



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

**Leaving Certificate 2022**

**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

*Instructions to candidates*

**Section A** 30 marks

Answer **five** questions in this section.  
Each question carries 6 marks.

**Section B** 130 marks

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

**Section C** 40 or 80 marks

Answer **one** elective question or question 4 (core) to include **part (a)** and either **part (b) or (c)**.  
If you submitted *Textiles, Fashion and Design* coursework for examination, you may only attempt Question 2 from this section.

**Grading Table - 240/200**

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

*In developing the marking schemes the following should be noted:*

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

## Annotations-Home Economics 2022

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

Annotation	Explanation
<span style="border: 1px solid red; padding: 2px;">0</span>	Zero marks awarded
✓ 1	<b>One</b> mark awarded
✓ 2	<b>Two</b> marks awarded
✓ 3	<b>Three</b> marks awarded
✓ 4	<b>Four</b> marks awarded
✓ 5	<b>Five</b> marks awarded
✓ 6	<b>Six</b> marks awarded
✓ 7	<b>Seven</b> marks awarded
✓ 8	<b>Eight</b> marks awarded
}	Blank page
<span style="border: 1px solid red; padding: 2px;">F</span>	Excess point awarded full marks
<span style="border: 1px solid red; padding: 2px;">P</span>	Excess point awarded partial marks
<span style="border: 1px solid red; padding: 2px;">&lt;</span>	Point/work not attempted
<span style="border: 1px solid red; padding: 2px;">A</span>	discount mark
<span style="border: 1px solid red; padding: 2px;">P1</span>	deduct 1 mark

<b>P2</b>	deduct 2 marks
<b>P3</b>	deduct 3 marks
<b>P4</b>	Deduct 4 marks
<b>P5</b>	deduct 5 marks
<b>P6</b>	deduct 6 marks
<b>P7</b>	deduct 7 marks
<b>P8</b>	deduct 8 marks
<b>P9</b>	deduct 9 marks
<b>P10</b>	deduct 10 marks
MMS	Modified marking Scheme

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

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

1. State **two** functions of calcium in the body.

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

Formation of strong bones and teeth; blood clotting; regulate blood pressure; normal muscle contractions; regular heartbeat; normal nerve function; etc.

Identify **one** factor that affects calcium absorption.

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

Vitamin D; oestrogen; acidic environment/Vitamin C; protein; etc.
tannins; fat; phytates/phytic acid; oxalates/oxalic acid; etc.

2. Complete the table below in relation to the digestion of carbohydrates.

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

Secretion	Enzyme	Substrate	Product
Pancreatic juice	Amylase	Starch	Maltose

3. In relation to proteins, explain foam formation.

**Explain 2 points @ 2 marks (graded 2:0)**

**Foam Formation** –when egg white is whisked air bubbles are formed; whisking generates sufficient heat to slightly coagulate the egg albumin around the air bubbles; etc.

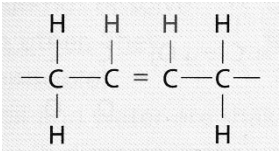
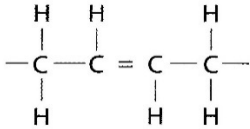
Give **one** culinary example of foam formation.

**Culinary example - 2 marks (graded 2:0)**

**Culinary example** – meringues; pavlova; soufflé; sponge cake; etc.

4. Describe how the chemical structure of cis fatty acids and trans fatty acids differ.

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

Cis Fatty acids	Trans Fatty acids
<p>Hydrogen atoms on either side of the double bond are on the same side of the carbon chain i.e. both are on the upper or on the lower side of it; etc.</p> 	<p>Hydrogen atoms on either side of the double bond are on opposite sides of the carbon chain; etc.</p> 

5. Outline **three** guidelines to follow to achieve a light pastry.

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

Correct ratio of ingredients; ingredients accurately weighed; cold ingredients and utensils; avoid overworking; introduction of air; careful addition of liquid; resting time; chilling time; light rolling in one direction; oven preheated to a high temperature; blind bake when appropriate; reduction of oven temperature after initial cooking time; etc.

6. In relation to freezing, describe quick-freezing.

Give **one** advantage of quick-freezing.

**Process 2 points @ 2 marks (graded 2:1:0)**

**Advantage 1 point @ 2 marks (graded 2:0)**

**Process**

Food is frozen @ -25°C; small ice crystals are formed; etc.

**Advantage**

Little damage to cell walls of food; little loss of nutrients; texture retained; colour retained on thawing; etc.

7. State a different benefit of each of the following types of food packaging:

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

<b>Polystyrene</b> Lightweight; resistant to bacterial growth; provides insulation; durable; recyclable; cost-effective; can be easily moulded; easy to stack; shock absorption qualities; etc.
<b>Glass bottle</b> Reusable; hygienic; protects from contaminants; suitable for heat treatments; variety of shapes/sizes/colours; transparent; re-sealable; easy to recycle; etc.
<b>Waxed carton</b> Biodegradable; recyclable; low in cost; easy to open; easy to print on; suitable for sterilising; waterproof; can be heat-sealed; lightweight; etc.

8. Identify **one** moist method of cooking suitable for fish.

**1 moist method of cooking @ 2 marks (graded 2:0)**

**Moist methods of cooking:** boiling; simmering; poaching; steaming; stewing; etc.

Describe the underlying principle of the cooking method named.

**Underlying principle 2 points @ 2 marks (graded 2:0)**

Convection transfer of heat by currents in air, liquid or steam; hot air or liquids rise when heated and fall on cooling; etc.

Conduction transfer of heat by passing of heat from one molecule to the next; etc.

9. Outline the function of each of the following in relation to food additives:

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

Anti-caking agent – prevents lumping in dried food; etc.

Emulsifier – prevents separation of oil and water in food; etc.

10. In relation to an individual's income, explain each of the following:

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

**Pay Related Social Insurance (PRSI)** compulsory pay related deduction from gross income; provides for social welfare/benefits; employees and employers share the cost; different PRSI classes; etc.

**Universal Social Charge (USC)** compulsory tax payable on gross income; paid before pension contributions; calculated as % of a person's total income; 0.5% - 11% - rate increases with increase in income; employees are liable to pay USC tax if their gross income is more than €13,000 annually; exempt if earning less than €13,000 annually; etc.



11. Name **one** statutory consumer protection agency.

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

Outline the role of the statutory agency named.

**Role 1 point @ 3 marks (graded 3:2:0)**

**Competition and Consumer Protection Commission (CCPC)** enforces a range of consumer protection laws; investigates illegal practices; informs consumers about their rights; informs consumers about personal finance; provides information through a website, helpline and public awareness campaigns; involved in enforcing product safety regulations for non-food products e. g. toys; advises government on consumer legislation; etc.

**Office of the Ombudsman** investigates complaints against public bodies e.g. Government Departments; HSE, An Post, Insurance Companies, Credit Institutions (Banks); used as a last resort if no resolution can be made between the consumer and Department/agency; etc.

**Citizen Information Board** provides information through phone services, website and in advice centres on consumer rights, social welfare payments; housing; family law; financial support such as The Money Advice and Budgeting Service (MABS); etc.

**National Standards Authority of Ireland (NSAI)** establishes standards in relation to food safety and quality in products; it implements the ISO 9000 scheme; etc.

**European Consumer Centre (ECC) Ireland** provides information and advice on consumer rights when buying goods and services in other EU countries (including online purchases); provides assistance with settling disputes between consumers and EU traders; etc.

**District court/Small Claims Procedure:** investigates complaints lodged by consumers; issues Notice of Claim to respondent; if claim is disputed within 15 days the Small Claims register will try to resolve the issue; etc.

12. Name **two** types of life assurance.

Identify **one** difference between the two types of life assurance named.

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

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

**Term life assurance** an individual's life is insured for a specified and agreed length of time; in the event of death during the term of cover, a lump sum of compensation is paid out to the dependents; if the person dies after the term of cover no payment is made; etc.

**Convertible term assurance** allows people to change their term insurance to a whole life assurance or endowment policy without losing the premiums they have already contributed; premiums are more expensive; etc.

**Whole life assurance** lasts for a whole lifetime; not limited to a specific time frame; the insured person's life is covered indefinitely, as long as the premium payments are made; an agreed sum is paid on death; etc.

**Endowment life assurance** combines whole of life assurance and a savings element; part of the payments are used to purchase whole of life assurance; the rest is invested in regular savings plans; a lump sum may be paid out on death or when the insured reaches a certain age; etc.

- 13.** State **two** pieces of information that should be found on a permanent label under the Fire Safety (Domestic Furniture) Order (1988, 1995).

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

Warning message 'carelessness causes fire'; name and address of manufacturer or importer; manufacturers identification and batch number; description of filling; description of cover material; details of fire-resistant interliner; etc.

- 14.** What information does each of the following symbols convey to the consumer?

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

**Green dot**

Indicates that the suppliers of the packaging have contributed financially to the cost of its recycling; etc.

**Eco Label**

Products and services that have this label are environmentally friendly and cause minimum damage to the environment; products have been audited on the energy or materials used during manufacture; their potential to pollute and reusability; etc.

## Section B

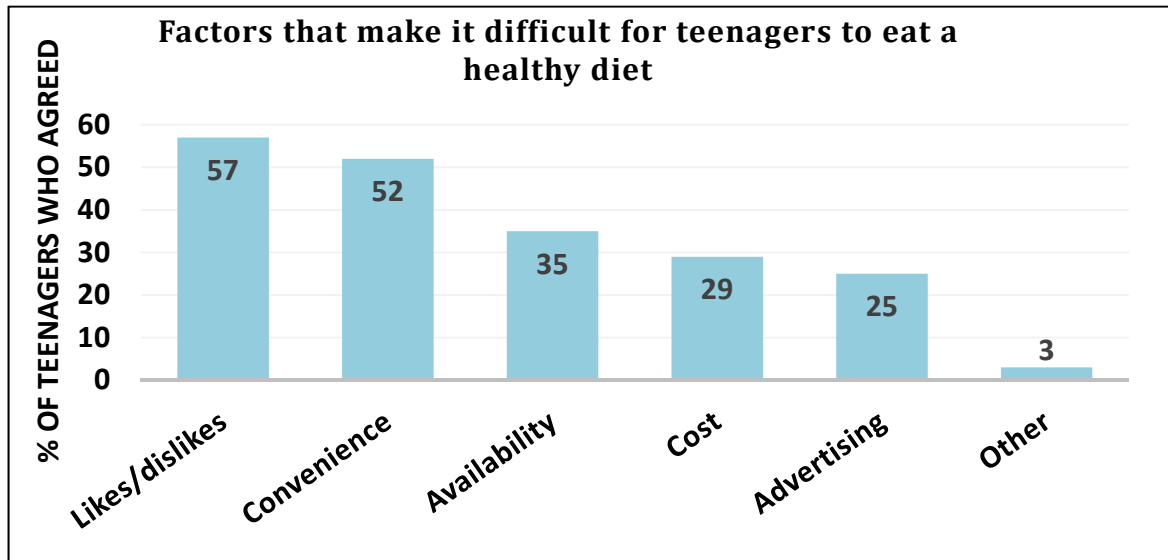
Answer **Question 1** and **one question** from questions 2, 3, 4, and 5.

Question 1 is worth 80 marks. Questions 2, 3, 4, and 5 are worth 50 marks each.

### Question 1

‘Health-related habits developed during teenage years tend to persist into adulthood’ (*iuna.net*)

The National Teens Food Survey II highlights the difficulties teenagers experience when trying to eat a healthy diet.  
(*adapted from iuna.net*)



- (a) Using the information provided in the chart, comment and elaborate on the factors that make it difficult for teenagers to eat a healthy diet. (20 marks)

**4 points @ 5 marks (graded 5:4:3:2:1:0)**

**Likes/dislikes** influence of the senses when eating; presentation of food; overconsumption of high salt/sugar foods; adapted taste buds to high fat/salt/sugar foods; introduction to unhealthy foods from an early age; etc.

**Convenience** availability of processed and convenience foods; eating on the go; busy lifestyle; canteen /deli foods; etc.

**Availability** foods in season; frozen meals/foods; location; food options available in shops/canteen; product placement; etc.

**Cost** money available; cheap processed foods; family income; cost-effective foods; etc.

**Advertising** product placement; digital advertising; social media; marketing strategies; new product advertising; influencers; celebrity endorsements; etc.

**Other** culture; sustainability; health status; emotional influences; family influences; lack of nutritional awareness; follow friends' eating patterns; etc.

- (b)** Give a detailed account of the dietary measures to follow when planning and preparing meals for teenagers. (20 marks)

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

Use of food pyramid to ensure balance; nutritional balance; physical growth spurt increases the need for intake of all nutrients; daily requirements of macro / micro nutrients including protein / carbohydrate / fat / iron / calcium requirements as appropriate to 12-18 year olds with reasons for possible variations; high fibre; Vitamin C / iron absorption; Vitamin D / calcium absorption; energy balance vis a vis activity levels; energy requirements peak in this age group when high growth rates and high activity levels coincide; current nutritional guidelines re nutrient and food intake; eat three balanced meals each day; avoid skipping meals; variety of foods; personal likes and dislikes; resource issues; foods in season; avoid unhealthy snack foods; foods high in salt; saturated fat and sugar; avoid serving soft drinks with meals, serve milk or water; convenient/easy to eat as teenagers may not have time to eat sitting down so select food that can be eaten using a fork only; easy & attractively served/portioned food; easy to keep hot; portion control; cooking methods; use fresh ingredients as opposed to processed where possible; suitable for different diets; etc.

- (c)** An adequate intake of Vitamin D is essential in a healthy diet.

Give an account of Vitamin D with reference to: (20 marks)

**Biological functions 4 points @ 2 marks (graded 2:0)**

Absorption of calcium; absorption of phosphorous; helping to form and maintain healthy teeth and bones; regulates balance of calcium between the blood and the skeleton; etc.

**Effects of deficiency 3 points @ 2 marks (graded 2:0)**

Rickets in children; osteomalacia in adults; osteopenia; osteoporosis; tooth decay; etc.

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

White crystalline solid; fat soluble/insoluble in water; heat stable/unaffected by cooking or heat treatments used in food processing; unaffected by oxygen; unaffected by acids; unaffected by alkalis; etc.

- (d)** Discuss how the health status of an individual can influence their choice when purchasing foods. (20 marks)

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

Special dietary requirements; restricted diets; lactose free; coeliac; diabetic; low cholesterol; allergies; gluten intolerance; high blood pressure; IBS; maintaining a healthy weight; metabolism; etc.

## Question 2

Vegan diets are increasing in popularity; however, these diets require careful planning.

- (a) Identify **three** nutrients that could be deficient in a vegan diet and outline a strategy to prevent the deficiency of each nutrient. (18 marks)

**3 points @ 6 marks (graded 6:4:2:0)**

**(name nutrient 2 marks (graded 2:0) strategy 1 point @ 4 marks (graded 4:2:0) ) x3**

**Protein** include a combination of wholegrains; soya beans contain HBV; legumes, vegan Quorn, seeds & nuts contain LBV; focus on complementary / supplementary value of proteins; etc.

**Calcium** use fortified products; include plant-based sources; include Vitamin D rich foods; include phosphorous rich foods; avoid foods that hinder absorption; etc.

**Iron** include plant sources; combine with foods rich in Vitamin C; avoid foods that hinder absorption; etc.

**Vitamin D** include fortified foods; vitamin D supplements may be necessary; sunshine is also a source; etc.

**Vitamin B12** include fortified products; supplements may be required; etc.

- (b) Set out details of an alternative protein food you have studied. (20 marks)  
Refer to:

- **name 2 marks (graded 2:0)**

- **stages in manufacture 6 points @ 3 marks (graded 3:2:0)**

**Textured Vegetable Protein** soya beans are cleaned and prepared; oil extracted; ground into flour; addition of ingredients; extruded and shaped; cooked and dried; packaged; labelled; etc.

**Mycoprotein** fungi are fermented; addition of ingredients; harvested, purified and dried; bound; addition of additives; textured and shaped; steamed; shaped into products/quorn; packaged; labelled; etc.

**Tofu** soya milk is curdled; the curds are pressed into blocks; soft cheese-like texture formed; can be smoked; packaged; labelled; etc.

**Soya milk** soya beans are cleaned; soaked in water; ground with soaking water; the mixture is heated; filtered; flavoured; may be homogenised; pasteurised, sterilised or dried; packaged; labelled; etc.

**Soya yoghurt** non-dairy bacteria culture is added to soya milk; mixed; sugar may be added; mixture is warmed to 30°C to 40°C; mixture is transferred to a thermos flask or electric yoghurt maker; incubated for 12 hours to ferment; fruit may be added; additives; packaged; labelled; etc.

**Tempeh** soya beans are cleaned, cooked and dehulled; infused with mould spores; packed into containers; heated to 30°C; left to ferment for 24 hours; packaged; labelled; etc.

**Miso** soya beans are cleaned; inoculated with a mould; water and salt are added; rice or barley may also be added; allowed to ferment; paste formed; packaged; labelled; etc.

- (c)** Indicate how European Union (EU) legislation in relation to food additives protects the consumer. (12 marks)

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

Additives are tested; provide a list of approved additives; 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 mislead consumer; must be used in smallest possible effective quantity; restricted in some foods; the Food Safety Authority of Ireland (FSAI) are responsible for enforcing the safe use of food additives; etc.

### Question 3

Micro-organisms and enzymes have a role to play in food spoilage and food production.

- (a) Discuss the role of enzymes in relation to food spoilage. (15 marks)

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

**Over-ripening** enzymes ripen food; enzymes continue to work after ripening, food over-ripens; food decays; etc.

**Enzymic browning** when some fruit and vegetables are cut or peeled, oxidase is released; reacts with the oxygen in the air (oxidation); causes browning; etc.

**Enzymic deterioration** enzymes in fish cause deterioration even at low temperatures; releasing a putrid odour; unblanched fruit and vegetables may be spoiled in the freezer; the enzyme oxidase is activated by oxygen and can destroy some vitamins; etc.

- (b) Name and give details of **one** type of mould.

Refer to:

- **name 1 @ 2 marks (graded 2:0)**
- **characteristics/description 3 points @ 3 marks graded (3:0)**
- **conditions necessary for growth. 4 points @ 3 marks (graded 3:2:1:0)** (23 marks)

Name	Characteristics
<b>Mucor</b>	Saprophytic mould; white hyphae; grey sporangia; reproduces sexually and asexually; optimum temperature of 30 °C to 40 °C; etc.
<b>Rhizopus</b>	Saprophytic mould; fluffy white mycelium; black pin-head sporangia; reproduces asexually and sexually; optimum temperature of 30°C to 40°C; etc.
<b>Penicillium</b>	Saprophytic mould; green-blue with powdery texture; optimum temperatures of 20°C to 25°C; reproduces asexually; etc.
<b>Aspergillus</b>	Saprophytic mould; black or green mould; favour temperatures of 20°C to 25°C; reproduce asexually; etc.

#### Conditions necessary for growth

**Food** saprophytic, feeding on bread, jam, cheese, fruit; etc.

**Oxygen** Aerobic, grow on the surface of food; etc.

**Temperature** Most are mesophilic, temp below 15°C slows down growth, freezing inactivates, temp above 75°C destroys mould; etc.

**Moisture** require moisture to grow, grow best in humid conditions; etc.

**pH level** moulds grow best in slightly acidic environments (pH 4 to 6), extreme acidic or alkaline conditions will inhibit mould growth; etc.

**Time** 24 to 48 hours required to grow and multiply; etc.

- (c) Assess the uses of micro-organisms in food production. (12 marks)

**3 points @ 4 marks (graded 4:3:2:1:0)**

Yeast produces CO<sub>2</sub>, raising agent in bread; bacteria/lactobacilli ferments yoghurt; bacteria flavours salami; moulds/penicillium flavours cheese; fungi ferments Quorn; etc.

#### Question 4

'Homeownership is good for individuals, families and communities.' (*Housing for All, 2021*)

- (a) Analyse the socio-economic factors that determine housing choices for potential buyers.

(16 marks)

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

Purchase cost; location; amenities; BER rating/ energy efficiency; size of the household; ages of children; special needs of family members; potential for future use; storage; personal preference; facilities for working from home; outside space; investment potential; etc.

- (b) Discuss the conditions that lending institutions require for potential buyers in order to qualify for a mortgage.

(24 marks)

**4 points @ 6 marks (grade 6:4:2:0)**

Term of the loan older applicants may have to repay over shorter term;  
amount to be borrowed up to three and a half times the gross salary;  
deposit – 10% deposit required by first-time buyers;  
income proof supplied such as P60 or salary slips;  
good credit history; regular saver; etc.

- (c) Explain how consumers are protected by the Sale of Goods and Supply of Services Act (1980) when availing of the services of an electrician in the home.

(10 marks)

**2 point @ 5 marks (graded 5:3:0)**

Act confers a legally binding contract between consumer and tradesperson; goods used and service must be fit for purpose intended; service must be provided by a registered skilled person; have appropriate insurance; due care and diligence; cert should be provided on completion; quality materials must be used; right to redress; etc.



### Question 5

Marriage and families are recognised social structures.

- (a) Describe the legal obligations for marriage in Ireland. (16 marks)

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

Over 18: both partners must be over 18 years of age; etc.

Mental capacity: both partners must have the mental capacity to understand the nature of marriage; this may not be present if either party is intoxicated, mentally impaired due to drugs or mentally ill; etc.

Notification: three months' notice given to church for a religious ceremony; to a registrar for a civil marriage ceremony; etc.

Registered venue: ceremonies must take place in registered building; etc.

Free to marry: neither spouse may be in an existing marriage; both parties must be single, widowed or divorced; etc.

Voluntary basis: both partners cannot be forced to marry against their wishes; etc.

Wedding registration: marriages must be registered after ceremony; etc

Not closely related: partners must not be close blood relatives; must not be closely related through marriage; etc.

- (b) Analyse how socio-economic factors have affected the changing roles of older family members in contemporary society. (20 marks)

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

Changing family structures; less defined roles; older people are less dependent on their children; grandparents more actively involved in childcare; older family members often indirectly teach young people respect; provide emotional support; more relaxed with grandchildren and can be positive role models for their grandchildren; increase in number of one-parent families support from grandparents; lifespan extended; high cost of living grandparents help financially; requirement for childcare; increased state welfare entitlements for older people; children dependent on parents for longer; etc.

- (c) State why it is important to make a will and outline the procedure involved in making a will. (14 marks)

**why 2 points @ 2 marks (graded 2:0)**

**Procedure 5 points @ 2 marks (graded 2:1:0)**

**Why** peace of mind; wishes will be carried out; major problems avoided; property passes to people you choose; amount of inheritance tax paid by dependents can be reduced; funeral and burial arrangements can be included; etc.

**Procedure** may employ a solicitor; draw up list of assets; list details of beneficiaries – names, addresses, dates of birth; appoint executor; allocate assets/estate; include provision for funeral and burial arrangements; will is formally drawn up; signed in the presence of two witnesses; lodge in safe place; etc.

## Section C

Answer **one** elective question **or** Question 4 (core), to include **part (a)** and either **part (b) or (c)**.  
If you submitted *Textiles, Fashion and Design* coursework for examination,  
you may only attempt Question 2 from this section.

### 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)** ‘Working from home in separate home offices can improve work-life balance.’  
(*The Irish Times*, 2021)

- (i) Identify and describe **three** professional services that could assist individuals when modifying their home to include a home office space. (15 marks)  
**3 points @ 5 marks (graded 5:4:2:0)**

**Architect** advises on site, house design; oversees construction; etc.

**Structural/Site engineer:** oversee house construction and advises re building problems; etc.

**Surveyor** survey site, identify possible problems and suggest solutions; etc.

**Solicitor** contracts; lodge title deeds with lending institution in the event of a loan; draws down payments; etc.

**Builder** draws up building contract re costs and completion dates; site preparation; sub contract work to specialists; deals with snag list; etc.

**Interior Designer; Landscaper Architect; Electrician; Plumber; BER Assessor;** etc.

- (ii) Recommend a suitable floor covering that can be used in a home office.  
Refer to:

- **name of floor covering 2 marks (graded 2:1:0)**
- **factors to consider when selecting a floor covering 4 points @ 3 marks (graded 3:2:0)**  
cost; function of the room; ease of maintenance/cleaning; aesthetics; safety; subfloor; etc.
- **properties 3 points @ 2 marks (graded 2:0)** (20 marks)

Floor covering	Properties
Tiles ceramic	Hard-wearing; easy to clean; low maintenance; hard underfoot; stain resistant; fire resistant; cold; crack/chip easily; etc.
Flagstone/cut stone; stone carpeting	Hard wearing; cold underfoot; chips easily; etc.
Tiles slate tiles chinese slate	Hard wearing; warm underfoot; uneven texture; slightly absorbent; easy to clean; etc.
Tiles marble tiles; limestone tiles/slabs;	Cold underfoot; chips easily; hard-wearing; easy to clean; low maintenance; hard underfoot; etc.
Mosaic tiles	Hard wearing; cold; easy to clean; etc.

Wood – hardwood e.g. oak, beech maple; soft wood e.g. pine, spruce; Parquet; etc.	Durable; low maintenance; most are ready sealed; noisy; cold; marked and scratched easily; etc.
Vinyl - sheets or tiles	Warm and soft underfoot if foam backed; durability varies with thickness; scorches and melts when subjected to heat; easy to clean and maintain; stain resistant; quiet; etc.
Cork - sheets or tiles	Warm underfoot; resilient; porous so will stain if not sealed; etc.
Carpet -wool; nylon; polyester; acrylic; carpet tiles; Woven/ hessian backed; tufted; etc.	Good insulator; good noise absorber; non-slip; easy to maintain; soft underfoot; hard wearing; etc.
Accept: linoleum; concrete; etc.	

- (iii) Outline how colour, pattern and texture can be used to enhance the interior design of a room.

(15 marks)

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

**Colour** primary, secondary, tertiary colours; warm, cool, pastel and neutral colours; contrasting; complementary; monochromatic; harmonious colour scheme; shade, tint, tone; colour can be used to link rooms in a house; alter the proportions of a room; highlight good features; create atmosphere; aspect of the room may influence the choice of colour; bright colours reflect light and can make a room appear larger; dark colours absorb light and can make a room look cosier; etc.

**Pattern** add variety and contrast; add interest; large scale; small-scale patterns; bold patterns; linear patterns; etc.

**Texture** adds interest smooth/rough, cold/warm; contrasting textures; matt; shiny; etc.

and

1.(b) 'Proper ventilation is very important.' (*seai.ie*)

- (i) Describe the effects of poor ventilation in the home. (12 marks)

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

Stale air; high humidity levels; condensation; smells may linger; poor combustion; build-up of carbon monoxide; lack of oxygen; increased carbon dioxide; aggravates asthma, bronchitis; structural damage – dampness, mould growth; stuffy room; etc.

- (ii) Recommend **one** artificial method of ventilation suitable for a kitchen.  
Explain the underlying principle of this method. (18 marks)

**Name 2 marks graded (2:1:0), underlying principle 4 points @ 4 marks (graded 4:2:0)**

Artificial methods

**Extractor fan** the shutters open when the fan is turned on; the electric motor rotates the blades; rotation creates suction; drawing stale air out of the room; replaced by fresh air; shutters close when not in use; etc.

**Cooker hood** an electric motor rotates a fan; high speed fan creates a suction; drawing in warm, odour-laden greasy air; ducted air is expelled to the outside; filter absorbs grease; ductless filters remove fumes and absorb grease; purifying the air; recirculates the air back into the room; etc.

**Modified heat recovery ventilation system** - a low energy ventilation unit is located in the attic moist stale air is removed from the home through ceiling ducts; incoming air passes through filters within the ventilation unit to remove pollutants; passed through a heat exchanger within the ventilation power unit; warm, clean, fresh filtered air is distributed around the home through a series of ducts to each room; etc.

or

1.(c) '25% of the energy used in Ireland is used in our homes.' (*seai.ie*)

- (i) Set out details of solar energy as an energy supply source to the home. (18marks)  
Refer to:

- a system used in the home to utilise solar energy 2 points @ 3 marks (graded 3:2:0)

**Solar photovoltaic systems**, sunlight absorbed by solar panels is converted into electricity using semiconductor materials; solar PV battery etc.

**Passive solar architecture**, orientating a house south/south-west and installing large glass windows to maximise sunlight; etc.

**Active solar heating/solar panels**, sunlight/heat absorbed by solar panels and converted to energy which heats the hot water; etc.

- merits of using solar energy 3 points @ 3 marks (graded 3:2:0)

**Merits** - hot water is always available for space heating and use within the home; reduced heating costs; some types don't need direct sunlight – can work on energy from wind, rain or sun; reduced electricity bills and little running costs e.g. servicing; no smoke or carbon dioxide emissions released; etc.

- sustainability 1 point @ 3 marks (graded 3:2:0)

**Sustainability** – the sun is a renewable energy source; could supply a large proportion of the world's energy requirements for an infinite period; etc.

- (ii) Explain, giving an example, the underlying principle of a method of insulation used in the home. (12 marks)

**Underlying Principle 2 points @ 4 marks (graded 4:2:0)**

**Example @ 4 marks (graded 4:0)**

### **Underlying Principle**

Air, polystyrene, fibreglass, wool, cellulose fibre are poor conductors of heat; prevent heat from escaping; have very good insulating properties; redirect heat back into the house; etc.

### **Examples**

fibreglass; foam; cavity walls – air; polystyrene; wool; underlay; carpet; double/triple glazing; draught proofing; heavy lined curtains; secondary windows; permanently insulated cylinder; lagging jacket; split foam sleeves; 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)** ‘Smart casual is a fusion of two contrasting dress codes.’ (*Louis Copeland*)



([www.shutterstock.com](http://www.shutterstock.com))

**(i)** Evaluate the design of the outfits shown in the image above.  
Refer to:

- comfort
- aesthetic appeal
- lifestyle

(15 marks)

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

**Comfort** – loose fitting trousers; soft fabric in t-shirt; absorbent materials; buttons on shirt; casual blazer; comfortable trainers; etc.

**Aesthetic appeal** – appeals to professionals; can be worn during time-off also; relaxed looks; etc.

**Lifestyle** - smart casual can be worn to work or for time off; can be worn for multiple occasions without having to change; greater convenience; trainers for comfort and dress down an outfit; etc.

**(ii)** Discuss how colour can be used to flatter body size and shape. (10 marks)

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

**Colour** – Tonal dressing i.e. wearing varying shades of the same hue can be impactful as it offers depth; dark colours such as navy and black absorb light outlining a person’s silhouette; single colour dressing can create an illusion of height; contrasting colours; complementary colours; certain colours enhance a person’s hair colour, eye colour and skin tone; blues are universally flattering shades; etc.

and

2.(b)

- (i) Differentiate between regenerated and synthetic fibres. (6 marks)  
**2 points @ 3 marks (graded 3:2:0)**

**Regenerated** created by dissolving the cellulose of plant fibres in chemicals and making it into fibre again; etc.

**Synthetic** polymer; from oil, coal or other protocol-based chemicals; 100% chemical; etc.

- (ii) Explain, filament modification, giving **two** examples. (9 marks)

**Explain – 1 point @ 3 marks (graded 3:0)**

**Examples – 2 @ 3 marks (graded 3:0)**

Techniques used to change or improve fabric properties; etc.

Examples blending; crimping; twisting; mercerisation; brushing; flame- resistant; stain- resistant; water repellent; etc.

or

2.(c) The functionality and aesthetic appeal of a garment has a strong influence on its design.

- (i) Describe **one** method of modifying a commercial pattern to tailor it to the specific needs of an individual. (9 marks)  
**3 points @ 3 marks (graded 3:2:0)**

lengthen - cut through alteration lines and insert tissue paper; redraw sewing/fitting lines;  
shorten - make a fold along one of the alteration lines; half the amount you want to reduce; alter waistlines, make alterations, to hiplines, sleeves, bust; etc.

- (ii) Discuss how traditional crafts have influenced Irish design and fashion industry. (6 marks)

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

hand-weaving and hand knitting; coatigans and coats knitted with traditional Aran stitches; Irish linen in various weights used in light tops and summer skirts to heavier coats and jackets; lace making and crochet feature frequently in wedding dresses; etc.

## Elective 3 – Social Studies – 80 marks

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

**3.(a)** According to CSO data, 216 959 people were estimated to be either out of work or in receipt of the government's pandemic unemployment payment in November 2021. ([www.cso.ie](http://www.cso.ie)).

**(i)** Define unemployment. (6 marks)

**1 points @ 6 marks (graded 6:3:0)**

Unemployment occurs when a person of working age is without work; are available for work; are seeking work; etc.

**(ii)** Discuss the following as contributory factors to unemployment in Ireland. (20 marks)

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

1 point on each and 2 other points

Refer to:

**changing requirements of industry**

increased automation; new technology companies; globalisation; economic recession; changes in skillset requirements; etc.

**geographical location**

variations in employment in different regions; areas where there is high unemployment can lead to further unemployment as people leave the area to find work elsewhere and consequently shops and services close; seasonal work; etc.

**level of consumer demand for products and services.**

cheaper imported goods have led to a fall in demand for Irish products; unemployed people spending less so demand for services has decreased; people have cut back on spending because they have had cuts to their income so spending power is reduced; Irish tourism affected by availability of reasonably priced foreign holidays; shopping on-line has offered cheaper option to purchasing products locally, etc.

**(iii)** Describe the effects of unemployment on society. (12 marks)

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

Children lack role models in terms of employment and a positive work ethic; pattern of unemployment develops over generations; boredom can lead to anti-social behaviour – drug or alcohol abuse, vandalism and crime; areas develop bad reputations; unemployment black spots; people forced to leave an area for employment; decrease in population has a negative impact on other businesses and services – can lead to further unemployment; higher unemployment leads to higher costs to the state in terms of social welfare payments; etc.



- (iv) Name **one** statutory initiative aimed at creating employment and outline how it helps to enhance employment options. (12 marks)

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

**Action Plan for Jobs:** government agencies and departments work together; support additional jobs; stimulate domestic economy; create employment in trade sectors; increase export market shares; etc.

**Industrial Development Authority (IDA)** – promote Ireland to foreign investors; provides support to potential foreign investors; financial grants; creates links between local industries, businesses, service providers, education institutions; etc.

**SOLAS:** up skilling those unemployed; apprenticeship programmes; CV training and access to job opportunities; etc.

**National Further Education and Training Authority;** responsible for funding, planning and co-ordinating training and further education programmes in conjunction with Education Training Boards (ETBs); provides community-based employment and training programmes aimed at the long term unemployed; etc.

**JobsPlus /Revenue Job Assist** employer incentive; encourages and rewards employers who employ jobseekers on the live register; aims to break the cycle where people need experience to get employment, but are unable to get experience because they don't have a job; etc.

**Enterprise Ireland** responsible for the development and growth of Irish enterprises in world markets; promotes the development of Irish food industry; helps agri-food businesses; provides grants for research; etc.

**Údarás na Gaeltachta** provides grants for business development in Gaeltacht areas; provides funding to community groups for training and upskilling; etc.

**Work Placement Experience Programme** gives people who never had a job or who have lost their job an opportunity to get work experience; provides the opportunity to re-train in a new role while on work placement in a host organisation; aged 18 to 65; unemployed for six months; in receipt of a qualifying social welfare payment; etc.

**Local Enterprise Offices** supports business start-ups; develop existing businesses; offer training; offer grants; provide mentoring service; etc.

and

**3.(b)** 'Everyone has a right to rest and leisure.' (UN, Universal Declaration of Human Rights)

(i) Analyse how young people benefit from participating in leisure activities. (12 marks)

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

Allows young people to relax and unwind; improve physical wellbeing; development of new skills; introduces challenges that result in a sense of satisfaction and wellbeing; enables young people to bond; encourages social interaction; encourages a healthy lifestyle; helps avoid isolation and loneliness; teamwork; etc.

(ii) Name and evaluate **two** popular leisure facilities you have studied.  
Refer to:

- **cost and value for money**
- **range of facilities offered.**

(18 marks)

**(Name 1 mark, cost 1 point @ 2 marks (graded 2:1:0), value for money 1 point @ 2 marks (graded 2:1:0), facilities 2 points @ 2 marks (graded 2:1:0) ) x2**

**Name** – sports clubs e.g. GAA; rugby; swimming; tennis; golf; hill-walking; sailing; etc.

Exercise classes e.g. gym; yoga; Pilates; dance; etc.

Evening classes e.g. painting; cookery; music; etc.

Cultural – cinema; book clubs; etc.

**Cost** – initial costs – membership fees; ongoing costs – special equipment, clothes; etc.

**Value for money** – amount of use/access; family rates; special discounts; extra benefits e.g. free entry to tournaments; friend/colleague can participate at a reduce fee; etc.

**Facilities** – classes/tuition professional advice; equipment provided; pitches for games /floodlighting/all weather; changing facilities, canteen/bar; etc.

or

**3.(c)** The Irish education system provides a holistic education for children.

(i) Analyse the factors that influence the educational achievement of school children.

(16 marks)

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

Parental attitude to education; family size; home environment; locality; school environment; intellectual ability; peers; access to resources and facilities; etc.

(ii) Evaluate **two** initiatives aimed at providing equality of opportunity in education with reference to early school leavers.

(14 marks)

**( name 3 marks (graded 3:2:0), description 1 point @ 4 marks (graded 4:2:0) ) x2**

**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.

**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 exam; smaller pupil-teacher ratio; multisensory space; schools for children aged 5-18 years old with extra educational needs; schools for visually and hearing-impaired children; visiting teachers etc.

**Tusla** encourages and supports regular school attendance; education welfare officer supports and monitor child's participation and attendance; ensures access to supports; etc.

**Social welfare benefits** back to school clothing and footwear allowance; etc.

**Variety of educational programmes offered** JC; Transition Year; LCA; LCVP; VTOS; FETAC; Traveller Training Centres; Youthreach; homework clubs; etc.

## Question 4 – Core – 80 marks

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

**4.(a)** 'Food waste is bad for the environment and bad for our pockets.' ([www.safefood.net](http://www.safefood.net))

(i) Discuss the nutritional significance of vegetables in the diet. (20 marks)

**5 points @ 4 marks (graded 4:3:2:1:0)**

**Protein** 1-8%, LBV; roots, soya beans supply HBV protein, essential for growth and repair; etc.

**Fat** 0%; lacking in fat; olives and soya beans are exceptions – both contain polyunsaturated fat; essential for formation of cell membranes, reduce risk of CHD; etc.

**Carbohydrate** 3-20%, fibre, prevent bowel disorders; starch provides heat and energy; sugar heat and energy; etc.

**Vitamins** vitamin A produces rhodopsin, maintains healthy lining membranes; keeps skin and hair healthy and helps to regulate growth; B6 (pyridoxine) release of energy from food; folate development of brain & spinal cord, improves immune system; Vitamin C antioxidant, improves immune system; Vitamin K healthy blood clotting; etc.

**Minerals** - calcium strong bones and teeth; iron – non-haem produces haemoglobin; potassium maintains fluid balance, healthy nerve and muscle activity; zinc production of new cells and enzymes; iodine regulates metabolism; magnesium aids muscle function; etc.

**Water** 70-95%, hydration; etc.

(ii) Give an account of a method of home preservation suitable for vegetables.

Refer to:

- **name of preservation method 3 marks (graded 3:0)**
- **underlying principle 3 points @ 4 marks (graded 4:2:0)**
- **suitable packaging 1 point @ 3 marks (graded 3:2:0)** (18 marks)

**Freezing** blanching before freezing inactivates enzymes; removal of air; removal of warmth prevents both enzyme activity and microbial growth; freeze at -25°C, small ice crystals are formed so liquid is unavailable to bacteria; store at -18°C; colour/ flavour/texture are unchanged; minimum loss of nutritional value; etc.

**Bottling** sterilisation at high temperatures destroys enzymes and micro-organisms; a vacuum is formed by the lid preventing re-entry of air and micro-organisms; loss of colour, flavour due to high temps; etc.

**Dehydration** heated to remove moisture; sugar/salt concentration increases; micro-organisms cannot multiply; long shelf life when stored correctly in cool, dry well-ventilated area; etc.

**Chutney/Relish** chemical preservatives form a concentrated solution in the food by osmosis; heat destroys bacteria and inactivates enzymes; acids lower pH to unacceptable level for microbial growth and enzyme activity; the lid forms a vacuum preventing re-entry of air and micro-organisms; etc.

**Pickling** boiling vegetables at 100°C destroys bacteria and inactivates enzymes; vinegar lowers the pH level, the acidic environment inhibits microbial growth and inactivates enzymes; the lid forms a vacuum preventing re-entry of air and micro-organisms; etc.

**Packaging** strong; vapour-proof; moisture-proof; polythene freezer bags; plastic containers; glass jars; etc. Accept the correct packaging for the chosen method; etc.

- (iii) Evaluate irradiation as a commercial method of food preservation. (12 marks)  
**3 points @ 4 marks (graded 4:2:0)**

Advantages destroys food poisoning bacteria; destroys parasites; destroys enzymes; longer shelf life; delays ripening and sprouting in fruit and vegetables; little effect on colour, flavour, texture of food; etc.

Disadvantages causes rancidity; loss of vitamin B- group and vitamin C; high levels of radiation needed to destroy some microbes; etc.

**and**

- 4.(b)** 'Being on a restrictive diet should not mean a restricted food experience.' ([www.delicious.ie](http://www.delicious.ie))

- (i) Outline the dietary guidelines that should be followed by a person with coeliac disease.

**3 points @ 5 marks (graded 5:3:0)** (15 marks)

Exclude all foods that contain gluten; corn, rice may be included; include gluten-free products; base the diet on foods that are naturally gluten free; examine ingredient lists on food labels; look for gluten-free symbol when shopping; etc.

- (ii) Analyse the growing popularity of speciality foods produced by small businesses in Ireland.

**3 points @ 5 marks (graded 5:3:0)** (15 marks)

Use of sustainable practices; organically produced food; reduction in food miles; speciality foods are produced in limited quantities; using traditional skills; support local products/producers; provide employment for local people and bring a skilled workforce to the market; produce good quality speciality food; implement high standards of hygiene in the production process; promote the area in which they are based; enhance Irelands reputation as a producer of high-quality food and drink; etc.

or

**4.(c)** Household technology has become an integral part of our lives.

- (i) Set out details of a study you have undertaken on an appliance with a heating element.  
Refer to:

Name of appliance **2 marks (graded 2:0)**

- construction **3 points @ 2 marks (graded 2:1:0)**
- working principle **3 points @ 2 marks (graded 2:1:0)**
- guidelines for use **2 points @ 2 marks (graded 2:1:0)** (18 marks)

#### **Kettle**

**Construction** – Made from stainless steel, chrome, glass or coloured plastic; variety of sizes; variety of shapes; lid; spout; vents; water level indicator; filter; heat-resistant handle; on/off switch; electric element; thermostat; lead/plug/base; fast boil; quiet boil kettles; keep warm feature; etc.

**Working principle** - electricity flows through element when plugged in; element offers resistance, causing it to heat by conduction; heated element heats the water by convection currents; thermostat automatically switches off the flow of electricity when the water reaches the required temperature; etc.

**Guidelines for use** – switch on with dry hands; unplug before filling; use minimum and maximum level guides; don't overfill; only boil amount needed; allow to cool before refilling; cleaning; etc.

Accept deep fat fryer, air fryer, egg boiler, contact grill, toaster, toasted sandwich maker, washing machine, dishwasher, iron, etc.

- (ii) Discuss the factors that influence consumers' decision making when purchasing large household appliances. (12 marks)

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

Initial cost; running costs; in store finance; maintenance costs; brand/make of appliance; energy efficiency; noise level; space available; features; ease of cleaning; after sales service; in-store demonstration; advertising; special offers; recommendations; influencers; safety; needs of the individual/family; design, colour, style; durability; guarantee; etc.



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

## Home Economics – Scientific and Social

### Food Studies Coursework

### Marking Scheme

*In developing the marking schemes the following should be noted:*

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

**Grading Table**

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

# Food Studies Practical Coursework General Marking Criteria

Investigation: Analysis/Research

32 marks

## Research and Analysis

(24 marks)

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

### Investigation

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

**Band B 13 – 18 marks** (very competent - good)

### Investigation

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

**Band C 7 - 12 marks** (basic - competent)

### Investigation

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

**Band D 0 - 6 marks** (very basic - limited)

### Investigation

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

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

(4 marks)

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

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

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

**Menus/main course/dishes must be balanced** – accept 3 out of 4 food groups.

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

(4 marks)



**Resources:**

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

**Implementation****28 marks**

Outline of the procedure followed to include food preparation processes, cooking time, temperature, serving/presentation, tasting/evaluation. **(16 marks)**  
*(information/account should be in candidate's own words)*

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

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

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

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

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

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

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

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

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

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

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

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

**Evaluation****3 points @ 4 marks****12 marks**

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

**Implementation**

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

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

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

**Specific requirements of the assignment**

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

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

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

### Assignment 1

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

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

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

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

Evaluate the assignment in terms of **(a)** implementation and **(b)** the specific requirements of the assignment. 2022

#### Key requirements of the assignment:

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

#### Investigation

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

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

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

#### Evaluation **(a)** implementation and **(b)** the specific requirements of the assignment

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

## Assignment 2

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

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

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

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

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

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

2022

### Key requirements of the assignment:

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

### Investigation

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

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

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

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

### Dishes selected

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

### Evaluation **(a)** implementation and **(b)** the specific requirements of the assignment

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

### Assignment 3

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

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

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

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

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

2022

#### Key requirements of the assignment:

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

#### Investigation

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

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

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

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

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

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

#### **Underlying principles**

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

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

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

#### Assignment 4

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

Carry out research on the types of biscuits (cookies) currently popular with the consumers.

Investigate two methods of making homemade biscuits.

Explain the underlying principles involved in each case.

Prepare and bake one type of biscuit using one of the methods that you have investigated.

Describe the packaging you would recommend for the product having regard to keeping the product hygienic and presenting it attractively.

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

2022

#### Key requirements of the assignment:

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

#### Investigation

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

#### Methods and underlying principles – homemade biscuits

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

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

**All-in-one:** *all the ingredients are beaten together; use a soft fat to allow **air** to be incorporated easily; during baking the raising agent reacts with the liquid from the egg to produce **CO<sub>2</sub>** and steam causing the biscuits to rise; the **heat** of oven sets the mixture/gluten; etc.*

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

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

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

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

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

Assignment 5

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

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

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

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

Carry out a Duo-Trio Test to determine if testers can differentiate between the two products.

Present the results obtained from the test.

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

2022

**Key requirements of the assignment:**

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

**Investigation**

**(24 marks)**

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

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

• **Duo-Trio Test**

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

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

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

• **Identification of the conditions to be controlled during the testing**

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

**Selected dish/product and selection criteria**

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

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

**Sources of Information:**

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

**4 marks**

## Preparation and Planning

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

8 marks

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

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

## Implementation

16 marks

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

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

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

Full sugar drink is to be the reference R/control; the coding on all the trays is to be the same

e.g. R □ ◇ symbols; it is the drinks that will vary on each tray- presentation order below only the drinks in □ and ◇ will change;

Tray	AAB	Tray	ABA	Tray	AAB
1	R □ ◇	2	R □ ◇	3	R □ ◇

Tray	ABA	Tray	AAB	Tray	ABA
4	R □ ◇	5	R □ ◇	6	R □ ◇

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

- Key factors to ensure success of the test (2 @ 4 marks each) (graded 4:2:0)

8 marks

Key factors must refer to the test carried out and can include conditions **controlled** during testing; coding; same and sufficient amounts; glass of water/or dry cracker included to cleanse the palate; importance of silence during testing; random presentation order; non-bias codes; different people setting up; testers not present when setting up; etc.

- Safety and hygiene

**Safety:** 1 point @ 2 marks (graded 2:1:0) **Hygiene:** 1 point @ 2 marks (graded 2:1:0) 4 marks

**Safety:** testers with allergies – soft drinks with additives/e numbers; diabetics; etc.

**Good hygiene** practice with regard to: preparation/testing area; handling of samples; disposable cups; etc.

## Evaluation

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

12 marks

- Implementation

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

- Specific requirements of the assignment

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

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

1. Examination requirements:  
Candidates are required to complete and present a record of any **four** assignments for examination. **2 assignments for 2022 as a result of adjustments.**
2. Each Food Studies assignment must include different practical activities.  
Where **a candidate repeats a practical activity for a second assignment**, the examiner will mark the repeated practical as presented and disallow the marks awarded for the repeated practical activity with the lowest mark.
3. Where a **candidate completes the investigation and/or the preparation and planning and/or the evaluation aspects of an assignment and does not complete the implementation**, the examiner will mark the completed aspects of the assignment as presented. However, marks for **evaluation of implementation**, where attempted, will be disallowed.  
In relation to Assignments 3, 4, and 5 **evaluation of specific requirements** will also be disallowed.
4. Where a **candidate completes the preparation and planning and/or the implementation and/or the evaluation aspects of an assignment, and does not complete the investigation**, the examiner will mark the completed aspects of the assignment as presented. However, marks for **evaluation of specific requirements of assignment**, where attempted, will be disallowed.
5. Where the **dish/product prepared has not been identified in the investigation**, but fulfils the requirements of the assignment, deduct the relevant marks awarded (-1/-2/-4) under meals/dishes/products in investigation.
6. Dish selected shows **few process skills** - mark pro-rata
7. **Dish selected not fully compliant** with requirements e.g.
  - an **uncooked dish** selected where a cooked dish specified – Assignment 1,2,3, 4
  - dish **not suitable for assignment requirements** – Assignment 1 and 2
  - the **investigated method not used in making the chosen dish** – Assignment 3 and 4
  - dish selected includes **over use of convenience foods**.

**Deduct 8 marks from total mark awarded for assignment and insert explanation as highlighted above.**
8. **A dish that does not meet the requirements of the assignment** e.g. a dessert dish prepared instead of a main course dish; no marks to be awarded for the dish.

**N.B.** Examiners must consult advising examiners when applying a scenario.





