation of healthy blood vessels; acts as antioxidant; protects HDL cholesterol; helps prevent bruising; healthy gums; etc.*

3. Name **two** proteins found in meat. (6)

- (i) *Myosin; actin; globulin;*
- (ii) *collagen; elastin; gelatine (in bones); etc.*

Outline **two** effects of cooking on protein in meat.

- (i) *protein coagulates causing the fibres to shrink; collagen is converted to gelatine; maillard reaction – amino acids and sugars on meat surface, improves flavour;*
- (ii) *fibres fall apart and meat becomes more digestible; over-cooking causes meat fibres to become tough and indigestible; etc.*

4. Outline the role of energy in the body. (6)
- (i) *growth; physical activity;*
 - (ii) *metabolism - cell and nerve activity; working of all internal organs;*
 - (iii) *generating heat and maintaining a constant body temperature (37°C); etc.*

5. Explain the significance of the following symbol to the consumer. (6)



Food products are gluten free and suitable for people with coeliac disease; etc.

Name **two** products that use this symbol on their labelling.

- (i) *soya products e.g. TVP; rice; maize products e.g. cornflakes;*
 - (ii) *pecially made gluten free products i.e. bread, biscuits; pasta; baked beans; sausages; etc.*
6. Complete the table below in relation to processed food. Give **one** example of a different food / product in each case. (6)

	Food / Product
Foods that are extensively processed	<i>flour, margarine; pasta; biscuits; convenience foods; dried milk; cheese; yoghurt; soups; etc.</i>
Foods processed to extend shelf life	<i>milk; jams/chutneys/relishes; tinned fish; etc.</i>
Fortified foods	<i>breakfast cereal; super/omega 3 milk; etc.</i>

7. Explain **each** of the following methods of heat transfer when cooking food. (6)

Conduction: *transfer of heat from one food molecule to the next by vibration of molecules; cooker heats the pan which in turn heats the liquid or fat and then the food; etc.*

Convection: *heat transfer by convection currents in cooking liquid or air, based on the principle that hot air rises when heated and falls on cooling; etc.*

8. State the temperature range for optimum growth for **each** of the following groups of micro-organisms. (6)

Psychrophiles	-5°C to 20°C
Mesophiles	20°C to 45°C
Thermophiles	45°C to 75°C

9. Suggest **two** textiles suitable for use in the home and state **one** property of each. (6)

Textile	Property
Cotton	<i>strong; drapes well; fade resistant; washable/dry cleanable; breathable; easy to dye and bleach; no elasticity; shrinks; burns easily; subject to mildew damage; creases easily; etc.</i>
Linen	<i>very strong; durable; colourfast; creases easily unless treated; easily laundered; absorbent; may be pre-shrunk; etc.</i>
Silk	<i>strong; warm; light; drapes well; absorbent; crease resistant; etc.</i>
Wool	<i>warm; insulating; absorbent; soft; resilient; durable; scorches easily; damaged by moths; damaged by careless washing - shrinks and felts; etc.</i>
Nylon	<i>strong; warm; stretches; lightweight; etc.</i>
Polyester	<i>strong; warm; crease resistant; etc.</i>
Acrylic	<i>strong; durable; light; crease resistant; shrink resistant; etc.</i>
Dralon (Velvet)	<i>soft; warm; light; durable; shrink resistant; etc.</i>

Name **one** fire retardant finish used on household textiles.

Proban; Provatex; etc.

- 10.** Explain how advertising affects consumers' buying behaviour. (6)
- (i) *creates awareness of the product; brand awareness; creates interest in the product; creates a need among consumers to buy the product;*
 - (ii) *advertising techniques used to influence consumer decisions e.g. product placement; shelf position; food samples; humour; celebrity endorsements; music/songs; etc.*

- 11.** State **two** advantages of regular saving. (6)
- (i) *more security, less worries; cope better with unexpected bills;*
 - (ii) *less risk of bad debts; good example to children; avoids paying on credit; safer than money kept at home; etc.*

Name **two** savings schemes offered by financial institutions.

Demand deposit account; notice deposit account; special term account; savings account; student saver account; junior saver account; online saver account; savings bonds; saving certificates; instalment savings schemes; etc.

- 12.** In relation to a person's income, explain **each** of the following: (6)
- Tax Credit: reduces the amount of income tax a person has to pay; income tax is calculated on gross income and then tax credits are deducted; notification of determination of tax credits and standard cut off points is issued annually by the Revenue Commissioners to each employee; etc.*

USC: compulsory tax payable on gross income; paid before pension contributions; calculated as % of a person's total income, 1% - 8%; employees are liable to pay USC tax if their gross income is more than €13,000 annually; exempt if earning less than €13,000; 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. Calorie menu labelling in restaurants can help combat obesity even where only modest changes occur in consumer behaviour. *(Calories on menus in Ireland, FSAI)*

Sample Main Course Menu

<p style="text-align: center;">Grilled Irish Salmon</p> <p>Irish salmon steak with pepper or basil butter or sticky honey, lime & chilli. Served with baby potatoes and peas.</p> <p style="text-align: center;">387 calories</p>	<p style="text-align: center;">Chicken Tikka Masala</p> <p>Creamy tikka masala sauce over marinated chicken breast. Served with basmati rice, naan bread, mango chutney & poppadoms.</p> <p style="text-align: center;">883 calories</p>	<p style="text-align: center;">Beer Battered Fish & Chips</p> <p>Freshly beer battered fish. Served with chips, mushy peas, lemon & tartare sauce.</p> <p style="text-align: center;">880 calories</p>
<p style="text-align: center;">Chilli Con Carne</p> <p>Irish beef mince chilli. Served with basmati rice and tortilla chips.</p> <p style="text-align: center;">662 calories</p>	<p style="text-align: center;">Roast Vegetable Pasta</p> <p>Tomatoes, courgettes and peppers in a tomato sauce over penne pasta, finished with cheddar cheese. Served with garlic bread.</p> <p style="text-align: center;">747 calories</p>	<p style="text-align: center;">Fish Pie</p> <p>White fish, smoked haddock & salmon in a creamy white sauce topped with mashed potatoes & cheese. Served with fresh bread.</p> <p style="text-align: center;">756 calories</p>

- (a) With reference to the sample menu above, comment and elaborate on the suitability of the menu options for a person on a weight reducing diet. In your answer, suggest modifications to the dishes for a healthier menu. (24)

4 points @ 6 marks each

Suitability: *accept comments on individual ingredients i.e. nutritive/dietetic value in dishes; portion size; proportion of vegetables to meat; salmon & fish (haddock) oily fish – omega 3 reduce cholesterol; chicken breast – low fat; chutney – high sugar; basil butter – high in saturated fat; potatoes/rice/naan bread/poppadoms/chips – high in starchy carbohydrates which taken in excess can be converted to fat; vegetables – high in fibre; comparison of calories and foods within dishes; cooking methods i.e. frying, roasting, baking etc.*

Modifications: *omit butter in grilled salmon dish; naan bread or poppadoms – serve one not both; rice – change to brown rice more filling and higher in fibre; use soda water/water in batter; offer salad instead of chips/garlic bread/fresh bread; low fat cheese/milk; omit cream from creamy sauce; etc.*

- (b) In relation to lipids, state the elemental composition **and** describe the chemical structure of a triglyceride. (9)

Elemental composition 3 @ 1 mark each

Carbon(C); Hydrogen(H); Oxygen(O);

Structure 3 points @ 2 marks each

Made up of **3 fatty acids; one glycerol molecule**; glycerol is an alcohol with three OH molecules; a fatty acid attaches itself to each hydroxyl group; three water molecules are eliminated (**condensation**) forming the triglyceride; etc.

Accept a clearly labelled diagram

- (c) Describe the structure and give **one** example of **each** of the following:

- saturated fatty acids
- monounsaturated fatty acids
- polyunsaturated fatty acids.

(18)

3 points @ 6 marks each

- **Saturated fatty acids:** each carbon atom is **saturated with hydrogen**; there are **no double bonds** present between the carbon atoms; **carboxyl group** at one end; **methyl group** at other end; etc.
Example: butyric acid; stearic acid; etc.

- **Monounsaturated fatty acids:** each carbon atom is **not saturated with hydrogen**; there is **one double bond** present between the carbon atoms; **carboxyl group** at one end; **methyl group** at other end; etc.
Example: oleic acid; etc.

- **Polyunsaturated fatty acids (PUFA's):** each carbon atom is **not saturated with hydrogen**; there is **more than one double bond** present between the carbon atoms; **carboxyl group** at one end; **methyl group** at other end; etc.
Example: linoleic; linolenic; arachidonic acid; etc.

Accept clearly labelled diagrams

- (d) Outline the significance of fatty acids in the diet. (9)

3 points @ 3 marks each

Unsaturated fatty acids (cis) are generally good as they help reduce LDL and increase HDL; etc. **Trans fatty acids** are believed to increase incidence of CHD – increasing levels of LDL, depositing cholesterol on the wall of the arteries; reduces HDL which removes cholesterol from circulation; during cooking and processing cis fatty acids may be converted to trans fatty acids; etc. **Saturated fatty acids** increase levels of LDL cholesterol and lower HDL cholesterol increasing the risk of CHD; etc. **Omega 3 fatty acids** reduce risk of heart attack, stroke, circulatory diseases, formation of blood clots, and certain cancers; linked with healthy brain activity; prevention of eczema; etc. **Essential fatty acids** – linoleic, linolenic and arachidonic - cannot be manufactured in the body so must be obtained from food; etc.

- (e) The aim of food labelling is to provide consumers with information which may influence their purchasing decisions.

In addition to nutritional information, discuss the reasons why consumers consult food labels on pre-packaged food prior to purchase. (20)

5 points @ 4 marks each

Product information; calorie content; specific ingredients; allergen information; use by/best before date; food additives; origin; salt/fat/sugar content; cooking instructions; storing instructions; GM foods; irradiated food; serving size; health logo's; contact details; etc.

2. Vegetarian diets are a popular choice with many individuals and families.

(a) In relation to vegetarian diets discuss:

- classes / types
- specific dietary requirements
- benefits of a vegetarian diet.

classes / types: 3 points @ 3 marks each (9)

Vegan: do not include milk, dairy products, eggs, meat and fish; eat plant based foods only; etc. **lacto vegetarian:** do not include eggs, meat and fish in diet; include milk and dairy products; etc. **lacto ovo vegetarian:** excludes meat and fish; include milk, dairy products and eggs; etc. **ovo vegetarian:** include eggs but not dairy products or meat: etc. **pesco-vegetarian:** do not include meat; include fish, milk, dairy products, eggs and poultry; etc. **pollo vegetarian:** do not include red meat or fish; include poultry, eggs, milk and dairy products; etc.

specific dietary requirements: 4 points @ 3 marks each (12)

Each meal should include all food groups, follow vegetarian food pyramid; include protein from legumes, pulses, soya beans, nuts, cereals etc.; include vitamin B - use wholegrain products e.g. brown rice; use vegan foods that have been fortified e.g. soya milk, breakfast cereals or take B12 supplements; calcium - include cheese, milk, yoghurt in lacto vegetarian diets for calcium and protein; vegans can use alternative dairy foods e.g. soya milk; for iron include fortified breakfast cereals, dark green vegetables, wholemeal products, dried fruit, beans; use soya milk, tofu and TVP instead of milk, cheese and meat; use vegetable spreads, oils, vegetable stock cubes and agar instead of gelatine; replace animal fats with vegetable oil; include herbs and spices in dishes to add flavour; aim to use fortified products for vegan; etc.

benefits of a vegetarian diet: 3 points @ 3 each (9)

Healthier as it contains less saturated fat; high in fibre therefore there is less chance of CHD and bowel disorders; eating fresh produce means less additives are eaten; a smaller number of vegetarians get diabetes; the high level of fruit/vegetables means obesity is less likely; less salt; cheaper; etc.

(b) Name and describe **two** novel (alternative) protein foods that can be used in vegetarian diets. (8)

2 points @ 4 marks each

(Name = 2 marks, Description = 2 marks) X 2

Tofu: soya bean curd made from soya milk; bland but can be smoked or marinated; made by curdling soya milk and pressing the resulting curds into blocks; etc. **Soya milk:** made by soaking soya beans in water; grinding with soaking water; etc. **Soya yoghurt:** fermented soya milk; etc. **Tempeh:** made from cooked and fermented soya beans; chewy in texture; etc. **Textured Vegetable Protein:** made from soya beans, cooked and dried; etc.

Miso: paste made from soya beans mixed with rice, salt and water, then fermented; etc.

Quorn: made from mycoprotein (fungi) and sold in ready to cook forms such as mince; etc.

Accept: soya products.

(c) Outline the manufacture / production of **one** novel (alternative) protein food. (12)

Name: 2 marks; Details: 5 points @ 2 marks each

TVP: *Soya beans are de-hulled and oil extracted; beans ground into flour; carbohydrate removed; vegetable oil, flavouring, seasoning, nutritional additives (B12, methionine, iron) added; mixture heated and extruded; cubed or chopped (mince); dried; packed and labelled; etc.*

Mycoprotein: fungus (*fusarium gramineurum*) *is fermented in optimum condition; cells are harvested, filtered and drained; albumin is used to bind the sheets of fungi together; flavouring and colouring added; textured to resemble meat; sliced, cubed or shredded and steamed to set binder; packed and labelled; etc.*

3. Many modern processed products such as low calorie, snack and ready to eat convenience foods, would not be possible without the use of food additives.

(a) What is a processed food?

1 point @ 4 marks

A processed food is any food that has been altered in some way during preparation; food processing can be as basic as freezing, canning, baking, and drying; not all processed food is unhealthy but some contain high levels of sugar, salt and fat; etc.

Evaluate the merits of incorporating processed foods in the diet. (20)

4 points @ 4 marks each

Merits: makes food safe to eat; save time & energy in the home; creates new food products; healthier food options; adds variety to the diet; increase the shelf-life of food; ensure wide choice all year round; allow for fortification; etc.

(b) Give an informative account of flavourings **and** antioxidants.

Refer to:

- classes / types
- examples
- functions
- use.

(20)

Flavourings = 10 marks

2 classes @ 1mark each	2 examples @ 1mark each	2 uses @ 1 marks each	2 functions @ 2marks each
Natural	<i>Sugar:</i>	<i>Jam, tinned beans, cereals; etc.</i>	<i>To add flavour to bland food;</i> <i>to replace flavour lost in processing;</i>
	<i>Salt;</i>	<i>Cheese, butter, convenience foods; etc.</i>	
	<i>Spices; herbs etc.</i>	<i>Meat products, sauces, stock cubes; etc.</i>	
Artificial	<i>Ethyl acetate;</i>	<i>Rum flavour;</i>	<i>to enhance the flavour of food; etc.</i>
	<i>Amyl acetate;</i>	<i>Pear flavour;</i>	
	<i>Benzaldehyde</i>	<i>Cherry flavour;</i>	
	<i>Maltol;</i> <i>Esters; aldehydes;</i> <i>etc.</i>	<i>Baked goods; etc.</i> <i>Cakes: etc.</i>	
Flavour Enhancers E600-699	<i>Monosodium Glutamate E621</i>	<i>Soups, sauces, stock cubes; prepared meals; etc.</i>	

Accept: Sweeteners; etc.

Antioxidants = 10 marks

2 classes/types @ 1 mark each	2 examples @ 1 mark each	2 uses @ 1 mark each	2 functions @ 2 marks each
Natural	Ascorbic acid/Vitamin C, Tocopherol/ Vitamin E (E306), etc.	Fruit drinks, vegetable oils, jams; etc.	Prevents oxidative rancidity where food is spoiled by reacting with oxygen; reduces food waste; food has a longer shelf life; etc.
Artificial	BHA (E320), BHT (E321), etc.	Stock cubes, cheese spread, chewing gum, crisps, cooking oils, tinned fish etc.	

- (c) Explain how the use of food additives is regulated by European Union (EU) legislation. (10)

2 points @ 5 marks each

Provide a list of approved additives that have been tested; each approved additive has E number (except flavourings); E number or name must be on labels; additives should not reduce nutritive value; cannot be used to disguise faults; must not be a health hazard; must not mislead consumer; must be used in smallest possible effective quantity; colourings not allowed in fresh fruit, vegetables, meat, poultry, fish; preservatives, BHA, BHT and colourings not allowed in baby food; sweeteners not permitted in food for infants or young children; additives are tested by the European Scientific Committee for Food (SCF); the SCF take advice from the World Health Organisation (WHO) and the Joint Expert Committee on Food Additives (JECFA); in Ireland the (Food Safety Authority of Ireland) FSAI are responsible for enforcing the safe use of food additives; etc.

4. Smart home technology is the automation and management of your home and daily life.

(a) Discuss how technology has contributed to the efficient management of the home. (20)

5 points @ 4 marks each

Appliances reduce workload; less labour intensive; improve quality of home life as tasks completed quickly; easy to care for products require less maintenance; increase in effectiveness of some tasks e.g. steam cleaners; use of computer chips in household appliances; design of appliances; automated systems - electronic gates, security lighting, burglar alarms, CCTV; oven timers; apps to turn on lights, heating; use of computer packages for accounts and budgeting, banking on line; internet shopping; communication via skype, social media; etc.

(b) Set out details of a study that you have undertaken on a refrigeration appliance.

Refer to:

- working principle **4 points @ 3 marks each**
- guidelines for use **3 points @ 2 marks each**
- modern features **2 points @ 2 marks each** (22)

Working principle: a **compressor** at the base of the fridge contains a refrigerant - Freon 12/liquid ammonia/isobutene; a motor activates the compressor which forces the refrigerant into the condenser; the **condenser** cools the gaseous refrigerant, condenses it into a liquid; the refrigerant moves to the **evaporator** where it turns back into a gas; the liquid evaporates as heat is taken from the fridge cabinet, this cools the fridge; the refrigerant returns to the compressor and cycle starts again; a **thermostat** is connected to the compressor and maintains an internal temperature of 3°C - 4°C within the refrigerator by turning on and off the motor when needed; etc.

Accept a clearly labelled diagram.

Guidelines for use: avoid opening unnecessarily, it raises the temperature putting pressure on motor; cool foods before placing in fridge to avoid raising temperature; cover foods to avoid drying out and cross-flavouring; store raw fish/meat below cooked food/dairy to avoid cross contamination; use food in rotation to prevent waste & food passing its best-before date; do not over pack to allow air circulation; etc.

Modern features: chilled drinks dispenser; gated shelves for tall containers; integrated fridge door to match kitchen cabinet doors; digital temperature display; internal or external ice-maker; zoned refrigeration; automatic defrosting; frost-free fridges; quick chill settings; antibacterial coatings; LED lighting; alarm; humidity controlled drawers; smart refrigerators; etc.

(c) Evaluate the role of energy labelling when selecting household appliances. (8)

2 points @ 4 marks each

Energy labelling indicates the energy consumption of the appliance - rated A-G, A-rated appliances use the least amount of electricity making them cheapest to run; cause least harm to the environment; G-rated appliances use the most electricity, making them the most expensive to run; cause the greatest harm to the environment; provides information on appliance capacity; noise emitted described in decibels; the capacity of fresh food & frozen food in litres for refrigerators and combined appliance; etc.

5. 'There can be no keener revelation of a society's soul than the way in which it treats its children.' (Nelson Mandela)

- (a) Identify and explain the rights of children in society today. (16)

4 points @ 4 marks each

Right to life; name and nationality; education; family life; play and recreation; adequate standard of living; protection from physical, emotional, sexual abuse and harm; right to environment that provides for their physical, psychological, social and educational needs; right to love, affection and understanding; safety; protection from discrimination, cruelty and exploitation; etc.

- (b) Discuss the possible causes of conflict between adolescents and adults.
Suggest strategies for resolving this conflict.

Causes: 3 points @ 4 marks each (12)

Causes: high parental expectations; school work; phone use; noise; boyfriend/girlfriend; church/religion; personal appearance; smoking, drink, drug use; dishonesty; etc.

Strategies: 3 points @ 4 marks each (12)

Strategies: identify the issues – be clear and concise, do not try to solve too many problems at once; listen with empathy; use "I" statements; clarify feelings; build lines of communication; negotiate; use positive methods; see issue from both sides; compromise; enlist the help of a family relative or friend who is removed from the situation; counselling; etc.

- (c) Outline the protection available for families under the Family Law (Maintenance of Spouses and Children) Act, 1976. (10)

2 points @ 5 marks each

If a relationship breaks down maintenance must be paid to a dependant spouse/civil partner if they do not have the financial resources to support themselves; if a relationship breaks down maintenance must be paid to the parent with custody of the dependent child/children even if both are sharing the same house; if a maintenance agreement cannot be reached they will have to attend the district court and apply for a maintenance order; an Attachment of Earnings Order can be granted if the supporting spouse fails to pay maintenance, money is deducted from his/her wages and paid directly to dependent spouse; etc.

Section C

Answer **one elective question** from this section.

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)** According to CSO figures, 896 families were homeless on census night including 1,726 children in those families. *(Central Statistics Office 2016)*

- (i)** Outline the housing requirements necessary to meet the needs of people who are homeless. (16)

4 points @ 4 marks each

Regular shelter e.g. hostel, emergency bed and breakfast or private accommodation with a bathroom/shower facilities; secure storage for belongings; privacy - a bed of their own and private changing facilities; communal facilities e.g. a shared kitchen or TV room; access to laundry facilities; serviced halting sites for mobile homes; etc.

- (ii)** Give an informative account of the quality of accommodation provided in **each** of the following housing sectors:

- private housing sector / owner occupied
- private rental sector.

(18)

private housing sector/owner occupied:

3 points @ 3 marks each

The quality of private homes can vary depending on year of construction; higher incidence of poor quality housing in older houses because of the lack of standards in terms of insulation, damp proofing and ventilation at the time of building; many older dwellings are occupied by elderly people living alone on fixed incomes unable to afford repairs and upgrades; homes built in recent years are of higher standard due to stricter building regulations – Buildings Regulations Act 1991; the National House Building guarantee scheme “Homebond” ensures a high standard of quality; good insulation, high levels of comfort, zoned heating; etc.

private rental sector:

3 points @ 3 marks each

Legislation – Residential Tenancies Act 2004 sets down minimum standards for rental accommodation, however some accommodation offered is of poor quality and not good value for money; rent charged depends on demand and supply, the quality and size of the building, amenities; regulations ensure that properties for rent meet minimum physical standards; regulations require the landlord to ensure the property is in a proper state of structural repair, maintain the property, ensure gas/electricity supplies are safe and in good repair, ensure that every room has adequate ventilation and lighting; hot and cold water must be provided; bathrooms and showers need to be in good working order; sufficient cooking facilities must be in place; electricity, lighting, ventilation and heating must be provided; etc.

- (iii) Discuss the importance of house building standards with reference to how building standards are regulated. (16)

4 points @ 4 marks each

Necessary to procure a loan; safety; sustainability – houses to last, heated by sustainable methods; environmentally friendly; etc.

National House Building Guarantee Scheme (Homebond) – registered builders, house inspected 3 times during construction, certificate is issued if house meets required standard; certificate guarantees against loss of deposit if builder goes bankrupt; against major structural defects within 10 years; many lending agencies require that new houses have a homebond certificate; scheme is run by the Department of the Environment; etc. Building Regulations Act 1991 – sets out rules in relation to areas of house design and construction to ensure that houses are safe and comfortable living spaces for occupants; regulations apply to materials used, construction standards, insulation, heating, lighting, ventilation and waste disposal; etc. Building Energy Rating (BER) – stipulates that all homes available to buy or rent must display a BER certificate; rates the house from A-G, A-rated homes most energy efficient, G rated homes least energy efficient; etc.

and

- 1.(b)** Well chosen floor coverings provide style and beauty and improve the aesthetics of a room.

- (i) Outline **four** factors that should be considered when selecting floor coverings for a home. (12)

4 factors @ 3 marks each

Cost; function of the room; ease of maintenance/cleaning; aesthetics; safety; subfloor; etc.

- (ii) Describe **three** types of flooring / floor coverings used in the home. List the properties of **each**. (18)

(Description: 4 marks; 2 properties @ 1 marks each) x 3

Flooring / floor covering	Properties
<i>Ceramic tiles - made of water, clay and minerals; can be glazed or unglazed; variety of sizes and shapes; etc.</i>	<i>Hard-wearing; easy to clean; low maintenance; range of colours, designs and sizes; hard underfoot; stain resistant; fire resistant; cold; crack/chip easily; etc.</i>
<i>Flagstone/cut stone – various shapes; natural colours; may have uneven textures; etc.</i>	<i>Hard wearing; cold underfoot; chips easily; etc.</i>
<i>Slate - fine-grained, foliated metamorphic rock; etc.</i>	<i>Hard wearing; warm underfoot; uneven texture; dark colours; slightly absorbent; easy to clean; etc.</i>

<p><i>Marble/travertine e.g. limestone refined into the individual tiles and slabs; flecks of colour; etc.</i></p> <p><i>Stone carpeting – gravel based mixture poured on subfloor and sealed when set; etc.</i></p>	<p><i>Cold underfoot; chips easily; available in a variety of colours; etc.</i></p> <p><i>Hard-wearing; easy to clean; low maintenance; range of colours, designs and sizes; hard underfoot; etc.</i></p>
<p><i>Mosaics – a mixture of glass, metal, resin and stone in various textures and colours; etc.</i></p>	<p><i>Decorative; hard wearing; etc.</i></p>
<p><i>Wood: strip – strips of hardwood e.g. oak, beech, maple or soft wood e.g. pine, spruce, tongue and grooved to form a smooth finish; strips vary in thickness; may be solid wood or laminated with a plastic veneer; etc.</i></p> <p><i>Block Parquet – blocks of hard wood laid in a herringbone pattern; etc.</i></p> <p><i>Mosaic – blocks of hard wood laid in a basket weave pattern; etc.</i></p>	<p><i>Attractive; durable; low maintenance; most are ready sealed; noisy; cold; marked and scratched easily; etc.</i></p>
<p><i>Vinyl: resin, plasticiser, pigment and filler put together under heat and pressure on to an alkali-resistant backing; may have a foam backing for extra thickness; patterns may be marbled, flecked, embossed, veined or striped; sheets or tiles; etc.</i></p>	<p><i>Warm and soft underfoot; durability varies with thickness; scorches and melts when subjected to heat; easy to clean and maintain, stain resistant; huge variety in colour, design and texture; quiet; etc.</i></p>
<p><i>Carpet: woven – fabric pile is woven on to hessian backing; cut pile Axminster weave allows for unlimited range of colours and designs; continuous strand Wilton weave limits number of colours; thicker carpet; etc.</i></p> <p><i>Tufted – tufts of pile inserted into a woven backing, held in place with adhesive and backed with foam; carpet tiles - graded as light, medium, heavy and general; 100% wool; 80% wool and 20% nylon; etc.</i></p>	<p><i>Wide variety of colours, patterns and textures; good insulator and noise absorber; non slip; easy to maintain; hard wearing; etc.</i></p>

Accept: cork; linoleum; concrete; etc.

or

1.(c) Sustainable energy improves peoples' lives, brings comfort and convenience and addresses environmental challenges. (*Sustainable Energy Authority of Ireland*)

- (i) Identify and elaborate on **three** sources of energy supply to the home. Comment on the sustainability of **each** of these energy sources. (15)

3 points @ 5 marks each

Fossil fuels include coal, oil, gas, peat and uranium (used to make nuclear energy, which is used to generate electricity); etc.

Electricity: generated in power stations by burning fossil fuels (non-renewable resources) or by solar energy, **wind power** and **hydropower** (renewable sources); reliable; clean; easily available; efficient; no fumes; etc. **Sustainability:** electricity itself will not run out, using non-renewable sources to generate electricity is not sustainable as fossil fuels are depleting and cannot be replaced; etc.

Oil: crude oil which has to be refined before use; used for heating and cooking; high heating value; clean, producing little waste or pollution when burned; oil spills cause environmental damage; etc. **Sustainability:** non-renewable; oil reserves are limited; etc.

Gas: natural gas piped ashore by underground pipes to homes on the national grid; liquefied petroleum gas (LPG) delivered to domestic tanks or sold in bottles; efficient as used for heating and cooking; cleaner than other fossil fuels; produces 70% less carbon dioxide than coal or oil; dangerous; etc. **Sustainability:** non-renewable, reserves are limited and cannot be replaced; etc.

Solar energy: created using radiant light and heat from the sun; can also use energy from wind and rain; 3 systems – passive solar architecture, active solar heating, solar photovoltaic system (PV); grants available; no emissions; systems are initially expensive to purchase; etc. **Sustainability:** renewable – infinite supply; etc.

Geothermal: takes heat from earth's crust; cost effective and reliable; no emissions; etc. **Sustainability:** very sustainable; heat pumps collect heat from the environment; etc.

Accept: coal; peat; bio-energy; wood; hydropower; wind energy; etc.

- (ii) Give an account of the emissions produced from burning fuels in the home **and** the effect these emissions have on the environment. (15)

3 points @ 5 marks each

Emissions: carbon dioxide (CO₂); carbon monoxide; water vapour; etc. **Effect:** global warming; climate change; etc.

Emissions: sulphur dioxide (SO₂); nitrogen oxide (NO₂); etc. **Effect:** acid rain - damage to plants and crops, fish species endangered and ecosystems are destroyed; harmful emissions e.g. carbon dioxide and sulphur dioxide combine with water vapour resulting in acidic precipitation with a Ph of 4.1; reduces Ph of soil, affecting growth; dissolves calcium carbonate in limestone, destroys historic buildings, damages paintwork, stained glass and corrodes metal; etc.

Smog and smoke: smoke from burning fossil fuels released into the atmosphere; combines with fog and results in smog; etc. **Effects:** reduced sunshine which effects plant growth; makes area seem darker; 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) “Fashion is a trend, style lives within a person.”

(Oscar de la Renta)



(Adored Vintage: Runway Report/Sonia Rykiel)

- (i) Assess the role of fashion as an expression of personality, with reference to the picture above. (15)

3 points @ 5 marks each

A person's personality is represented through their clothing; style may be casual, trendy or formal; moods can be expressed through clothing – black outfit can reflect a dark mood, colours can reflect a happy mood as in the floral dress; many women choose to wear **classic** clothes which can make them look thinner and taller and for simplicity, chicness, and to highlight their personality; making fashion statements; etc. the **romantic** dresser sticks to the pastel colours, paisley prints and polka dots; etc. **trendy fashion personality** follows bloggers for current trends e.g. short skirts, high heels, cropped trousers; personalities come through in the choice of accessories as shown in the use of belts and bags; etc. **casual fashion personality** gives preference to jeans, pants, shirts - relaxing and comfortable style; etc.

- (ii) Analyse the technological influences on the design and construction of clothing. (10)

2 points @ 5 marks each

Computer aided design; development of new fabrics e.g. scuba, lycra; fabric finishes; international fashion shows, showing new season fashions – images are sent by phones to magazines so trends hit the high street earlier; bloggers; etc.

and

2.(b) Natural fibres are a sustainable resource as they can be used without depleting or damaging the environment.

(i) Classify natural fibres, giving examples **and** uses in each case. (9)

3 points @ 3 marks each

Animal: wool; silk;

Plant: cotton; linen;

Uses: household items e.g. curtains, cushions, bed linen; etc. clothing e.g. dresses, trousers, shirts, nightwear etc.

(ii) Explain how fibres can be identified using a burning test.
Give **one** example. (6)

3 points @ 2 marks each

Fibres can be identified by **flame** e.g. cotton and linen burn quickly with yellow flame; polyester burns slowly; wool smoulders, burns slowly with slow flickering flame; etc. **smell** e.g. wool/silk - burning feathers; cotton - charred paper; polyester slightly sweetish smell; etc. by **ash** e.g. wool - black, crushable; cotton/linen - grey ash; silk - burns as black beads; polyester – hard round brittle black bead; etc.

or

2.(c) A commercial pattern reflects the designer's vision for the outfit.

(i) Suggest reasons why commercial patterns may require modification. (9)

3 points @ 3 marks each

To fit a figure that does not conform to standard body shape e.g. to add length; to add width; to reduce a pattern; different preferences; etc.

(ii) Describe **one** method of modification to a commercial pattern. (6)

3 points @ 2 marks each

(Method: 2 marks, Description: 2 points @ 2 marks each)

Lengthen or shortening commercial pattern; lengthen - cut through alteration lines and insert tissue paper; redraw sewing/fitting lines; reduce pattern - make a fold along one of the alteration lines; half the amount you want to reduce; pin fold in position; 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 demand for education is growing. Adults with higher educational attainment have better economic outcomes. (*Education at a Glance 2017, OECD*)

(i) Name and describe **two** programmes provided in second level education.

Refer to:

- curriculum offered
- assessment / examination systems.

(20)

2 programmes @ 10 marks each

(Name: 2 marks; curriculum: 4 marks; assessment/examination systems: 4 marks) x 2

Junior Certificate: 3 year examination course; broad curriculum; compulsory and optional subjects; level differentiation; etc. **Assessment:** subjects examined by a combination of terminal written exams, practical and project work; examinations at higher and ordinary level; Maths and Irish are offered at foundation level; etc.

Junior Cycle: new programme featuring new subject specifications and short courses; aims to expand and deepen students' knowledge, develop confidence, creativity, communication, personal and social skills; focuses on literacy, numeracy and key skills; new approaches to assessment and reporting; provides the basis for schools to plan quality, inclusive and relevant education programmes; improves learning experiences for all students including special needs students; etc. **Assessment:** each subject will have classroom-based assessments; assessment includes project tasks, oral language tasks, investigations, field studies and artistic performance; after the second CBA, students will complete a written assessment task on what they have learned and the skills and competencies that they have developed in that assessment; the written assessment task along with the final exam at the end of third year will be marked by the State Examinations Commission; etc.

Transition Year Programme: student-centred, encouraging self-development; non-exam focused; no set curriculum; broad range of non-state examinations subjects offered e.g. drama, enterprise etc.; aims to promote personal development; skill development in creative and critical thinking, communication, teamwork, research and leadership by incorporating work life and adult experiences; etc. **Assessment:** ongoing in the form of project, portfolio, oral, written and practical work; some schools offer IT exams e.g. ECDL; etc.

Leaving Certificate Programme: two-year programme, culminating in state examinations at end of 2nd Year; at least 5 subjects including English, Irish and Mathematics; level differentiation – higher, ordinary, foundation; etc. **Assessment:** subjects are examined by a combination of terminal written examinations, practical coursework and project work; grades received are allocated a point value, which may be used to access third-level education; etc.

LCVP: students study 5 leaving certificate subjects, including two vocational subjects and a foreign language; three compulsory link modules - enterprise education, preparation for work, work experience; etc. **Assessment:** assessed by written exam (40%) and by portfolio

work (60%); awarded with a pass, merit or distinction; result may be substituted for one Leaving certificate subject (for points); etc.

LCA: two year programme; modular based, divided into 4 half-year modules; programme can be used to access Post-Leaving Certificate courses; etc. **Assessment:** assessment is continuous with practical, written and oral examinations at the end of second year; practical tasks are carried out during first and second year, assessed on basis of a written report and an interview; etc.

Accept: PLC courses; etc.

- (ii) Analyse the factors that influence educational achievement. (15)

3 points @ 5 marks each

Intelligence/individual ability; attitude to education; influence of family; home environment; work ethic; family size; school attended – locality and school environment; peer group; supports for special needs; etc.

- (iii) Evaluate equality of opportunity in second level education with reference to students at risk of disadvantage and social exclusion. (15)

3 points @ 5 marks each

Delivering Equality of Opportunity in Schools (DEIS) action plan designed to reduce the number of early school leavers, the participating schools provide a school completion programme with initiatives such as homework clubs, after school supports and mentoring programmes, school meals programme, access to home school community liaison services, enhanced school book grants; etc. **Learning Support:** withdrawal from class for extra tuition with resource teachers; etc. **Cúntóirí Teanga:** assistance with the Irish language in Gaeltacht schools and in Gaelscoileanna; etc. **Special Needs Assistants/Inclusion Support Assistants:** one-to-one assistance in class; etc. **Extra Resources** e.g. laptop; reader/scribe in examinations or extra time to complete the paper; smaller pupil-teacher ratio caters for students with mild/moderate learning difficulties; special classrooms for children with Autism with one teacher for every 6 children; programmes like JCSP and LCA cater for students as the curriculum is more assessment based and focuses on the world of work; schools for children with special needs 5-18 years with learning difficulties, schools for visually and hearing impaired children; etc.

and

3.(b) Volunteering enriches individuals' lives and the communities in which they live.

(i) Discuss, with examples, how a community can benefit from the work of volunteers. (15)

3 points @ 5 marks each

Community: provides range of services quickly to those in need in a community i.e. older people, people with disabilities or homeless people, reducing disadvantage for community members; complement the work carried out by statutory bodies; offer a more personal local service e.g. St. Vincent de Paul; when state funding is lacking or inadequate they organise and run services which should have been provided by the state; improves community by restoring and cleaning the local landscape or by alleviating poverty and social problems; creates a sense of community spirit, as volunteers come together to achieve a common goal e.g. tidy towns; friendships formed which can create a sense of closeness within community; issues can be dealt with quickly before they become major social problems; attracting media attention, can initiate change and social reform; etc.

(ii) Explain how a volunteer can benefit personally by participating in community projects. (15)

3 points @ 5 marks each

Volunteer: rewarding, builds a sense of achievement, self-worth and knowledge that a positive contribution has been made to the community; aids personal development in terms of communication, teamwork, organisational and interpersonal skills, which will benefit them in paid employment; provides insight and experience; develop empathy towards less fortunate; form friendships with co-workers and with those they seek to help; etc.

or

3.(c) Leisure is an important component of daily life and a core ingredient for overall well-being.

(i) Discuss the value of leisure in today's society. (15)

3 points @ 5 marks each

Contributes to the social, emotional, physical and intellectual development of a person; provides relaxation and relieves stress from everyday life; helps develop new skills; encourages physical wellbeing; can further social interaction; etc.

(ii) Analyse the social **and** cultural factors that influence an individual's choice of leisure activities. (15)

3 points @ 5 marks each

(1 reference to social, 1 reference to cultural + 1 other point)

Social: the leisure activities of the socioeconomic group one belongs to; status; local amenities in the area; income/money available; leisure trends; influence of famous people; etc.

Cultural Influences: certain activities are linked with certain areas/countries e.g. hurling in Ireland, basketball in USA; culture in the family influences the leisure activities; multicultural Ireland has led to a broader range of leisure activities; etc.

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Coimisiún na Scrúduithe Stáit
State Examinations Commission

LEAVING CERTIFICATE 2018

MARKING SCHEME

HOME ECONOMICS – SCIENTIFIC AND SOCIAL FOOD STUDIES COURSEWORK

Food Studies Practical Coursework General Marking Criteria

Investigation: Analysis/Research - 32 marks

Research and analysis

= 24

Band A 19 - 24marks (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 - 18marks (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 each

= 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 each = 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 each = 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 each = 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

Diet and lifestyle during pregnancy is very important for both the mother and the developing baby's future health.

Research and elaborate on the nutritional needs and the meal planning guidelines that should be considered when planning meals for women during pregnancy.

Suggest a range of menus (two courses) suitable for an evening meal for a pregnant woman having regard to the factors identified in your research.

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.

2018

Key requirements of the assignment:

- *dietary / nutritional needs when planning meals **for women during pregnancy***
- *relevant meal planning guidelines with specific reference to **pregnant women***
- *range of menus (two courses) for an evening meal for a pregnant woman*
- *chosen main course dish of the main meal of the day (from menu).*

Investigation

Dietary / nutritional requirements:

*Requirements with specific reference to **women during pregnancy** e.g. nutritional balance; daily requirements of macro / micro nutrients including protein for proper growth of foetal tissue; carbohydrate for energy; fibre to prevent constipation; fatty acids for development of nervous system; calcium requirements should be twice that of non-pregnant women; iron for healthy blood - reduces risk of anaemia during pregnancy; calcium / phosphorus to build strong bones; vitamin C / iron absorption; vitamin D / calcium absorption; vitamin B for energy release; folate / folic acid to protect baby from developing neural tube defects; energy balance vis a vis activity levels; etc.*

Meal planning guidelines:

Use food pyramid to ensure balance; personal likes and dislikes; alterations in tastes and cravings; adverse reactions to foods; eat small portion sizes; avoid excess caffeine consumption; sensitivity to smell – fatty and spicy foods can trigger the release of stomach acid and cause nausea / morning sickness; cold foods reduce the smells experience; avoid fatty foods to prevent excess weight gain; avoid empty kilocalorie foods i.e. high in sugar, can lead to type 2 diabetes; avoid highly spicy / seasoned foods to prevent heartburn; include high fibre foods to prevent constipation; keep salt consumption to a minimum to reduce the risk of high blood pressure; include bland / plain foods e.g. crackers / toast; smaller meals are better towards the end of pregnancy; eat fortified foods e.g. super milk / cereals for added nutrients; avoid unpasteurised mayonnaise, ice-cream, cheeses as they may contain food poisoning bacteria - listeria and salmonella; etc.

Dishes selected

- range of menus (two courses) suitable for an evening meal
- must meet the nutritional requirements for a pregnant woman
- must be a main course dish.

Evaluation (specific requirements of assignment)

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

Assignment 2

A new WHO guideline recommends adults and children to reduce their daily intake of free sugars to less than 10% of their total energy intake. (World Health Organisation, 2015)

With reference to the above statement, discuss the health risks associated with a diet that is high in sugar. Research and elaborate on the nutritional needs and the meal planning guidelines that should be considered when planning and preparing meals for people who wish to reduce sugar in their diet.

Having regard to the factors identified in your research, suggest a range of dessert dishes / modified dessert dishes suitable for a diabetic **or** a person who wishes to reduce their sugar intake.

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

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

2018

Key requirements of the assignment:

- *health risks associated with a diet high in sugar*
- *nutritional needs and meal planning guidelines for people who wish to reduce sugar in their diet*
- *range of dessert dishes / modified dessert dishes suitable for a diabetic **or** a person who wishes to reduce their sugar intake*
- *dessert dish (identified in research).*

Investigation

Health risks associated with a diet high in sugar:

Weight gain / obesity; cardiovascular disease e.g. heart disease; stroke; high blood pressure; high blood sugars; type 2 diabetes; tooth decay; 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 foods release glucose steadily over several hours so less insulin is required; diabetics need to be aware of the total carbohydrate (sugar and starch); vitamin C / iron absorption; vitamin D / calcium absorption; current nutritional guidelines re nutrient and food intake; etc.

Meal planning guidelines:

Use food pyramid to ensure balanced meals; eat regular meals to avoid hypoglycemia, and one or more snacks to maximize insulin action / minimise swings in blood sugar levels; snack healthily to keep blood sugars and energy levels stable; beverage choices are as important as food choices; watch saturated fat content in low sugar recipes e.g. coconut oil high in saturated fats; use artificial sweeteners in tea / coffee; avoid refined carbohydrate and processed foods (they have a higher GI); protein and fat lower the GI of a carbohydrate rich food; limit intake of sweet / sugary foods; buy tinned fruit in its own juice not in a syrup; choose high fibre cereals instead of sugary varieties; use healthy cooking methods i.e. steaming, etc.; artificial sweeteners give a sweet taste but have little or no effect on glucose levels; check food labels for sugars e.g. sucrose, glucose, fructose, etc.; avoid convenience foods; introduce more home cooking; plan meals in advance; etc.

Range of dessert dishes / modified dessert dishes:

Dish selected - *must be low sugar / no sugar / sugar modified*

Evaluation (specific requirements of assignment)

Analysis of findings regarding what you learned from the investigation regarding points to be considering for people who wish to reduce sugar in their diet; how the selected dish meets the requirements as identified in the investigation etc.

Area of Practice B: Food Preparation and Processes

Assignment 3

The use of yeast in home baking has become popular as a result of TV cookery programmes.

Carry out research on the use of yeast as a raising agent in home baking.

Refer to: types of yeast used, the underlying principles and examples of dishes.

Investigate and elaborate on the key points that should be observed to ensure success when using yeast in home baking.

Prepare, cook and serve **one** of the dishes (sweet or savoury) from your research.

Evaluate the assignment in terms of **(a)** implementation **(b)** the advantage **or** the disadvantage of baking with yeast at home and **(c)** cost of the dish in comparison to a similar commercial product.

2018

Key requirements of the assignment:

- *research on types of yeast used*
- *underlying principles of yeast as a raising agent*
- *examples of dishes using yeast*
- *the key points that should be observed to ensure success when using yeast in home baking*
- *chosen dish (sweet or savoury - must contain yeast).*

Types of yeast available:

Fresh yeast / cake / compressed yeast: *creamy beige / pale grey brown in colour; soft and crumbly; beery smell; compressed into a block of fresh yeast cells that contain about 70% moisture; lasts 2-3 weeks in fridge or frozen up to 2 months; blend with tepid liquid; should become frothy before adding to flour; use 15g fresh yeast to 450g flour; etc.* **Dried yeast:** *available in pre-packed, pre-measured sachets; brownish grains; most of the water has been removed in the drying process; lasts up to 6 months; more concentrated than fresh yeast; 7g dried yeast = 15g fresh yeast; requires food, moisture and warmth before being added to flour; appears frothy; etc.* **Fast action dried yeast:** *a blend of finely powdered dried yeast and flour improvers e.g. vitamin C which helps speed up fermentation process, reduces the rising time; is added directly to dry ingredients; only requires one kneading and one rising; 7g to 450g flour; etc.* **Sourdough starter:** *can be created by combining flour and water, which is allowed to ferment by airborne yeast; can include commercial yeast to speed up fermentation process; fermentation of dough using naturally occurring lactobacilli and yeast; added to dough as required; stored in refrigerator; can be dried; gives sour dough bread a distinctive flavour – from a subtle hint of sourness to a strong sour tang; etc.*

The underlying principles of yeast in home baking:

Fermentation: *yeast breaks down the starch and sugar in the dough forming CO₂, alcohol and energy, occurs in stages and works on the action of enzymes; enzyme diastase in flour converts starch to maltose; enzyme maltase in yeast converts maltose to glucose; enzyme invertase in yeast converts sucrose to glucose and fructose; enzyme zymase in yeast converts glucose and fructose to CO₂ and alcohol; gluten matures and becomes elastic and springy; etc.* **Rising (proving):** *dough expands and rises in a warm environment; CO₂ expands and rises pushing the dough upwards; yeast is killed by **high temperature of oven**, and rising process stops; alcohol evaporates and gluten sets; surface starch changes to dextrin, forming a brown crust on the dough; etc.*

Examples of dishes using yeast: *yeast bread; croissants; doughnuts; hot cross buns; Chelsea buns; pizza; etc.*

Key points that should be observed to ensure success when using yeast in home baking:

Use the correct amount of yeast and correct proportions of ingredients; sugar provides food; salt can slow down the growth of yeast, too much can kill the yeast; use strong flour - high gluten content; vitamin C speeds up fermentation and reduces rising time by 1/3; where fat is used in a recipe, add a little extra yeast; eggs entrap air in a mixture and help achieve a lighter end product; yeast works best at a warm temperature around 20 - 27°C; knead to develop and stretch the gluten in the flour; yeast is destroyed at temperatures above 55°C; knocking back dough creates and traps little bubbles of CO₂; shaping of dough; proving in a warm place to double in size; prove overnight in refrigerator; high oven temp 220°C, kills the yeast; etc.

Dish selected - *chosen dish from research must contain yeast (sweet or savoury)*

Evaluation (specific requirements of assignment)

(a) implementation **(b)** the advantage **or** the disadvantage of baking with yeast at home **(c)** cost in comparison to a similar commercial product.

Area of Practice D: Properties of a Food

Assignment 4

One of the simplest ways to flavour food is to marinate it, and the key to mastering a good marinade includes combining quality ingredients and time.

Carry out research on **each** of the following:

- definition of the term 'marinade' and the different types of marinades
- the reasons for using marinades in food preparation
- the principles underlying the use of marinades
- a range of dishes that illustrate the use of the different marinades investigated.

Prepare, cook and serve **one** of the selected dishes where a marinade is used.

Evaluate the assignment in terms of **(a)** implementation **(b)** the success of the marinade in achieving its intended purpose.

2018

Key requirements of the assignment:

- *definition of the term 'marinade' and the different types of marinades*
- *reasons for using marinades in food preparation*
- *principles underlying the use of marinades*
- *a range of dishes that illustrate the use of the different marinades investigated*
- *chosen dish (must use a marinade identified in research).*

Investigation

Definition of the term 'marinade': *mixture of oil, wine, vinegar, spices, herbs or similar ingredients, in which meat, fish and other food is soaked before cooking in order to flavour or soften it; etc.*

Different types of marinades and a range of dishes illustrating the use of the different marinades investigated:

Wet marinade / rubs: *salt, oil and acid mixed to form a dense paste which sticks to and coats the food; etc.*

Dishes: *chicken satay, paprika pork, etc.* **Dry marinade / rubs:** *mixture of herbs / crushed spices / salt / mustard / sugar with little oil, vinegar / citrus juice applied by friction on the surface of the food, infuses flavour through the food; etc.* **Dishes:** *beef rib marinade, garlic and rosemary chicken, etc.*

Enzymatic marinades: *based on fruits e.g. pineapple, papaya, oranges, figs, rubbed on foods; etc.* **Dishes:** *orange balsamic glazed ribs, Asian flank steak, etc.* **Acid marinades:** *liquid base of acid, oil, soya sauce, herbs / spices; acids breakdown the connective tissue in meat; etc.* **Dishes:** *marinated root vegetables, Moroccan chicken, etc.* **Brine marinades:** *dry brine / wet brine - salt / sugar / brine solutions trap moisture in food; etc.* **Dishes:** *maple brined pork loin, etc.* **Dairy marinades:** *buttermilk, yoghurt etc.; not as tough as acid marinade; calcium activates enzymes to encourage denaturation; etc.* **Dishes:** *tandoori chicken kebabs, chicken tikka masala, etc.*

Reasons for using marinades: *enhances the flavour of food; improves tenderness; economical as cheaper cuts of meat can be used; improves the satiability of less attractive cuts of meat; adds variety to the dish; reduces moisture loss so makes food juicier; to extend the shelf life; makes food healthier; etc.*

The principles underlying the use of marinades: *spices, garlic, herbs, onion etc. gives **flavour**; food must be covered completely in marinade so that it can work on the exposed surface; oil carries the flavours of seasonings into foods; acid e.g. wine, vinegar, citrus fruits, yogurt, etc. break down the protein chains and connective tissue making meat fibres more **tender**; oils e.g. sesame, sunflower, olive oil etc. hold moisture in meat, giving a juicier end product as moisture loss is reduced during cooking; yoghurt tenderises meat and forms a soft crust on food as it cooks; smaller cuts of meat or tender foods such as fish or vegetables need a shorter marinating period etc.; tenderisation occurs as a result of acid ingredients e.g. sherry, wine vinegar, soy sauce; this acidity breaks down the muscle fibres and connective tissue of meat; etc.*

Dish selected - must use marinade identified in research

Evaluation (as specified in assignment)

(a) implementation (b) the success of the marinade in achieving its intended purpose e.g. tenderising, moistening food, adding flavour, etc.

Area of Practice E: Comparative Analysis including Sensory Analysis

Assignment 5

There is a wide range of yogurts available on the Irish food market to suit all tastes and dietary requirements.

Carry out research on the different brands and flavours of yogurt available.

Using **two** different brands of yogurt, both the same flavour, carry out a **paired preference test** to determine which brand of yogurt is preferred by the class group.

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

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Key requirements of the assignment:

- *research different types of yogurt available (i.e. brands and flavours)*
- **paired preference test**
- *conditions to be controlled during testing*
- **selected products** of your choice (*different brands of yogurt, same flavour*).

Investigation

= 24

- Research / Investigation of products appropriate to the testing
i.e. investigate the different types of yogurt available i.e. brands and flavours.

- **Paired preference test**

Description: *tester is presented with two samples of yogurts (two different brands, both same flavour) and the testers select product that they prefer.*

Aim of test: *to determine which of the two samples of yogurt is preferred by testers.*

Possible outcomes: *by tasting the yogurt samples it should be evident which one is preferred by the testers.*

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; hygiene; timing; where testing takes place; dietary considerations; etc.

- **Selected dish / product**
Selected products

= 4

Sources: 2 @ 2 marks

= 4

Preparation and Planning

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

= 8

Paired Preference Test: *6 trays; 6 glasses of water; 12 coded containers; 6 samples of yogurt A; 6 samples of yogurt B; 6 score-cards; record sheet; pen; etc.*
(numbers determined by the testing group size)

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.

Paired Preference Test (two products)

Code containers with symbol □ and symbol ◇; put yogurt samples in each container; set up trays, each tray has one container labelled with symbol □, one container with symbol ◇; testers follow instructions on score card; taste each sample; indicate preference by placing a tick beside the preferred sample on the record sheet; scorecards are collected by the recorder and results transferred onto prepared record sheet; calculate the number of ticks for each product; reveal codes and present results; results can be presented on bar chart / pie chart / table; tidy; wash up; evaluate results; etc.

- **Key factors considered (any 2 @ 4 marks each)**

= 8

*Key factors that may be considered in order to ensure success in this assignment include - conditions **controlled** during testing; coding; choice of yogurts 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; 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, hygiene: 1 point @ 2 marks)**

= 4

***Safety:** check date on yogurts to avoid food poisoning; storage of yogurts; testers with allergies – product with nuts etc.; special diets e.g. lactose intolerant; etc.*

***Hygiene:** good practice with regard to preparation area and the testing area; use separate spoons for testing each sample to avoid contamination; handling of samples – use of plastic gloves / disposable glasses; etc.*

Evaluation (3 points @ 4 marks each)

= 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.

- **Specific requirements of the assignment**

Students should evaluate the results obtained for the Paired Preference test and draw some conclusions. The factors that may contribute to the test results obtained should be analysed.

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 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.

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