



Coimisiún na Scrúduithe Stáit  
State Examinations Commission

**LEAVING CERTIFICATE 2008**

**MARKING SCHEME**

**HOME ECONOMICS –  
SCIENTIFIC AND SOCIAL**

**HIGHER LEVEL**





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#### **HIGHER LEVEL**

## Section A

Answer any 10 questions from this section.

Each question is worth 6 marks.

Write your answers in the spaces provided.

1. In relation to protein describe the formation of a peptide bond/link. (6)  
The carboxyl (acidic) group (COOH) of one amino acid reacts with the alkali group (NH<sub>2</sub>) of the other, with the elimination of water.

2. Give **one** main function of potassium. (6)  
Maintains fluid balance in body tissue (homeostasis), essential constituent of cell fluids; necessary for cell formation; healthy nerve activity; normal muscle function.

List **two** good sources of potassium in the diet.

- (i) Green Leafy Vegetables, Pulses, Bananas, Oranges, Popcorn, Dried fruits  
(ii) Meat, Milk, Nuts, Fish, Bread, Mushrooms, Avocadoes, Wholegrain Cereals, Liquorice etc.
3. How does osteoporosis affect the body? (6)  
Bone mass is reduced, resulting in fragile/brittle bones; loss in height, curved or hump back.

State **two** possible causes of this condition.

- (i) Heredity, deficient in Vit D, Calcium, phosphorous, excess caffeine or tannin.  
(ii) Lack of weight bearing exercise, considerable weight loss, use of steroids.
4. Complete the following table in relation to the pasteurisation of milk (6)

Method	Temperature	Time	Effect
Pasteurisation	72°C	15-25 sec	Bacteria destroyed, Loss of thiamine, vit C

5. Name **three** cereals grown for food production and give **one** example of a different product manufactured from each cereal. (6)

Cereals	Products
Wheat Oats	Flour, bread, Pasta, Cous Cous Oatmeal, Flapjacks
Maize (corn) Barley	Cornflakes, Cornflour Pearl Barley
Rice	Rice Cakes

6. State **one** use of each of the following fungi in food production. (6)
- Moulds*            **Cheese Production**
- Yeast*             **Bread, Wine, Vinegar, Beer Making, Food Supplements**
- Large Fungi*    **Mushrooms, Truffles, Quorn**

7. List **three** different classes of food additives and give **one** example of each class. (6)

Class of Food Additive	Example
Colourings	Chlorophyll, Caramel, Cochineal, Carotene, Tartazine E102, Red E128, Green E142, Amaranth
Flavourings	Sugar, Salt, Spices, Herbs, Esters, Maltol, Aldehydes, Ethyl acetate, Amyl acetate, MSG
Physical Conditioning Agents	<i>Emulsifiers:</i> Lecithin, Alginates <i>Stabilisers:</i> Guar Gum, Carageen <i>Polyphosphates:</i> Magnesium, Carbonate <i>Pectin:</i> <i>Humectants:</i> Sorbitol, Mannitol
Sweeteners	Fructose, Sugar, Glucose, Aspartame, Saccharin, Sorbitol, Mannitol
Nutritive Additives	Vit A, D, Calcium, B12 etc
Preservatives	Sugar, Salt, Alcohol, Vinegar, Spices, Smoke, SO <sub>2</sub> , Sorbic Acid, Diphenyl, Antioxidants: Vit A, C, E BHA, BHT.

8. Identify **three** different items of nutritional information that are generally included on pre-packed foods. (6)

- (i) **Nutrients present and their quantities per 100g / per serving**
- (ii) **Energy value**
- (iii) **Nutritive additives used, GDA, RDA**

9. State the function of **each** of the following parts of the microwave oven. (6)

- (i) *Transformer* **Increases domestic voltage from 220V to higher frequency.**
- (ii) *Magnetron* **Converts electricity to microwaves/electromagnetic waves.**

10. State the purpose of consumer research. (6)  
To identify consumer wants and expectations.  
To test the market prior to developing / launching a new product.  
To highlight market trends; identify market size or potential markets.

Name **two** methods of consumer research.

- (i) *Field research* - vox pops, interviews, consumer panels.  
(ii) *Desk research* - written surveys, questionnaires, phone surveys.

11. Identify **two** features of national housing policy in Ireland. (6)

- (i) High density living. Sustainable communities supported by shops, schools, proper infrastructure etc.
- (ii) Retention of listed buildings through grants. Protection of natural environment. Provision of social and affordable housing. Promotion of energy efficient homes. Encouragement of home ownership through mortgage interest relief. Improvement grants scheme, rent allowance scheme, registration of rented accommodation etc.

12. State **two** benefits to the consumer of the Hire Purchase Acts (1946, 1960). (6)

- (i) Ten day cooling off period; conditions must be provided in writing to the consumer.
- (ii) Goods cannot be repossessed without a court order, if more than one third of the price has been paid.

## 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. Fat is an essential part of our diet. Fat has health benefits but it also has a lot of negative aspects. Consumers must make informed decisions on the amount and type of fat included in their daily diet. Consumer Choice

Constituents	Extra Light Spread	Original Spread	Butter
Energy	188 kcal	531 kcal	744 kcal
Fat	18g	59g	82.2g
Saturates	5.1g	12g	52.1g
Monounsaturates	4.1g	17g	20.9g
Polyunsaturates	8.8g	29.5g	2.8g
Omega 3 fatty acids	1.6g	3.5g	0.6g
Trans fatty acids	0.3g	0.5g	2.9g
Sodium	0.4g	0.6g	0.6g

*Typical % values per 100g*

- (a) Using the information provided in the table, evaluate each of the three products described having regard to current dietary advice on fat intake. (24)

*6 points @ 4 marks each  
(2 points on each of the 3 products chosen)*

**Extra Light Spread** - lowest E value of the 3 products, therefore the lowest in calories and the most suitable for people on weight reducing diets; lowest overall fat content; lowest in saturated fat which is good as this contributes to CHD; lowest in monounsaturated fatty acids, however these are good fats as they lower total blood cholesterol and LDL levels; has three times the amount of PUFA as butter, not as high as original spread PUFAs which lower total blood cholesterol and LDL levels etc.

**Original Spread** - E value is the middle of the 3 products; overall fat content is the middle of the 3 products, yet having over 3 times the amount of fat as extra light spread; has approx twice as many saturated fats as extra light spread but considerably less than butter; has 4 times as many monounsaturated fatty acids as extra light spread helping to lower total blood cholesterol and LDL levels; has the highest level of PUFAs contributing to lowering total blood cholesterol and LDL levels etc.

**Butter** - highest energy value of the 3 products, therefore high in calories and not suitable for people on weight reducing diets; highest overall fat content; high in saturated fat therefore implications for those with CHD, raises total blood cholesterol level and LDL levels; highest of the 3 products in monounsaturated fatty acids which lower total blood cholesterol and LDL levels; has the lowest amount of PUFAs of the 3 products etc.

Energy	Lower kcal more suitable for people on weight reducing diets
Fat	Higher fat content - negative implications for weight and blood cholesterol
Saturates	Contributes to CHD, raises total blood cholesterol and LDL levels
Monounsaturates	Good fat, lowers total blood cholesterol and LDL levels
Polyunsaturates	Good fat, lowers total blood cholesterol and LDL levels, thought to counteract the hardening effect of cholesterol in the arteries and reduce risk of CHD
Omega 3 fatty acids	Lowers blood cholesterol, reduces risk of CHD, reduces risk of heart attack, stroke, circulatory diseases and certain cancers, associated with healthy brain activity
Trans fatty acids	Associated with CHD, may raise LDL and lower HDL cholesterol levels
Sodium	Found in salt, too much may cause high blood pressure which may increase risk of CHD and stroke

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

3 @ 8 marks each,

- each type of fatty acid expect 2 points @ 3 marks
- example = 2 marks

(24)

- saturated fatty acids

**Saturated** -Each carbon molecule has its full complement of hydrogen - no double bonds. Solid at room temp. Examples - stearic acid, butyric acid.

- monounsaturated fatty acids

**Monounsaturated:** Contains one double bond. Liquid at room temp, Example - oleic acid.

- polyunsaturated fatty acids.

**Polyunsaturated:** contains more than one double bond between the carbon atoms. Soft or liquid at room temp. Examples - linoleic acid, linolenic acid, arachidonic acid.

(c) Write an explanatory note on **each** of the following properties of lipids: (12)

(i) rancidity 2 points @ 3 marks each

Spoilage of lipids, occurs in two ways

- oxidative- when oxygen reacts with carbon atoms of double bond in unsaturated carbon chain
- hydrolytic rancidity - caused by reaction of enzymes or micro-organisms within the lipid, can occur in the freezer.

(ii) emulsification. 2 points @ 3 marks each

When two immiscible liquids are joined together a colloidal solution / emulsion is formed, water in oil or oil in water, two types-temporary, e.g. French Dressing, permanent e.g. mayonnaise.



- (d) Explain how (i) advertising and (ii) a person's health status might influence decision making when purchasing dairy products. (20)

*4 points @ 5 marks each*

*1 to refer to advertising and 1 to refer to person's health status plus two other points.*

***Advertising*** - famous people acknowledging benefits of a particular product, constant exposure to an advertisement, adverts relay benefits and appeal to peoples health concerns, adverts show new products on the market e.g. omega 3 milk.

***Person's health status*** - person trying to loose / maintain a healthy weight may choose low fat /low sugar dairy products; person concerned about CHD may choose products low in saturated fat, high in PUFAs, high in omega 3, high in plant stanols to lower cholesterol; person concerned about high blood pressure may choose products low in salt e.g. unsalted butter; people choose products with probiotic bacteria for overall health benefits and protection from illness; person with osteoporosis may choose calcium enriched / super milk; people with allergies or are lactose intolerant may chose alternative dairy sources such as goats milk etc.

2. **Fruit and vegetables are highly nutritious and an essential part of the diet, however, only 21% of adult men and 19% of women in Ireland are meeting the current World Health Organisation target, with young children eating even less.**

**safefood**

- (a) Discuss the (i) nutritional significance and (ii) the contribution to the diet of fruit and vegetables. (20)

*5 points @ 4 marks each*

Contain anti-oxidant Vitamins A,C,E; protein in pulse vegetables; generally lack fat; calcium and iron in green vegetables; Vitamins B12 & Vitamin D; little loss of nutrients in frozen fruit & vegetables; tinned fruit high in sugar.

Useful in low calorie diets & low cholesterol diets; economical; wide variety available - processed vegetables available all year round; versatile etc.

- (b) Suggest **one** method of food preservation which could be used to preserve a surplus of home-grown fruit or vegetables. Explain the underlying principle of the method of preservation you have selected. (15)

*name method – 3 marks*

*principle - 3 points @ 4 marks each*

**Jam-making** - Correct proportion of sugar; high temps used to destroy enzymes & micro-organisms; concentrated solution/ osmosis; pectin and acid; sealing to prevent the re-entry of micro-organisms.

**Freezing** -Blanching; fast freeze; wrapping/covering; low temps inactivate enzymes and micro-organisms; moisture converted into ice therefore unavailable.

**Chutney-making** - sugar, vinegar; high temps destroy/inactivate enzymes & micro-organisms; concentrated solution/osmosis; sealing to prevent re-entry of micro-organisms.

**Drying** - removal of moisture; warmth/sun; storage to prevent re-entry of micro-organisms.

- (c) Write an informative note on food irradiation. (15)

*3 points @ 5 marks each*

Irradiation is a physical treatment where food is exposed to a defined dose of ionising radiation. Destroys micro-organisms by exposing the food to radiation.

Destroys food poisoning bacteria; controls growth of mould on soft fruits; delays ripening of fruit; prevents sprouting of potatoes & other vegetables; little effect on colour, flavour, texture; eliminates the need for chemical preservatives; vitamins can be destroyed. Within the EU foods that are irradiated must be labelled indicating this.

The Radura Symbol is an international icon for irradiated food.



3. 'In the hustle and bustle of today's world, more and more people are eating convenience food and 'food to go'..... however, poor handling practices can cause food poisoning'. FSAI

- (a) Discuss the importance of temperature control during the storage and cooking/reheating of food in order to minimise the risk of food poisoning. (16)

*4 points @ 4 marks each*

**Storage:** Refrigerate at 0°C to 5°C or freeze prepared foods immediately, freeze at -25°C and store at -18°C, never refreeze thawed food, cool food before refrigerating or freezing etc.

**Cooking/Reheating:** Defrost frozen foods completely and in the fridge before cooking, cook large joints of meat & poultry thoroughly, use correct time and temperatures; heat high risk foods ie stews & gravies to 100°C, serve cooked foods immediately, keep food hot at temps above 65°C, avoid keeping foods in the danger zone 6°C - 63°C, consume hot food within 1½ hrs, reheating should be done quickly at temps above 100°C etc.

- (b) Describe the stages in a basic HACCP system for making a hot meat dish. Refer to (i) possible hazards and (ii) the corresponding control measures to be implemented. (24)

*4 stages @ 6 marks each*

<i>Stages -1 mark each</i>	<i>Hazards - 2 marks each</i>	<i>Control Measures - 3 marks each</i>
Purchase	Damaged goods Contamination - bacterial, chemical pests	Reputable shop Check that raw and cooked foods are stored separately Check packaging Check best before and use by dates Check fridge / freezer / food temperature Check no sign of pest damage Use refrigerator bags for transport of perishables
Storage	As above Multiplication of bacteria Cross contamination	Store chilled food below 5°C Frozen food store below - 18°C Check mould on vegetables
Preparation	Multiplication of bacteria Cross contamination	Hands washed with antibacterial soap Colour coded boards Wash equipment with hot water and detergent
Cooking	Survival of bacteria	74°C for 2 minutes core temperature
Serving	Cross contamination Growth of surviving bacteria	Clean utensils used Foods must be held above 63°C
Reheating / hot holding	Multiplication of bacteria	Reheat once only Foods must be held above 63°C Hold for 1.5 hours only Cover and store properly before reheating

- (c) Outline the role of the environmental health officer in relation to food safety. (10)

*2 points @ 5 marks each*

Involved in the registering of new food premises. Carries out inspections on food premises - hospitals kitchens, restaurants, shops and food manufacturers etc.  
Handles complaints regarding hygiene standards in food premises.

**4. Developments in housing are influenced by lifestyle patterns and demographic trends.**

- (a) Discuss how (i) socio-economic factors and (ii) trends in housing development influence housing choices. (20)

*5 points @ 4 marks each  
2 references to each and 1 other*

***Socio-economic*** - size of family, stage of family life, location of house, money available, special needs, personal preference, parental assistance in the purchase of houses etc.

***Trends*** - Development of larger housing estates, increase in apartments especially in urban areas, mix of housing types in estates, redevelopment of inner city areas, exclusive houses are built in smaller estates, larger houses in suburbs and householders' commute to work, energy efficient housing etc.

- (b) Identify and elaborate on the general terms and conditions that have to be fulfilled before a mortgage is granted. (20)

*5 points @ 4 marks each*

**Amount borrowed, deposit, credit record, proof of income, mortgage indemnity, term of repayment, title deeds, life assurance, house insurance, property certain standard - good investment etc.**

- (c) Explain the term *mortgage protection* and state why mortgage protection is necessary. (10)

*2 points @ 5 marks each*

**Life Assurance policy taken out on the value of the mortgage. The insurance company repays the loan to the lending institution if the borrower dies. The policy usually covers both home owners.**

5. 'Fewer than one in five households in Dublin City are now made up of the traditional family of husband, wife and children'. (CSO Census of Population 2006)

- (a) Analyse the reasons for the decline of the traditional family in Irish society. (20)

*5 points @ 4 marks each*

**Separation/ divorce; children outside of marriage; decline in marriage rate; changing roles within the family; shift in attitudes towards marriage/ family; increased availability of contraception; increased urbanisation leading to more nuclear families etc.**

- (b) Describe how changing roles within the family have had an impact on individuals and/ or society. (18)

*3 points @ 6 marks each*

**Changing role of parents (father and mothers), grandparents, children. Larger percentage of women working outside the home; increased standard of living for families; nuclear family more egalitarian; child-rearing & household tasks shared between parents; greater involvement of grandparents; role reversal; role overload; role conflict etc,**

- (c) Describe one strategy for resolving conflict within the family (12)

*3 points @ 4 marks each*

**Communication, openness & honesty, see both sides, reaching a compromise; counselling etc.**

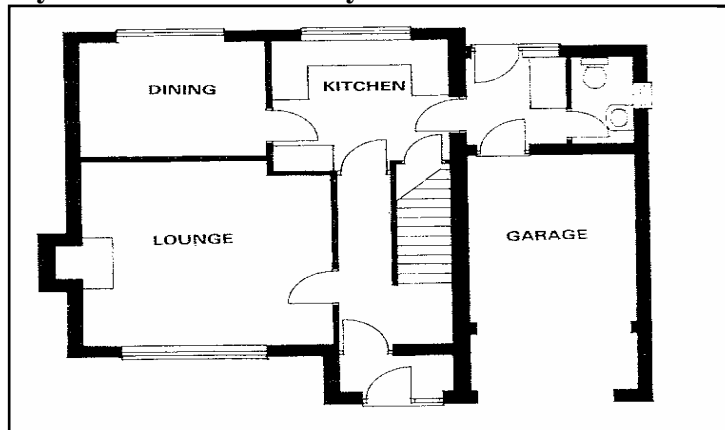
## Section C

Answer one elective question from this section.  
Candidates who submitted Textiles, Fashion and Design coursework  
for examination may only attempt Question 2.

### 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) Lifestyle & fashion trends are increasingly influencing design in the home. Most new houses are smaller, so the key requirement is to create a sociable living space that works efficiently for the modern family.



House Plan – Ground Floor Layout

- (i) Suggest three changes you would make to the house plan shown in the diagram above in order to accommodate the needs of a couple with two young children. In each case, give a reason for your recommendation. (18)

*3 changes @ 3 marks each  
3 reasons @ 3 marks each*

Convert garage to playroom, open door off hallway, change garage door to bay window with built in window seat and underneath storage, remove wall between kitchen and dining room to create a bigger space, put double doors between lounge & dining room - open plan living space can be created, doors can be closed for more privacy when required, put toilet under stairs to allow extra storage in utility room, increase the size of the lounge by removing wall between hallway & lounge, extra storage/office space could be created under the stairs, addition of sunroom etc.

- (ii) Describe two different wall finishes suitable for use in the house interior and state two properties of each finish. (14)

*2 @ 7 marks each  
Description - 3 marks  
2 properties @ 2 marks each*

*Paint - water based e.g. vinyl matt, silk vinyl, soft sheen, washable matt, textured paint - easy to work with, low odour, easy to apply, covers well, reflects little light therefore suitable on uneven walls, fast drying, washable etc.*

*Paint - solvent based e.g. satin finish - hardwearing, more difficult to apply, strong smell, takes time to dry, suitable for areas of high condensation, wears well, washable, requires no undercoat,*

*Wall paper - machine or hand printed, PVC coated, vinyl, textured vinyl, embossed - introduce colour, pattern, texture, some washable (PVC coated), some ready pasted, durable, waterproof, easy to handle, suitable for rooms prone to condensation etc.*

*Tiles - ceramic, porcelain - hardwearing, waterproof, easy to clean, available in many shapes, sizes, colours, patterns etc.*

- (iii) State, giving examples, how (i) ergonomics (ii) technological developments and (iii) environmental factors influence house design/construction. (18)

*6 points @ 3 marks each – 2 references to each*

**Ergonomics** - science of relationship between people & their work environment, a certain amount of space in the house is necessary for work to be carried out efficiently & for people to live safely. Principles allow free and efficient movement within the building, eg. work triangle and food preparation sequence in kitchen, certain amount of space is necessary to allow access to toilets or to be able to open doors. Adequate storage space. Well positioned power point switches etc.

**Technological developments** - CAD - Computer aided design, electric gates, virtual reality tours of house designs, sensor lights, CFL's, solar powered garden lights, monitored security systems, intelligent appliances, thermostatic controls, zoned heating systems, integrated sound & lighting systems, streamlined fixtures for kitchen/bathrooms etc.

**Environmental factors** -use of natural materials e.g timber and stone - wooden floors, stone fireplace, wood burning stoves, tiling absorbs solar energy and releases heat gradually, use of organic paints. Use of sustainable sources of energy for heating e.g. solar, wood or geothermal. Installation of a radon barrier to eliminate the risk of radon seepage into the house. The house shape and orientation can be tailored to protect it from the wind and take advantage of natural light etc.

and

1. (b) Rooms in the home used for different activities require varying levels of thermal comfort which can be regulated by the use of a thermostat.

- (i) Discuss levels of thermal comfort in relation to two rooms in the home. (12)

*4 points @ 3 marks each-  
1 reference to each room and 2 other points*

Recommended temperature varies from room to room, depending on the room function e.g. sitting or carrying out light work 19 - 23°C, recommended temperature for living rooms is 17 - 21°C, bedrooms 10- 16°C, kitchens 15-19°C. bathroom 16-19°C. A minimum temperature of 20°C recommended for elderly people.

- (ii) Explain the working principle of a thermostat and give examples of the use of thermostats in the home. (18)

*principle - 4 points @ 3 marks each  
2 uses @ 3 mark each*

Based on the principle of thermal expansion, contain a bimetal strip, composed of two metals - brass which expands readily on heating and invar which expands only slightly when heated. When heat is applied the brass expands and the strip bends. This breaks the electrical circuit and switches off the appliance. On cooling the bimetallic strip returns to its original shape switching on the appliance again.

Uses - electric/gas cookers, electric kettles, electric blankets, immersion heaters, a room thermostat, a boiler thermostat, a thermostatic radiator valve etc.

or

1. (c) (i) In relation to household electricity supply describe **each** of the following:
- ring circuit
  - miniature circuit breakers (MCBs).
- (12)**

*(3 points @ 2 marks each) x2*

*Ring circuit* - a wire leads from the consumer unit all around the house and returns to the consumer unit. The ring loop could contain all the sockets or the light switches for the house, or one ring loop could be used for upstairs and one for downstairs. It also contains an earth wire for safety. Each circuit has its own fuse, usually 35amp.

*Miniature circuit breakers* - MCBs are safety feature that contain trip switches that interrupt the circuit & disconnect the current when a fault occurs or the circuit is overloaded. Trip switches can be reset when the fault has been found and sorted out. MCBs also contain RCDs (residual current devices) providing additional protection.

- (ii) Identify **three** potential inefficient uses of electricity in the home and outline the improvement strategy you would recommend in **each** case. **(18)**

*6 points @ 3 marks each (3 uses and 3 improvements)*

Unnecessary use of lights, use of standard bulbs instead of CFL's, appliances left on standby, use of oven for one dish, heating system without thermostat/timer, washing half loads in dishwasher etc. choosing less energy efficient option e.g. grill instead of toaster, C rating appliance instead of an A rating. Using tumble dryers to dry clothes 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) A company has asked a clothing manufacturer to design and make a uniform/suit suitable for the office staff. Fabric A and fabric B are being considered.

	Fabric A	Fabric B
Fabric	Wool	Linen
Fabric Properties	<ul style="list-style-type: none"><li>• relatively weak</li><li>• warm</li><li>• excellent absorbency</li><li>• very elastic</li><li>• tailors well</li><li>• susceptible to pilling</li><li>• crease resistant</li></ul>	<ul style="list-style-type: none"><li>• very strong</li><li>• durable</li><li>• excellent absorbency</li><li>• carries heat away from the body</li><li>• creases unless treated</li></ul>
Fabric Care	<ul style="list-style-type: none"><li>• hand wash</li><li>• do not tumble dry</li></ul>	<ul style="list-style-type: none"><li>• machine wash</li><li>• iron while damp</li></ul>

- (i) With the aid of the information given in the table above, select a fabric for the uniform/suit. Give reasons for your choice. (6)

*3 points @ 2 marks each*

Reasons - relate property to reasons - elastic -comfortable in office: tailors well - looks professional, carries heat away from the body - not too warm in the office, long lasting -durable etc.

- (ii) Sketch the uniform/suit and describe how **two** principles of design have been applied in the design of the outfit. (13)

*sketch = 7 marks*

*2 principles @ 3 marks each*

Principles of design e.g. Balance, Proportion, Emphasis, Rhythm, Harmony

- (iii) Name and describe a fabric performance test of your choice. (6)

*name = 2 marks*

*2 points @ 2 marks each*

Tests - abrasion resistance, pilling and snagging, tearing resistance, water absorption, flame resistance, recovery from wrinkling, colourfastness, insulation test, fabric stretch and recovery, washability, etc.

and

- 2.(b) (i) Differentiate between regenerated fibres and synthetic fibres and give **one** example of each. (9)

*1<sup>st</sup> fibre 3 marks*

*2<sup>nd</sup> fibre 2 marks*

*Examples – 2 @ 2 marks each*

Regenerated - made from cellulose, pulped and treated with chemicals and forced through nozzles e.g. rayon, viscose, acetate, tri- acetate etc.

Synthetic- made from chemicals such as coal or petroleum e.g. nylon, polyester, acrylic, PVC.

(ii) Write a note on **each** of the following:

- blended fabric
- filament modification

(6)

*2 points @ 3 marks each*

*Blended fabric* - principle is to create a new fabric with different qualities by combining the properties of the individual fabrics used e.g. cotton/polyester blend creases less than pure cotton, linen and cotton blended together is cheaper in price than 100% linen.

*Filament modification* - techniques used to change/modify/improve fabric properties e.g. blending, crimping or twisting to allow fibres to breathe; polyester can be made bulky (crimplene) useful for jersey fabrics; cotton can be mercerised to increase its lustre, strength and affinity for dyes. Cotton can be brushed to produce a soft fluffy fabric. Flame- resistant, stain- resistant and water repellent etc.

or

2. (c) (i) Why is it sometimes necessary to modify a commercial pattern?

(6)

*2 points @ 3 marks each*

To lengthen or shorten, to alter waistlines, make bust alterations, to alter hiplines, to alter sleeves etc.

(ii) Describe, with the aid of a diagram, **one** method of modifying a commercial pattern.

(9)

*(diagram = 5 marks, description = 4 marks)*

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

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

3. (a) ‘It would appear that an increasing number of parents in Ireland are now recognising the importance of early childhood education, with many looking to enrol their children in pre-schools and Montessori facilities’.

Press release 2007

- (i) Discuss the purpose of education in relation to the physical, emotional, moral and intellectual development of the child. (24)

*4 points @ 6 marks each  
1 reference to each heading*

*Physical development* - manual dexterity- hand-eye coordination, body development - Home Economics, MTWood PE games, dance etc.

*Emotional* - interaction with other children & adults, empathy, children are taught that it is normal to respond emotionally to a particular event - e.g. crying when upset or in pain. They are taught to be sensitive to others and supportive to others. RSE allows for discussion relating to healthy emotions etc.

*Moral* - sets down values & morals of school life, some subjects allow for the discussion of morality e.g. S.P.H.E. Religious Education, school ethos etc.

*Intellectual* - language development, reading, numeric skills, music, artistic skills. Students study a broad based curriculum aimed at developing their intellectual abilities. Provision is made for students with learning difficulties to be integrated and catered for in schools. Exams are set to test these abilities etc.

- (ii) Comment on how socio-economic status impacts on equality of opportunity in education. (15)

*3 points @ 5 marks each*

*Middle to higher* - more likely to complete second level education & go on to third level, greater financial stability, more expendable finance for education and extra tuition etc, parents place greater emphasis on education. Research indicates that children from upper socio-economic backgrounds are far more likely to progress on to 3<sup>rd</sup> Level.

*Lower* - may not receive same opportunities & more likely to be early school leavers, high rate of illiteracy, lower stream in class - achieve lower grades, parents may not be able to assist children with their homework as they left school early, lower teacher/parent expectations etc.

- (iii) Name and give an account of one national initiative that improves access to education. (11)

*name = 3 marks  
2 points @ 4 marks each*

*e.g. Early Start pre-school programme* - community-based initiative for 3-4yr olds in disadvantaged areas, funded, managed & evaluated by Dept of Education & Science. The aim is to provide children with a positive start in education, to prevent future school failure & improve overall development of students from socially disadvantaged areas. Taught by primary school teachers, childcare assistants & parents. Curriculum consists of - language, cognition, social & personal development.

*JCSP, LCA programme* enables more students to complete secondary school.

*National Education Welfare Board (NEWB)* obliges schools to put in place positive steps to encourage attendance.

*Free fees and maintenance grants at third level etc. Home School Community Liaison Scheme VTOS, Youthreach, Learning support /resource teachers, SNA's. Subsidised school transport etc.*

3.(b) 'Despite almost a decade of economic boom, Ireland still has a large proportion of people at risk of poverty'. CSO

- (i) In relation to the above statement discuss the extent and distribution of poverty in Ireland today. In your answer include reference to the cycle of deprivation in families. (20)

*4 points @ 5 marks each  
1 point to relate to cycle of deprivation*

Number of people on poverty line decreased since 60's & 70's, increased during 80's due to recession, upturn in economy during 90's led to another decrease. High cost of living & housing today means number of people living below poverty line is increasing again. 20% of Irish households live below the poverty line, one in 4 children live below the poverty line. Ireland has the 4<sup>th</sup> highest poverty rate in Europe and the highest rate of child poverty. Groups at risk - elderly & disabled, unemployed, low-paid workers, lone parents, refugees, ethnic minorities, homeless, travelling community, small rural farmers etc.

Cycle of deprivation in families - one aspect of poverty contributes to another and creates a never-ending cycle within the family.

- (ii) Name and give details of **two** government schemes that reduce expenditure for low-income families. (10)

*2 schemes @ 5 marks each*

e.g. rent allowance, back-to-school clothing and footwear allowance, free electricity, telephone rental, tv licence, fuel allowance, school books grant scheme, school meals, medical cards, after school services etc.

or

3. (c) Requirements for childcare vary depending on family circumstances.

- (i) Summarise the factors that can affect a family's requirements for childcare. (12)

*4 points @ 3 marks each*

Two parents working full time or part time, single parent working, availability of grandparents/family members, cost of care, after school care requirements, hours of opening, available during school holidays, proximity to family home, special needs of the child etc

- (ii) Evaluate **two** types of child care options. (18)

*(3 points @ 3 marks each) x 2*

Nurseries & Creches, Playschool/Playgroup, Montessori school, Childminder, Au Pair, After school groups etc.



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

**LEAVING CERTIFICATE 2008**

**MARKING SCHEME**

**HOME ECONOMICS –  
SCIENTIFIC AND SOCIAL**

**FOOD STUDIES PRACTICAL  
COURSEWORK**

**HIGHER LEVEL**





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

# **LEAVING CERTIFICATE 2008**

## **MARKING SCHEME**

### **HOME ECONOMICS – SCIENTIFIC AND SOCIAL**

### **FOOD STUDIES PRACTICAL COURSEWORK**

**Food Studies Practical Coursework General Marking Criteria**  
(to be read in conjunction with Assignments)

**Investigation: Analysis/Research - 30 marks**

**Research and analysis**

**= 20**

**Band A 16-20 marks (very good – excellent)**

*Investigation*

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

**Band B 11-15 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 6-10 marks (basic to competent)**

*Investigation*

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

**Band D 0-5 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. - 2 two course meals / 2 dishes / 2 products - (2 x 2 marks)**

**= 4**

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

(menu – starter/desert = 1 mark, main course = 1 marks.)

*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**

**Reasons / selection criteria - (2 x 2 marks)**

**= 4**

*clearly indicates criteria that determined choice of dish or product selected to prepare,*

**Sources including source of recipe - 2 x 1 mark (2 marks)**

**= 2**



## **Preparation and Planning - 6 marks**

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

## **Implementation - 28 marks**

- Outline of the procedure followed to include preparation, food preparation processes, cooking time /temperature, serving /presentation, wash-up, 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 to 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** (must relate to specific dish / test) **2 x 4 marks each** = 8  
*Identification (2) and clear explanation of importance (2) of two factors considered which were critical to success of dish*
- **Safety/hygiene** **2 x 2 marks** = 4  
(must relate to specific ingredients being used / dish being cooked)  
*Identification (1) and explanation (1) of **one** key safety issue **and one** key hygiene issue considered when preparing and cooking dish/conducting test*

## **Evaluation - 16 marks**

Evaluate the assignment in terms of:

- **Implementation** **2 x 4 marks each** = 8  
**Band A -4 marks** - *identified and analysed specific weaknesses/strengths in carrying out the task, modifications, where suggested, were clearly justified, critical analysis of use of resources / planning*  
**Band B- 3 marks** - *identified weaknesses / strengths in carrying out task, some justification of proposed modifications, limited analysis of use of resources / planning*  
**Band C- 2 mark** - *some attempt made at identifying weaknesses **or** strengths in completion of task, modifications where suggested not justified, reference made to use of resources / planning*
- The **specific requirements** of the assignment **2 x 4 marks each** = 8  
**Band A 4 marks** - *draws informed conclusions in relation to two key requirements of the assignment*  
**Band B 3 marks** - *draws limited conclusions in relation to two key requirements of the assignment*  
**Band C 2 mark** - *summarises two outcomes in relation to the assignment*

## Area of Practice A – Application of Nutritional Principles

### Assignment 1

#### ***Special consideration should be given when planning meals for young children.***

Research and elaborate on the nutritional needs and the meal planning guidelines that should be considered when planning meals for children aged between two and five years.

Bearing in mind these considerations, suggest a menu for **one** day (three meals and snacks) suitable for a family with children of this age group.

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

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

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

- dietary/nutritional needs with specific reference to **children aged between two and five years.**
- relevant meal planning guidelines

#### **Investigation**

**Dietary / nutritional requirements** – nutritional balance, physical growth increases the need for intake of all nutrients, daily requirements of macro / micro nutrients including protein / carbohydrate / fat / iron / calcium requirements as appropriate to 2-5 year olds with reasons for possible variations, high fibre, Vitamin C / iron absorption, Vitamin D / calcium absorption, energy balance vis a vis activity levels, current nutritional guidelines re nutrient and food intake etc.

**Meal planning guidelines** – use of food pyramid to ensure balance, eat three balanced meals each day, avoid skipping meals, variety of foods, personal likes and dislikes, resource issues, use foods in season, avoid - snack foods, foods high in salt, saturated fat and sugar, include porridge/muesli instead of processed breakfast cereals, plan meals suitable for all family members, meals should be attractive and colourful, avoid spicy foods, foods should be easy to chew and digest, use sauces to soften meat, liquidise vegetables with meat & sauces, portions should not be too big, select foods that are easy to handle etc.

#### **Dishes selected – menu for one day (three meals and snacks)**

- must meet the nutritional requirements for 2-5 year olds
- must be a main course.

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

Analysis of findings regarding the nutritional requirements of dishes/meals for 2-5 year olds.

Meal planning guidelines – range of foods / dishes suitable for 2-5 year olds etc., how the selected dish meets the requirements as identified in the investigation etc.

## Assignment 2

***The prevalence of obesity has increased with alarming speed over the past twenty years. Approximately 39% of Irish adults are overweight and 18% are obese. It has been described by the World Health Organisation as a “global epidemic”.***

With reference to this statement, research and elaborate on (i) the causes of and (ii) the possible health implications for adults who are overweight or obese.

Investigate and elaborate on the nutritional needs and the factors that should be considered when planning and preparing meals for adults who wish to reduce their weight.

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

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

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

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

- *dietary/nutritional requirements with particular reference to **overweight or obese** adults*
- *causes of obesity*
- *health implications for adults who are overweight or obese*
- *relevant meal planning guidelines*

### **Investigation**

***Dietary / nutritional requirements*** – *nutritional balance, daily requirements of macro / micro-nutrients including protein / cho / fat / iron / calcium requirements as appropriate, high fibre, Vitamin C / iron absorption, Vitamin D / Calcium absorption, current nutritional guidelines re nutrient and food intake, use of ‘diet’ products etc.*

***Causes of obesity*** – *lack of exercise, busy lifestyles, inactive lifestyle, energy intake greater than energy expenditure, poor appetite control, fast food diet high in fat and sugar, genetic, hormonal, psychological reasons etc.*

***Health implications*** – *Coronary Heart Disease (CHD), high blood pressure, high cholesterol, stroke, diabetes, back pain, varicose veins, osteoarthritis, breathing difficulties, reduction in life expectancy, poor self esteem etc.*

***Meal planning guidelines*** – *use of food pyramid to ensure balance, establish pattern of eating three regular balanced meals each day starting with a balanced meal for breakfast, eat wide variety of fruit and vegetables, cut down/avoid processed, snack and empty kilo calorie foods, choose low fat/low calorie products, avoid refined carbohydrate foods and replace with wholemeal products, select foods with a low GI (glycemic index), choose poultry, white fish and lean meats, cut fat off meat, avoid foods that contain hidden fats i.e. cakes, biscuits and pastries and replace with fruit and vegetables, change cooking habits i.e. grill, boil, bake or steam foods, drink plenty of water and natural fruit juices instead of fizzy drinks etc.*

### **Dishes selected – menu for one day (three meals)**

- **should meet the nutritional requirements as identified to reduce weight**
- **must be a main course**

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

*Analysis of findings regarding what you learned from the investigation regarding the management of a diet for adults who are overweight or obese, factors that should be considered when planning meals for adults in order to maintain a healthy weight and to ensure nutritional adequacy, what foods are suitable/unsuitable, what special aspects of meal planning have to be considered, how the selected dish meets the requirements as identified in the investigation etc.*

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

### Assignment 3

**Many consumers have now added a wok or a steamer to their range of kitchen equipment.**

Select either a wok **or** a steamer and research

- the different types available
- uses i.e. dishes / foods, including main course dishes, that can be cooked using this item of equipment
- the reasons for its popularity
- the key points necessary for successful use of the equipment.

Prepare, cook and serve **one** of the main courses you have investigated using the selected item of equipment to maximum advantage

Evaluate the assignment in terms of **(a)** implementation, **(b)** the advantages and / or the disadvantages of using this item of equipment.

#### Key requirements of the assignment

- *research on different types of woks or steamers available*
- *examples of foods/dishes including main courses that can be cooked using wok / steamer*
- *reasons for its popularity*
- *the key points necessary for successful use of the equipment*

#### Investigation

- **Types of woks or steamers**

**Wok – electric/stand alone:** *bases – round bottomed, flat bottomed etc., materials - carbon steel, stainless steel, copper, non-stick Teflon coated, aluminium etc., handles – long wooden / metal, two small side wood / metal etc., brands – Jamie Oliver, All Clad, Le Creuset etc.*

**Steamer - electric/non electric/counter top:** *basic standard tiered steamer, tiered bamboo, microwave steamer, steamer oven etc., materials –stainless steel, aluminium, glass lids, hard plastic, heat resistant handles, glass perforated containers, aluminium baskets etc., brands – Morphy Richards, All Clad etc.*

- **Uses of woks or steamers**

**Wok – stir frying, deep fat frying, steaming, stewing, braising etc.**

**Steamer – steaming foods**

- **Foods/dishes that can be cooked using wok or steamer**

**Wok – chicken/beef/vegetable stir-fry, noodles, rice, chow mien, spring rolls, fruit fritters, sweet and sour pork etc.**

**Steamer – fish, chicken, rice, eggs, vegetables and puddings e.g. steamed rolls of plaice, steamed potatoes, steamed broccoli, sticky toffee pudding, marmalade pudding, caramel custard, steamed rice pudding etc.**

- **Reasons for popularity**

**Wok – speed of cooking, economical – uses less fuel, full meal cooked in one appliance, versatile, foods retain their nutritional value and flavour, convenience, cooked dishes low in fat, ethnic influence etc.**

**Steamer – healthy method of cooking as no fat used – ideal for low fat diets, nutritive value, flavour and colour of foods retained, economical, little wash up, wide variety of foods can be steamed, can be used to reheat food, cuts down on energy costs, foods can be timed and left unattended etc.**

- **Key points for successful use of wok or steamer**

**Wok – season wok, pre-heat, cook foods at correct temperature, use good quality oil, use uniform size pieces of food, cook food in batches etc.**

**Steamer – accurate timing, ensure foods are arranged in steamer according to density, avoid over packing steamer, ensure lid is well fitted etc.**

**Dishes selected – must be a main course (using wok/steamer for the main cooking process)**

**Evaluation (as specified in assignment)**

*What you learned from the assignment regarding the advantages and / or the disadvantages of using a wok/steamer, how the selected dish meets the requirements as identified in the investigation etc.*

## **Area of Practice C: Food Technology**

### **Assignment 4**

***The market for handmade sweets and chocolates has expanded significantly in recent years.***

Carry out research on commercially available handmade sweets and chocolates.

Investigate methods of making homemade sweets / chocolates.

Elaborate on **one** method and explain the principle involved.

From your research prepare and make **one** of the products that you have investigated. Include details regarding the type of packaging and labelling you would recommend for presentation.

Evaluate the assignment in terms of **(a)** implementation, **(b)** practicability of making sweets / chocolates at home and **(c)** cost in comparison to a similar commercial variety.

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

- *research commercially available handmade sweets / chocolates*
- *investigate methods of making homemade sweets / chocolates*
- *method and underlying principle of one method*
- *packaging and labelling suitable for presentation*

#### **Investigation**

***Research commercially available handmade sweets / chocolates***

**Brands: Chocolates:** *Butlers, Lily O'Brien, Lir, Leonidas etc. Sweets:* *Tramore Road (boiled), Linehans, O'Connells, Lemons, Athlone, Turkish Delight etc.*

**Types: Chocolates:** *truffles, filled chocolate etc. Sweets:* *toffees, marzipan, peppermint creams, fudge, cream fondants, boiled sweets etc.*

**Research may include definitions of 'handmade' 'chocolate' 'sweets', cost, quantity / weight sold (per box/bag), packaging, labelling, shelf life, availability, type of chocolate used – organic, free trade, cooking chocolate, manufacture of chocolate – cocoa bean, tempering etc.**

#### **Methods of making homemade sweets / chocolates**

**Syrup – boiled sweets:** *sugar is dissolved in water, brought to boil 100°C, temperature rises water evaporates, syrup thickens and darkens, sugar thermometer used for testing, flavours added etc.*

**Caramelisation: Caramel / Toffee / Fudge** - *moist heat causes sugar to dissolve, further heating produces syrup, heating to between 120°C – 130°C produces caramel(hard ball), turns golden brown when it reaches 160°C – 162°C, syrup when dropped into cold water forms a ball which is hard enough to hold its shape, still pliable etc. Toffee(soft/hard crack) is produced when syrup is heated to 132°C – 143°C(soft crack), mixture is not stirred to avoid crystallisation, syrup when dropped into cold water, separates into hard but not brittle threads, 149°C – 154°C(hard crack), when dropped into cold water syrup forms hard, brittle threads etc.*

**Marzipan: boiled** –*syrup of sugar and water brought to boiling point, cream of tartar added, heated to 116°C (soft ball), removed from heat and stirred until syrup 'grains' etc. uncooked* – *icing/castor sugar mixed with ground almonds and formed into stiff dough with egg yolk and lemon juice, kneaded etc.*

**Whisking: Truffles** – *heating cream and whisking cream with melted/solid chocolate pieces, butter/golden syrup, refrigerate until firm, shaping etc. e.g. praline truffles, chocolate rum truffles, mocha truffles etc.*

**Fondant:** *sugar is dissolved in water, brought to boil 100°C, temperature rises water evaporates, syrup thickens, soft ball formed at 116°C – 118°C, soft ball formed when a little of syrup is dropped into very cold water etc. e.g. peppermint creams*

**Fudge:** *sugar dissolved with butter in evaporated milk/cream, flavouring added, heated to 116°C – 118°C (soft ball) without stirring, mixture beaten to give characteristic creamy texture, caramelises and browns etc. e.g. vanilla fudge, chocolate fudge etc.*

**Chocolates:** *heating cream and flavouring, chocolate added and allowed to melt, cooled whipped, piped etc.*

**Turkish Delight:** *water and sugar syrup, thickened with gelatine, flavouring added etc.*

**Honeycomb, Inclusion, Coating etc.**

**One of the methods chosen should include details of the underlying principle**

***Suitable packaging and labelling for handmade sweets and chocolates*** *e.g. sweet cases, cardboard boxes, airtight tins, glass jars, gift bags, greaseproof paper, decorative or stick-on labels with product name / ingredients etc. If no packaging/ labelling mentioned – 3 marks*

**Dishes selected – Sweets/Chocolates.**

**Evaluation** (as specified in assignment) - *Practicability of making sweets / chocolates at home – resource issues – time, skills, equipment, packaging, storage etc.*

*Cost comparison between home made and commercial product etc.*

## **Area of Practice D – Dishes illustrating the Properties of a Food**

### **Assignment 5**

***Caramelisation and coagulation are used in food preparation to enhance the properties of the final dish / product.***

Define caramelisation **or** coagulation.

Investigate and elaborate on the application of caramelisation or coagulation in the making of a range of dishes explaining the principle involved.

Prepare, make and serve one of the dishes that you have investigated.

Evaluate the assignment in terms of **(a)** implementation and **(b)** success in applying the principle of caramelisation / coagulation in the making of the selected dish.

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

- *define caramelisation or coagulation*
- *application of the scientific principle caramelisation or coagulation in the making of a range of dishes*
- *range of dishes using caramelisation or coagulation*

**Caramelisation:** *when sugar is heated alone or in a concentrated syrup, caramel forms etc.*

**Coagulation:** *hardening or setting of a protein food etc.*

#### **Scientific principle of Caramelisation**

*Form of non-enzymic browning when sugar is heated alone or in a concentrated syrup, sugar melts and then produces a range of brown substances collectively known as caramel, sucrose caramelises at 170°C-177°C, the colour changes from a light yellow to a deep brown, caramelisation occurs most readily in the absence of water (crème brûlée), sugar solutions (syrups) will caramelise if heated strongly enough, ten gradual changes in sugar between melting and caramelisation, first stage 104°C, caramelisation occurs 170°C - 177°C, produces a darker colour, pleasant smell, slightly bitter taste, too much heat will produce a bitter and very dark caramel, if over heated eventually caramel carbonises etc.*

#### **Range of dishes –**

**Caramelisation:** *crème caramel, crème brûlée, banoffi pie, caramel squares, caramelised onions etc.*

#### **Scientific principle of Coagulation**

**Coagulation: Heat** - *hardening or setting of a protein food, proteins coagulate when heated, egg white coagulates between 60°C and 65°C to become opaque and solid, yolk coagulates between 65°C and 70°C, causes protein chain to unravel, straighten, and bond together around small pockets of water, eggs beaten well to combine white and yolk so one does not set quicker than the other etc.*

**Moist heat** – *i.e. boiling and stewing changes collagen to gelatine which tenderises tough meat etc.*

**Dry heat** – *i.e. roasting and grilling causes shrinkage, toughening of muscle tissue, loss moisture, producing dry texture etc.*

**Mechanical action** – *whisking of egg whites causes partial coagulation of the protein, protein chains unfold and line up around the air bubbles, entrapping air which results in the formation of a foam etc.*

#### **Range of dishes –**

**Coagulation:** *egg custard, Quiche Lorraine, meringues, soufflés, lemon meringue pie, bread and butter pudding, omelettes etc.*

**Dishes selected – must be a dish where caramelisation or coagulation is used.**

**Evaluation** (as specified in assignment)

*How successful the application of the principle of caramelisation/coagulation was in the preparation/cooking of the selected dishes.*

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

### Assignment 6

***The Home Economics class have been asked to design and produce a simple healthy snack (e.g. biscuit / bar) to be sold in the school canteen. This product should appeal to teenagers.***

Carry out research on **three** different products that would meet the above brief and give a description of each.

Your group should choose **one** product to develop and give reasons for the group choice. Compile a product specification indicating how the product should look and taste. (Use 6 attributes).

Make the product. Carry out a **descriptive rating test** using line scales or star diagrams. (Use the same 6 attributes as above). Compile a sensory profile of the product made.

Evaluate the assignment in terms of **(a)** implementation and **(b)** modifications that could be made to meet the product specification.

#### Key requirements of the assignment

- research and describe **three different healthy snacks** ( e.g. biscuit / bar ) to be sold in school canteen
- reasons for choice of product
- product specification indicating how product should look and taste ( 6 attributes)
- descriptive rating test using line scales or star diagrams
- conditions to be controlled during testing

#### Investigation

- **Research / Investigation of products appropriate to the testing**

*i.e. investigate and describe three different healthy snacks (e.g. biscuit/bar) types, flavours, ingredients etc.*

= 20

- **Descriptive rating Test using line scales or star diagrams**

**Description:** agree on 6 attributes for snack to be rated (class suggest and agree on attributes), rate snack for chosen attributes using line scales or star diagram, draw up sensory profile for snack etc.

**Aim:** to compile a sensory profile on the snack made etc.

**Possible outcomes:** to have a description of the attributes for the snack i.e. sensory profile

- **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, similar quantities in each sample, hygiene, timing, dietary conditions, an understanding of the meaning of each attribute etc.*

- **Selected dish and selection criteria** (name =4marks; 2 reasons @ 2 marks)

*Select one type snack and state 2 reasons for choice.*

= 4  
= 4

Sources – 2 x 1 mark

= 2

#### Preparation and Planning

- **Resources**

= 3

**Main equipment needed to carry out assignment**

**Descriptive rating test** - tray, glass of water, snack, score-cards, record sheets, pen etc.

- **Time allocation / Work sequence**

= 3

*Sequence of tasks within appropriate time allocation, brief outline of the main steps they intend to follow i.e.*

*Prepare and cook (if appropriate) snack*

*Descriptive rating test: compile product specification, agree descriptive words and agree attributes, label score card and record sheet, follow instructions on score cards, set up trays, carry out descriptive rating test using line scales or star diagrams, compile sensory profiles based on group results, tidy and wash up, evaluate results etc.*

**Implementation** = 16

**Procedure followed when carrying out this aspect of the assignment**

*The full sequence of implementation should be given and findings should be presented for the test as follows:*

**Descriptive rating test (one product) using star diagram**

*Prepare and cook (if appropriate) snack*

*Compile product specification, agree descriptive words and agree attributes, label score cards and record sheets with agreed attributes, follow instructions on score card, arrange sample of food, set up trays, tasters taste food rate attributes from 0 – 5 using star diagram for the food sample, complete individual star diagram, collect cards and transfer results of each tester in group onto record sheet, calculate average scores for each attribute, transfer results to group star diagram (can draw own or cut one from scorecard used and stick on), **compile a sensory profile** for snack, present results, tidy and wash up etc.*

**Using line scales:**

*Agree descriptive words and agree attributes, label score cards and record sheets with agreed attributes, arrange sample of food, set up trays, using 6 line scales, one for each attribute, rate attributes from 0 – 5 using a horizontal line with low rating at left hand end of line and high rating at right hand end of line, transfer results of each tester in group onto record sheet, calculate average scores for each attribute, **compile a sensory profile** for snack, tidy and wash up 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 snack, degree of doneness, uniformity of samples for testing, sufficient amounts, glass of water/or dry cracker included to cleanse the palate, importance of silence during testing, samples used are from the same batch, use of appropriate words (attributes) familiar to all students, etc.*

- **Safety and hygiene (two safety / hygiene points x 2 marks each)** = 4

***Safety:** testers with allergies e.g. nuts, special diets – coeliac, care in cutting samples etc. **Good hygiene** practice with regard to: preparation area and the testing area, handling of samples – use of plastic gloves / disposable glasses etc.*

**Evaluation**

- **Implementation (2 points x 4 marks each)** = 8

*Evaluate efficiency of work sequence*

*Safety and hygiene issues considered*

*Problems encountered and suggested solutions*

- **Specific requirements of the assignment (1 point x 8 marks)** = 8

*What **modifications** that could be made to meet the desired product specification etc.*

**Band A = 8 marks**  
**Band B = 6 marks**  
**Band C = 4marks**



## Appendix

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

1. Examination requirements:  
Candidates are required to complete and present a record of **five** assignments for examination.  
In respect of **Areas of Practice**, candidates must complete  
Area A - **One** assignment  
Area B - **One** assignment  
Area C - **One** assignment  
Area D - **One** assignment  
**One** other assignment from either Area A or Area E  
Where a **candidate completes five assignments and does not meet the examination requirements** as set out above, the examiner will mark the five assignments as presented and disallow the marks awarded for the assignment with the lowest mark from AOP A or E.
2. Each Food Studies assignment must include different practical activities.  
Where a **candidate repeats a practical activity for a second assignment**, the examiner will mark the repeated practical as presented and disallow the marks awarded for the repeated practical activity with the lowest mark.
3. Where a **candidate completes the investigation and / or the preparation and planning and / or the evaluation aspects of an assignment and does not complete the implementation**, the examiner will mark the completed aspects of the assignment as presented. However, marks for **evaluation of implementation**, where attempted, will be disallowed.  
In relation to Assignments 3, 4, 5 and 6 **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) under meals /dishes/products in the investigation.
6. **Teacher demonstration** work is **not acceptable**, therefore no marks to be awarded for implementation and evaluation of implementation.
7. **Dish** selected **not fully compliant** with requirements e.g.
  - An uncooked dish selected where a cooked dish specified
  - Dish, where required, not modified to meet assignment requirements e.g. Assignment 2
  - Dish selected shows few process skills e.g. Assignment 4
  - Dish selected includes over use of convenience foods
  - Dish selected where principle is not essential to success of dish as specified in the assignment.Deduct – 10 marks from total mark awarded for assignment.
8. A **dish that does not meet the requirements of the assignment** e.g. a dessert dish prepared instead of a main course no marks to be awarded.
9. Assignments 1, 2 and 3 where main courses are not balanced or are incomplete – deduct - 5 marks.  
(Ingredients -1 mark: Implementation – 4 marks)
10. Where a teacher disallows a practical application, no marks are allowed for **Implementation and Evaluation of Implementation**. All other areas may be credited.



