Coimisiún na Scrúduithe Stáit
State Examinations Commission

LEAVING CERTIFICATE 2010

MARKING SCHEME

HOME ECONOMICS – SCIENTIFIC AND SOCIAL

ORDINARY LEVEL

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.*

Leaving Certificate Home Economics – Scientific and Social
Written Examination – Ordinary Level

Section A

Answer any ten questions from this section.
Each question is worth 6 marks.
Write your answers in the spaces provided.

1. List the **four** elements found in proteins.
(6 @ 1 mark) **(6)**

(i) carbon _____

(ii) hydrogen_____

(iii) oxygen _____

(iv) nitrogen, sulphur, iron, phosphorus _____

Give **one** source of **each** of the following proteins.

Animal *e.g. meat, fish, eggs, milk, cheese, yoghurt etc.*_____

Plant (Vegetable) *e.g. soya beans, nuts, pulse vegetables, cereals, bread etc.*_____

2. Complete the following statement in relation to the biological functions of carbohydrates using the words listed below.
(3 @ 2 marks) **(6)**

liver energy cellulose

Glucose releases heat and ***energy*.**

Excess glucose is stored as energy in the ***liver*** and muscles.

Cellulose stimulates the movement of food through the bowel.

3. Explain **two** of the following properties of lipids (fats):
(2 @ 3 marks) **(6)**

Melting Point: *e.g. solid fats melt when heated to 30° C -40° C etc.*

Smoke Point: *e.g. when lipids are overheated they start to decompose, converting the triglyceride into its component glycerol and fatty acids, a blue haze forms, impurities lower smoke point of lipid and fats that have been used several times etc.*

Flash Point: *e.g. when lipids are overheated a vapour is emitted which can spontaneously burst into flames, flash point of solid fats is 310° C and oils 325° etc.*_____

4. In relation to vitamins, indicate with a tick (√) whether each of the following statements is true or false.

(3 @ 2 marks) **(6)**

Vitamins	True	False
Night blindness is a result of a deficiency of Vitamin A	√	
Vitamin C is essential for the absorption of iron	√	
Vitamin B is a fat-soluble vitamin		√

5. Outline **three** current nutritional guidelines (healthy eating guidelines) that are especially relevant for an obese person.

(3 @ 2 marks) **(6)**

(i) *eat balanced meals with low energy values*

(ii) *increase intake of high fibre foods*

(iii) *avoid fatty foods especially saturated fats, use low-fat options / products reduce salt, reduce sugar etc.*

6. Name **two** government departments or agencies that have a role in the food and drinks industry.

(2 @ 1 mark) **(6)**

(i) *e.g. An Bord Bia, Teagasc, Forbairt, Department of Food & Agriculture, BIM, FSAI*

(ii) *Department of Health, Department of Communications, Marine & Natural Resources etc. HSE, IDA, etc.*

List **two** career opportunities in the food industry.

(2 @ 2 marks)

(i) *e.g. chef, waiter, receptionist, food manufacturing, dietetics, home economics teacher,*

(ii) *butcher, confectioner, baker, engineer, agricultural scientist/ science graduates, sales health inspector, etc.*

7. Name **three** types of flour used in home baking and give **one** different culinary use of each.

(6 @ 1 mark) **(6)**

Type of flour	Culinary use
1. wholemeal /wheat meal / brown	*1. brown bread / scones*
2. white / plain / cream	*2. pastry, bread, scones, sauces, etc.*
3. self raising flour, strong flour, gluten free flour, high ratio flour, spelt, bleached/unbleached, corn flour etc.	*3. cakes, yeast baking, coeliac products, biscuits, etc.*

8. Set out in the table are classes (types) of food additives. Match each class with the correct example using the examples listed. **(6)**

(3 @ 2 marks)

Examples: herbs and spices, vitamin E, turmeric

Classes of Food Additives	**Example**
Colourings	*turmeric*
Flavourings	*herbs and spices*
Antioxidants	*vitamin E*

9. State the purpose of labelling on household cleaning agents. **(6)**

(1 @ 3 marks)

e.g. safety and hazard symbols can be recognised and adhered to, prevents accidents,

informs consumer of contents of product and how to use products etc.

Identify and explain this hazard symbol.

(1 @ 3 marks)

Harmful / Irritant

Substances can cause irritation or reddening of skin, substance similar to toxic substances but less dangerous

10. Outline **two** advantages of planning a household budget. **(6)**

(2 @ 2 marks)

(i) *e.g. helps to develop good management skills*

(ii) *spending and the use of credit facilities can be carefully monitored*
areas of overspending / impulse buying become obvious, economies can be made so that serious debt can be avoided, financial security, encourages savings, sets a good example for family members etc.

What protection does life assurance give to a person or family?

(1 @ 2 marks)

e.g. provides security e.g. in the event of premature death, provides cover for the financial hardships that result from death, when person dies the beneficiary receives a lump sum etc.

11. State **three** ways that technological developments have contributed to greater efficiency in the management of the home.

(3 @ 2 marks) **(6)**

(i) *e.g. workload is lightened / reduced by appliances such as dishwashers & washing machines*

(ii) *some appliances save on electricity e.g. microwave and so save money*

(iii) *appliances have built in safety devices e.g. thermostats which protect the consumer, save time e.g. food processors, tasks are performed with increased efficiency, security technology reduces the risk of burglary, communication technology allows for easier and quicker access to information, improvements in energy efficiency e.g. solar panels etc.*

12. Explain **two** of the following methods of payment used for goods and services.

(2 @ 3 marks) **(6)**

Credit card: *e.g. visa, master card, allow card holders to buy goods or services without having to pay for them until a 'credit free' period is over, minimum payment must be made each month, interest is charged if bill not paid in full, no interest if balance is cleared each month etc.*

Laser Card: *e.g. money is immediately debited from your account, can be used to get cash back in shops when paying for goods, money can be withdrawn at ATM machine, cheaper than using cheque etc.*

Direct Debit / Standing Order: *e.g. a specific amount of money can be withdrawn from account at regular intervals to pay bills e.g. mortgage, ESB etc, charge for setting up and each time money is withdrawn, etc.*

Section B

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

(80)

1. 'Dem bones, dem bones need calcium….'

Ninety per cent of the adult skeleton is formed by the age of 17 years. Bone continues to grow during the 20s but from the mid 30s onwards the skeleton starts to weaken slowly.

(National Dairy Council)

The table below shows nutritional information, per 100g for whole and semi-skimmed milk.

	Whole milk	**Semi-skimmed milk**
Energy kcal	66	46
Protein (g)	3.3	3.5
Carbohydrates (g)	4.6	4.7
Fat (g)	3.9	1.7
Saturated fatty acids (g)	2.5	1.1
Calcium	118	120
Iron (mg)	0.03	0.02
Vitamin A (Retinol)	30	19
Folate	8	9
Vitamin C	2	2

(a) Identify the **<u>three</u>** main differences between whole milk and semi-skimmed milk
3 @ 3 marks each **(9)**

e.g. whole milk is higher in energy, fat, saturated fatty acids, Vitamin A and iron, semi-skimmed milk is higher in protein, CHO, calcium, etc.

(b) Give an account of the dietetic value of semi-skimmed milk.
3 @ 5 marks **(15)**

e.g. easy to digest therefore suitable for invalids and elderly, versatile food, convenient for people on low cholesterol, low kilocalorie diets, high in calcium for strong bones and teeth, protein for growth, cho for energy, not suitable for children as it is low/lacking in some nutrients, combine with foods rich in starch, fibre, iron, etc. to create a balanced diet.

(c) Set out the results of a study you have carried out on calcium.
Refer to **<u>each</u>** of the following:

- sources in the diet
- functions in the body
- effects of deficiency
- factors that affect absorption.

• sources in the diet

3 sources @ 4 marks each **(12)**

e.g. hard water, dairy products – milk, cheese, yoghurt, canned fish, green leafy vegetables, fortified bread & flour, eggs, etc.

• functions in the body

2 functions @ 4 marks each **(8)**

e.g. strong bones, healthy teeth, clotting of blood, muscle contraction, normal nerve function, membrane permeability, etc.

• effects of deficiency

2 effects @ 4 marks each **(8)**

e.g. rickets, osteomalacia, osteoporosis, dental caries, irritability and muscle spasm, poor blood
clotting, disturbances in functioning of nerve cells, irregularity in muscle contractions, etc.

• factors that affect absorption

2 factors @ 4 marks each **(8)**

e.g. **increased by***: an acid environment, Vitamin C, parathormone, vitamin D, adequate protein in diet, lactose, phosphorus etc.*
decreased by*: excess fat, excess protein, incorrect calcium / phosphorus ratio, saturated fatty acids, dietary fibre, phytates, oxalates etc.*

(d) Discuss how the food industry has responded to consumer demands through the development of new and value added food products.

4 points @ 5 marks each **(20)**

e.g. ready to cook / reheat foods, frozen meals – quick, easy to use, cheaper than buying all different ingredients, handy in emergencies and for people in hurry, instant foods e.g. breakfast rolls, pizzas, etc. bio yoghurts, Benecol, Flora pro-active – lowers cholesterol, products with added omega 3, increased health benefits, improve metabolism, help to maintain a healthy lifestyle, reduce the risk of cardiovascular disease, energy drinks, breakfast/protein bars, juices and smoothies, etc.

2. 'Meat plays a central role in the Irish diet providing a significant contribution to the intakes of the key nutrients.' *(An Bord Bia)*

(a) Describe the nutritive value of meat in the diet.

4 points@ 5 marks each **(20)**

e.g. HBV protein, saturated fat amounts depends on animal and cut of meat and the method of cooking, e.g. low in chicken, no carbohydrate – serve with starchy foods, vitamin B group, A & D in liver, iron in red meat, small amounts of sulphur, zinc, potassium, water, extractives, etc.

(b) Using meat as the main ingredient design a **<u>two</u>** course menu suitable for the main meal of the day for a family on a low income.
Give reasons for your choice of foods. **(14)**

Menu: 2 courses @ 4 marks each

Sample Menu
Vegetable Soup
……
Spaghetti Bolognese

2 reasons @ 3 marks each

accept nutritive/convenience/cost/ personal preference/ skills reasons – e.g. any available vegetables can be used, meat is high in protein – good for growing children, high in iron – good for pregnant women, teenage girls, serve with starchy foods e.g. pasta, potatoes, balanced meal, reasonable cost, easy to cook, quick to prepare, etc.

(c) Processed meats are popular consumer products.
Name **<u>two</u>** types of processed meat and state **<u>one</u>** advantage of each. **(16)**

Name: 2 @ 4 marks each

e.g. frozen meat products – burgers, nuggets, sausages, puddings, rashers, cooked cold meats, cured/salted – ham, smoked bacon, canned meat - stew, corned beef, dehydrated -TVP etc.

2 advantages @ 4 marks each

e.g. economical, little loss of nutrients, no waste, easy to use, save time, labour & fuel, wide variety, longer shelf life, etc.

3. All home preservation is based on the principle of preventing enzymes and micro-organisms from causing food to decay.

(a) State **four** of the main causes of food spoilage.

4 causes @ 4 marks each **(16)**

e.g. enzyme action, microbial contamination – yeasts, moulds and bacteria, oxidation, moisture loss, foods not stored at correct temperature, poor hygiene practices – food handled and stored incorrectly, etc.

(b) Give an account of **one** method of food preservation used in the home. **(24)**
Refer to:

- method of preservation (name) **= 4 marks**
- suitable foods **= 4 marks** (2 foods)
- how this method of preservation is carried out **3 points @ 4 marks each**
- packaging = **4 marks**

- method of preservation **–** ***freezing, jam, chutney and relishes, drying, pickling***

- suitable foods

e.g. **fruit***: apples, oranges, strawberries, plums, apricots etc.*
vegetables: *carrots peas, beans, tomatoes, onions, cauliflower, broccoli etc*

- how this method of preservation is carried out

e.g. ***freezing****: turn on fast freeze button for 3-4 hours, choose best quality food only, freeze in usable quantities, blanch vegetables to inactivate enzymes, wrapping food prevents the re-entry of micro-organisms and helps to maintain colour, flavour and texture, etc., cool all foods before freezing, open-freeze foods that will stick together, e.g. strawberries, seal foods well in packaging removing as much air as possible, allow space for liquids to expand, label all foods with name, quantity and date of freezing, place food in freezer in contact with sides or base of compartment, leave for approximately 24 hours, remove to storage section etc.*
jam making: *weigh and measure ingredients accurately, use sound, washed and sterilised jars, prepare fruit according to type, use heavy based / copper pan for cooking fruit, allow to simmer to release pectin, add sugar, boil until setting point is reached, test, skim, pot, cover, label and store.*

- packaging

e.g. use moisture proof, vapour proof and strong packaging, foil / plastic containers, ties, labelling, glass jars, wax discs, cellophane covers, etc.

(c) Outline **two** uses of micro-organisms in food production.
2 points @ 5 marks each **(10)**
e.g. ***Moulds*** *– mycoprotein*
Yeast - *vinegar, alcoholic drinks, yeast bread*
Moulds -*manufacture of cheese,*
Bacteria - *starter culture in yogurt, etc.*

4. Jim and Ann are a couple with two young pre-school children. They are both working outside the home. The children attend play school every morning. Recently their washing machine has broken down.

(a) Discuss **four** factors that Ann and Jim need to consider when planning the purchase of a new washing machine.

4 factors @ 5 marks each **(20)**

e.g. energy rating, reliable brand, easy to operate, design of appliance, after sales service, guarantee, cash vs. credit, size of family, initial and maintenance cost, quality symbols, space available, colour, etc.

(b) Explain how Jim and Ann could use the *Small Claims Procedure* if the washing machine they purchase is faulty and they cannot get redress from the shop.

3 points @ 4 marks each **(12)**

e.g. application form from District Court Registrar is completed, fee of 9 euros not refundable, the claimant must be the person who bought the faulty goods, copy sent to respondent, respondent can accept claim or challenge it, registrar will try to resolve case, if not resolved referred to courts, if respondent does not refute the claim within 15 days the claim is settled in favour of claimant, no solicitor is needed, deals with claims below 1,270 euros, if complaint is disputed and registrar fails to settle the dispute the case will be resolved by a court hearing, etc.

(c) Identify **two** main sources of income and **four** main areas of expenditure (spending) for this family. **(18)**

2 sources @ 3 marks each

e.g. Jim & Ann's salaries / wages, children's allowance, interest on savings, rent allowance, F.I.S. etc.

4 areas @ 3 marks each

e.g. food, mortgage/rent, childcare and play school fees, clothes, medical bills, utility bills - electricity, gas, telephone, transport, etc.

5. 'The effects of disadvantage can last a lifetime. It's true that children have amazing abilities to cope, but the wrong start can affect the direction of their whole lives.'

(www.barnardos.ie)

(a) With reference to the above statement, identify and explain the **physical** and **psychological** (emotional) needs of young children. **(15)**

3 needs @ 5 marks each
(1 reference to physical, 1 reference to psychological and 1 other)

physical: *e.g. food, clothing, shelter, warmth, security, protection of vulnerable etc.*
psychological: *e.g. provision of loving environment to develop self esteem and thus help child to form relationships, children need love, security, care, praise, stimulation to learn, etc.*

(b) Give an account of **four** rights of children within the family. **(20)**

4 rights @ 5 marks each

e.g. right to life, name and nationality, to live with parents unless considered to be against the best interests of the child, to basic physical needs, to develop physically, mentally, socially, morally, spiritually, protection from all forms of abuse and neglect, right to education, leisure, cultural activities, recreation, etc.

(c) Explain, giving examples, how the state provides support to children who are disadvantaged. **(15)**

3 examples @ 5 marks each

e.g. provision of education i.e. pre-schools/ primary / post-primary schools, psychological assessment, providing resource teachers and class room assistants, economic - children's allowance, Back to School Allowance, School Completion Programme, medical card, protection - removing children from the home either temporarily or permanently and placing them in foster care, support services e.g. Family Support Projects, state introduced Childcare Act, 1991, etc.

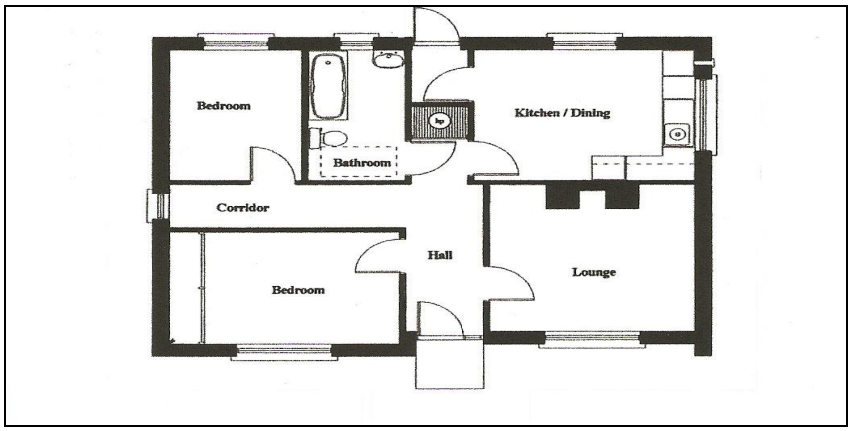
Section C

Answer one question from this section.

Elective 1 - Home Design and Management (80 marks)

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

1. (a) The diagram below shows the floor plan of a two-bedroom house.



(i) Assess the suitability of the house plan, shown above, for a family of one parent and two children aged 13 and 4 years. **(20)**

4 points @ 5 marks each

e.g. provides adequate basic accommodation for family, no bedroom for friends to stay overnight, children must share bed room – where does 13 year old study, only one bathroom to share, dining/kitchen area very small for eating in, no play area for children, not much storage space for toys, bicycles, smaller home can be easier to maintain and heat, inexpensive to run, compact, etc.

(ii) Describe **three** factors that might influence a person's choice of location when building a house. **(15)**

3 factors @ 5 marks each

e.g. urban or rural area, cost of site, proximity to family, friends, work, church and schools, size & orientation, natural shelter and light, no danger of flooding, proposed developments in area, planning permission, building regulations in the area, the surrounding neighbourhood, resale value, etc.

(iii) In relation to house building and purchase explain the role of **each** of the following: (a) the architect; (b) the surveyor and (c) the solicitor. **(15)**

3 points @ 5 marks each

Architect: *e.g. design, co-ordinate & manage the building project, advise on the design of an extension or refurbishment of a house, advise on site, advise on contractors etc.*
Surveyor: *e.g. carry out comprehensive site survey, identify potential problems in houses and sites and provides proactive advice on how to solve them, etc.*
Solicitor: *e.g. handles the legal aspects concerning the title deeds of site / house, prepares contracts for purchase site / house, checks rights of way, advises on building regulations and planning permission etc.*

and

1. (b) Awareness of energy efficiency has increased significantly in recent years.

(i) Identify **three** areas in the home where energy inefficiencies may occur and in relation to each suggest **one** method of improving efficiency. **(18)**

3 areas @ 3 marks each + 3 methods @ 3 marks each

walls: *e.g. solid walls – insulation sheets attached and covered with a plaster board layer, etc., cavity walls, injection of polystyrene beads or granules into cavity walls, blanket insulation etc.*
attic: *e.g. insulation blanket made from glass / mineral fibre, pellets of polystyrene or vermiculite poured between joists, foam sprayed between roof rafters and solidifies etc.*
windows / doors: *e.g. double glazed windows, well fitted windows, fit draught excluders, use heavy lined curtains, fit draught excluders at letter boxes, etc.*
heating: *e.g. service boiler regularly, set thermostats to correct temperature – not too high, use individual room thermostats and timers, heat unused rooms at a lower temperature, only use heat when necessary, etc.*
lighting: *e.g. use correct wattage bulbs, use CFL bulbs, turn off lights when not in use etc.*
water heating: *lag pipes and water cylinder, take showers instead of baths, have timer and thermostat on immersion, avoid washing under running tap, use jug kettle for small amounts, use economy programme on dishwashers and washing machines, etc.*
use of appliances *e.g. avoid leaving on stand-by etc.*

(ii) State the advantages / the disadvantages of solar energy. **(12)**

3 points @ 4 marks each

e.g. **advantages***: saves up to 68% on heating bills, ensures comfort – plentiful supply of hot water for space and water heating, converts light from sun directly into electricity, no carbon dioxide emissions, grants available, etc.*
disadvantages*: expensive to install solar panels, limited amount of sunshine in Ireland, house has to be south facing to absorb most sun and light, etc.*

or

1.(c) Floral prints, checks and stripes are examples of pattern used in interior design.

(i) Explain, giving examples, how pattern may be used to enhance (improve) the appearance of a room. **(12)**

2 points @ 6 marks each

e.g. *pattern adds variety style, interest & contrast, alters the proportion of a room i.e. bold patterns advance, vertical lines give height, etc.*

Examples – soft furnishings, curtains, carpets, wallpaper, etc.

(ii) Suggest **two** types of flooring suitable for a sitting room. **(18)**

2 types @ 3 marks each

e.g. wood, carpet, vinyl, marmoleum, ceramic tiles, cork, etc.

State **two** properties of each.

4 properties @ 3 marks each

e.g. **wood -** *durable, attractive, may get marked, etc.*
vinyl – *available in a variety of colours, patterns, warm, soft, easy to clean, etc.*
carpet – *wide variety of colours, pattern, designs, good insulator, absorbs noise, etc.*
marmoleum – *wide variety of colours, patterns, easy-care, quiet, etc.*

Elective 2 - Textiles, Fashion and Design (40 marks)

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

2.(a)

(i) Comment on current fashion trends (male and female) as shown in the photograph above. Refer to:

- colour / pattern,
- fashion influences
- the use of accessories. **(18)**

6 points @ 3 marks each

- **colour / pattern:** *dress – black / grey / white; pattern introduced on bodice with lace type overlay also in panels on skirt. Suit – solid black with further colour (grey and white) and pattern introduced in shirt and cravat*
-
- **use of accessories:** *sunglasses, hat, belt, earrings, chain with medallion etc.*

(ii) Name and describe **<u>one</u>** method of applying a design to a jacket. **(7)**

1 method @ 3 marks
description @ 4 marks [2 points @ 2 marks each)

method: *e.g. appliqué, embroidery, quilting, beads, screen printing, roller printing, embossing etc.*
appliqué: *decorative method of applying one fabric to another, the top fabric may be applied by hand or machine.*

And

2.(b) (i) Outline the contribution of cottage industries to the Irish clothing and textile industry. **(9)**

3 points @ 3 marks each

e.g. accounts for approximately 70% of all clothing businesses in Ireland, important in rural communities for employment, work is often subcontracted to locals to do at home, this is especially true of hand-weaving and hand knitting traditional crafts, e.g. Aran knitting, Carrickmacross lace, etc. are promoted by FÁS, I.C.A.T.A., offer support and advice etc.

(ii) State **two** reasons why career opportunities in the Irish clothing industry have declined. **(6)**

2 reasons @ 3 marks each

e.g. high cost of raw materials, transport, wages, competition from abroad, downturn in the Irish economy, etc.

or

2.(c) Synthetic and regenerated fibres are increasingly used in the production of modern textiles.

Write a profile of a fabric made from manufactured fibre under the following headings:

- name
- fibre production
- properties
- fabric uses. **(15)**

5 points @ 3 marks each (1 reference to each + 1 other point)

- fibre production

e.g. Nylon – two chemicals called monomers are mixed in a 1:1 ratio and heated creating a long chain polymer, the fibre is run onto a water-cooled revolving wheel, which cools the ribbon, it is then drawn through a cold water tank where it solidifies, it is cut into chips which have to be dried, they are then melted, extruded from a small hole, on contact with cold air they solidify into nylon yarn ready for spinning.

- properties

e.g. very strong, crease resistant, light to wear, drapes well, high abrasion resistance, can be 'set' permanently in size and shape which prevents stretching or shrinking after washing, easy to dye, good fire resistance, mildew resistant, etc.

- fabric uses

e.g. used in shirts, lingerie, stockings, tights, netting for bridal veils, snowsuits, ski clothes, windbreakers, knitted dresses and suits, carpets, soft furnishings, etc.

Elective 3- Social Studies (80 marks)

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

3.(a) Ireland has moved from having the second lowest unemployment rate among the EU-15 countries two years ago to the second highest.' *(Irish Independent July 2009)*

(i) Discuss the effects of unemployment on
- the family unit
- the individual
- society. **(20)**

4 effects @ 5 marks each (1 reference to each + 1 other point)

- the family unit

e.g. lack of money, decline in living standards, poverty, problems paying rent, bills etc, strain on family relationships, tension, children can suffer academically in school, may be tendency to turn to drink or drugs, loss of home, etc.

- the individual

e.g. loss of income, stress, feeling worthless, worry, guilt, loss of identity, status and self esteem, loss of social contact, depression, ill health, boredom, loneliness, isolation etc.

- society.

e.g. burden on state through payment of unemployment assistance, increased poverty and crime, increases emigration, creates inequalities within communities, increase in taxes, social problems, a growth in the black economy, etc.

(ii) Outline the benefits of voluntary work to (a) the unemployed person and (b) the community. **(16)**

4 benefits @ 4 marks each (2 references to each)

unemployed person: *e.g. rewarding, helps personal development, may lead to paid work, learning new skills, develop empathy when they see difficulties faced by others, opportunity to see different aspects of life, make new friends, occupies free time, etc.*

community: *services provided quickly without bureaucracy and cost, attention focused on social issues, sense of community spirit, cleaner streets, etc.*

(iii) Give details of **<u>two</u>** different types of support provided by voluntary organisations to families where the main wage earner is unemployed. **(14)**

2 types @ 7 marks each

e.g. support can be financial, advisory, material – provided by St. Vincent de Paul, CIC, Rotary, Lions clubs etc. Can act as pressure groups, can offer government bodies detailed information and possible solutions, funding of classes to teach people the skills to help them cope with their situation, etc.

and

3.(b) 'A litany of serious neglect in childcare standards at crèches and Montessori schools can be revealed today'. (Irish Independent September 2009)

(i) Outline the reasons why **<u>each</u>** of the following is important in crèches / pre-schools:

- adequate levels of supervision
- sufficient resources
- high levels of hygiene and safety. **(18)**

6 reasons @ 3 marks each
(1 reference to each + 3 others)

- adequate levels of supervision

e.g. appropriate ratio of adults to children, to ensure that each child has adequate supervision for learning, play, eating, toileting, to enable children to interact, to enable development of independence, etc.

- adequate resources

e.g. for children to learn at their own rate through play in a fun and active environment, to sleep/ eat as necessary, to give a positive start to their education, sufficient indoor and outdoor space for number of children, adequate age appropriate toys, etc., to stimulate curiosity, develop dexterity, etc.

- high levels of hygiene and safety.

e.g. for health and safety of the child, to keep them free from infections in a safe environment, toys and furniture should all meet required safety standards, foods / beverages kept at required temperatures to prevent food poisoning etc.

(ii) Explain how attending pre-school can assist a child's development. **(12)**

3 points @ 4 marks each

e.g. socialisation, part of team, form relationships with other children, form relationships outside the home, learn to interact with others, become independent and confident, develop physically by playing games, intellectual development helped by learning in a stimulating environment, etc.

or

3.(c) The notion that work in the home is becoming evenly distributed among the sexes is a myth. Research shows that women are responsible for 86% of child supervision, 82% of care of adults and 80% of cooking.

(Report from The National Women's Council of Ireland, October 2009).

Discuss how the burden of home care duties can have an impact on women in relation to **<u>three</u>** of the following:

- health
- employment opportunities
- leisure time
- pension entitlements.

5 points @ 6 marks each **(30)**
(1 references to each of any 3 of the listed headings + 2 other points)

- health

e.g. role overload with no time to themselves can cause stress, little support from working partner, can become depressed when children start school, no outside interests, put on weight and can be careless in appearance, lack of stimulation etc.

- employment opportunities

e.g. home care demands may result in women not being available for full time work or work not adjacent to home, lack of work experience can lead to difficulty getting employment, need to retrain, often working in the services sector on a part time basis, may never achieve managerial status, promotion, etc.

- leisure time

e.g. little or no time for leisure activities can lead to stress, money not available to join leisure centres, if partner's attitude not positive can lead to friction, partner's working hours, etc.

- pension entitlements.

e.g. as often engaged in homecare duties do not contribute to pension scheme so dependent on state pension; where employed on a part time / casual basis less opportunity to join an occupational pension scheme; career breaks / job sharing can lead to reduced pension entitlements, etc.

Coimisiún na Scrúduithe Stáit
State Examinations Commission

LEAVING CERTIFICATE 2010

MARKING SCHEME

HOME ECONOMICS – SCIENTIFIC AND SOCIAL

FOOD STUDIES COURSEWORK

Food Studies Practical Coursework General Marking Criteria

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 **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 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 / menu for day **= 4**

If dish prepared is not investigated -1 / -2 marks in Investigation.
(menu – starter/desert = 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

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** **= 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

Research has highlighted the close relationship between health, nutrition and socio-economic status. Attention has been drawn to the vulnerability of socially disadvantaged groups to food poverty and related conditions such as malnutrition and obesity.
Identify and elaborate on the nutritional needs and the meal planning guidelines that should be considered when planning meals for a low-income family.
Bearing in mind these considerations, investigate a range of main course dishes suitable for the main meal of the day for this family.
Prepare, cook and serve **one** of the main courses that you have investigated.
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 a **low-income family***
- *relevant meal planning guidelines with specific reference to a **low-income family***
- *range of main course dishes*
- *reasons for choice.*

Investigation

Dietary / nutritional requirements – *nutritional balance, daily requirements of macro / micro nutrients including protein / cho / fat / iron / calcium requirements as appropriate to a low-income family's needs with reasons for possible variations, high fibre, Vitamin C / iron absorption, Vitamin D / calcium absorption, possible variations in energy requirements, current nutritional guidelines re nutrient and food intake etc.*

Meal planning guidelines – *use of food pyramid to ensure balance, variety of foods, personal likes and dislikes, resource issues with particular reference to foods that are nutritionally adequate and relatively inexpensive – own brand foods, special offers, cheaper protein food sources e.g. use of meat extenders and substitutes, special offers, foods in season, avoid foods high in salt, saturated fat and sugar i.e. convenience foods, use of energy efficient methods of cooking e.g. microwave, steamer, full use of oven, portion size, cost of meals, time available for preparation, skills, avoid purchasing convenience foods e.g. brown bread - make own instead etc.*

Dishes selected – range of main course dishes
- must be suitable for low-income family
- must be a main course.

Evaluation (specific requirements of assignment)
Analysis of findings regarding the nutritional requirements of main course dishes for a low-income family.
Meal planning guidelines – range of main course dishes suitable for a low-income family, how the selected dish meets the requirements as identified in the investigation.

Assignment 2

Osteoporosis affects one in three women over the age of fifty in Ireland.
Carry out research on *osteoporosis* in relation to: **(i)** the causes, **(ii)** the effects on the body and **(iii)** the possible preventative measures of this condition.
Investigate and elaborate on the nutritional needs and the factors that should be considered when planning and preparing meals for women (aged 50 years and over).
Having regard to the factors identified in your research, suggest a menu for **one** day (three meals) suitable for this group of people.
Prepare, cook and serve the main course of the main meal of the day.
Evaluate the assignment in terms of **(a)** implementation and **(b)** the specific requirements of the assignment.

Key requirements of the assignment

- *causes of osteoporosis*
- *effects of osteoporosis on the body*
- *possible preventative measures of this condition*
- *dietary/nutritional requirements for women (aged 50 years and over)*
- *relevant meal planning guidelines*
- *menu for **one** day (three meals) and reasons for choice.*

Investigation

Causes of osteoporosis – *low body weight or history of an eating disorder such as anorexia or bulimia, low calcium/phosphorus/vitamin D intake, intolerance to dairy products, lack of regular exercise, long term immobility or excessive exercise, heavy drinking, smoking, excess caffeine and fibre, family history, psychological stress, long term use of corticosteroid tablets (asthma medication), early menopause or hysterectomy, over 16 years before first period, missed periods for more than 6 months and were not pregnant, low levels of testosterone in men, advancing age, small bone structure – low body weight, medical conditions e.g. Crohn's and Coeliac disease, endocrine disorders, long term use of some medications etc.*

Effects of osteoporosis on the body *–fractures, height loss, curving or rounding of the spine caused by loss of thickness in the vertebrae which can cause vertebrae to become compressed, back pain with height loss, restricted movement, brittle bones, bone wasting etc.*

Possible preventative measures- *increase intake of calcium to between 1,000 mg and 1,200 mg by consuming at least 5 portions of dairy products each day, increase vitamin D intake, participate in 30 minutes a day of physical exercise e.g. weight bearing exercise i.e. brisk walking, jogging, running etc., have a Dexa scan to diagnose bone density, avoid smoking, drink alcohol, tea and caffeine in moderation, avoid fizzy drinks etc.*

Dietary / nutritional requirements *– nutritional balance, daily requirements of macro / micro- nutrients including protein / cho / fat / iron / calcium requirements as appropriate(5 portions per day), high fibre, Vitamin C / iron absorption, Vitamin D / Calcium absorption, increase phosphorus intake, follow current nutritional guidelines re nutrient and food intake etc.*

Meal planning guidelines *– use of food pyramid to ensure balanced meals, eat wide variety of fruit and vegetables, avoid legumes and cereals that contain phytates and /or oxalates as they hinder the absorption of calcium, include extra calcium to avoid this problem, avoid caffeine drinks as caffeine can contribute to calcium loss instead choose decaffeinated beverages, avoid foods high in salt and sugar i.e. processed foods, choose low fat/ products with polyunsaturated fats as saturated fats hinder calcium absorption, avoid refined carbohydrate foods and replace with wholemeal products, eat 5 portions of dairy products each day, vegans should use milk substitutes that are fortified with calcium etc.*

Dishes selected – menu for one day (three meals)

- **should meet the nutritional requirements as identified to prevent osteoporosis**
- **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 women aged 50 years or over, factors that should be considered when planning meals for women aged 50 years or over in order to prevent osteoporosis, and to ensure nutritional adequacy, what foods are suitable/unsuitable, what special aspects of meal planning have to be considered etc., how the selected dish meets the requirements as identified in the investigation.

Area of Practice B – Food Preparation and Cooking Processes

Assignment 3

The variety of yeast breads available to consumers has increased in recent years.
Carry out research on **(i)** the types of yeast available **(ii)** the underlying principle of yeast as a raising agent and **(iii)** the culinary uses of yeast.
Investigate and elaborate on the key points that should be observed to ensure success when using yeast in baking.
Prepare, cook and serve **one** of the products from your research.
Evaluate the assignment in terms of **(a)** implementation, **(b)** the advantages and the disadvantages of making yeast products at home and **(c)** cost in comparison to a similar commercial product.

Key requirements of the assignment

- *research on the types of yeast available*
- *the underlying principle of yeast as a raising agent*
- *the culinary uses of yeast*
- *the key points that should be observed to ensure success when using yeast in baking*
- *chosen product and reasons for choice.*

Investigation

The types of yeast available:

Fresh yeast / Cake yeast – *creamy/beige colour, compressed and containing a little corn flour to help keep it dry, beery smell, firm yet crumbly, lasts 2-3 weeks in fridge, must be blended with liquid and should become frothy before being added to flour, 15g fresh yeast to 450g flour etc.*

Dried yeast – *available in pre-packed, pre-measured sachets, brownish grains, most of the water has been removed from the yeast cells in the drying process, lasts up to 6 months, more concentrated than fresh yeast 7g dried yeast = 15g fresh yeast, it is dehydrated active yeast that requires food, moisture and warmth before being added to flour, added to warm water with little sugar, appears frothy etc.*

Fast action dried yeast – *most popular form, a blend of dried yeast and improvers such as vitamin C which helps to speed up the fermentation process and reduce the rising time, is added directly to dry ingredients, only requires one rise, 7g to 450g flour etc.*

Sourdough starter – *mixture of yeast, flour and water, yeast fungi kept alive in liquid medium called a starter, allowed to ferment, added to dough as required, stored in refrigerator, gives sour dough bread its distinctive flavour etc.*

The underlying principle of yeast as a raising agent:

Fermentation – *process by which yeast breaks down sugar forming CO_2 and alcohol, enzyme diastase in flour converts starch to maltose, enzyme maltase in yeast converts maltose to glucose, enzyme invertase in yeast converts sucrose to glucose and fructose, enzyme zymase in yeast converts glucose and fructose to CO_2 and alcohol, gluten matures and becomes elastic and springy etc.*

Rising - *CO_2 expands and rises pushing the dough upwards, yeast is killed by high temperature of oven, and rising process stops, alcohol evaporates, gluten sets, temp. reduced 190°C to cook product etc.*

Culinary uses of yeast:

Breads / rolls – sweet & savoury, buns, cakes, desserts, wine and beer making, vinegar, Bovril/marmite, etc.

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

Use strong flour as the gluten content must be high, water most suitable liquid, milk gives softer crust and closer texture, use correct proportion of ingredients - yeast to flour, sugar provides food, salt can slow down growth of yeast and too much can kill yeast, where a lot of fat is used in a recipe e.g. Chelsea buns a little extra yeast should be used, eggs(also contain fat) entrap air in a mixture and help to achieve a lighter end product, the longer the dough can be left to rise the less yeast will be needed initially, vitamin C speeds up fermentation and reduces rising time by one third, kneading is necessary to develop and stretch the gluten in the flour which helps the dough to rise, all yeast breads must be risen at least once before baking for fermentation to occur, yeast works best at a warm temperature around 20 – 27°C so it is best to keep dough and ingredients warm during making and rising (proving), yeast is destroyed at temperatures above 55°C, knocking back to original size breaks down large bubbles of CO_2 into smaller more even sized bubbles, shaping dough, proving in warm place to double in size, cover with greased polythene when rising, oven temp 220°C kills the yeast etc.

Dishes selected – must be a yeast product from research

Evaluation - *advantages and disadvantages of making yeast products at home*
- cost in comparison to a similar commercial product etc.

Area of Practice C: Food Technology

Assignment 4

Mincemeat is the traditional filling used for mince pies which are a popular Christmas food. Mincemeat is made from a combination of ingredients preserved by combining uncooked dried fruits, sugar, alcohol etc.

Carry out research on the range of commercially available mincemeat.
Investigate **(i)** the range of ingredients used in making mincemeat and **(ii)** different methods of making homemade mincemeat. Explain the principles involved in making this product.
Choose **one** recipe for mincemeat and prepare, make and pot this product suitable as a Christmas gift. Include details of potting, labelling and presentation.
Evaluate the assignment in terms of **(a)** implementation, **(b)** practicability of making mincemeat at home and **(c)** cost in comparison to a similar commercial product.

Key requirements of the assignment

- *research on the range of commercially available mincemeat*
- *investigate the range of ingredients used in making mincemeat*
- *investigate different methods of making homemade mincemeat*
- *explain underlying principle in making mincemeat*
- *storage containers and labelling (for homemade mincemeat)*

Investigation

Research on the range of commercially available mincemeat *e.g. Chivers, Robertsons, Tesco, Aldi, Marks & Spencer, Tiptree and products sold at Farmers' Markets etc.*

Research may include definition of 'mincemeat,' brands, quantity/weight per jar, ingredients, nutritive value, packaging/containers, labelling, shelf life, cost etc.

Investigate the range of ingredients used in making mincemeat

Dried fruit - raisins, currants, sultanas, candied fruit – mixed peel, cherries etc.
Spices - cloves, nutmeg, mace & cinnamon etc. Nuts – almonds & walnuts; Sugar – brown or white,
Fruit - grated apple, apricots, prunes, citrus fruits - oranges & lemons, cranberries etc.
Fat - animal suet, butter, vegetable fat etc. Alcohol - brandy, rum, sherry etc. Misc. - breadcrumbs etc.

Investigate different methods of making homemade mincemeat

Uncooked / all in one - *fruit is prepared, combined with suet, sugar, spices and alcohol etc., covered and left overnight /2-3days for flavours to develop, potted etc.*

Melted method - *fruit is prepared, combined with melted butter, sugar, spices and alcohol, covered and left overnight for flavours to develop, potted etc.*

Cooked – boiling / oven method – *ingredients are mixed together, left overnight for flavours to develop, placed in pre-heated oven 120°C for 3 hours or can be put in slow oven overnight at 100°C, allowed to cool before adding alcohol, potted or frozen, can be stored for up to 3 months etc.*

Partially cooked – *fresh fruit e.g. apples stewed or baked, mashed and added to remainder of ingredients, potted etc.*

Underlying principle

Growth of micro organisms inhibited by addition of alcohol and lemon juice which lowers the ph and prevents growth, addition of sugar results in the production of a concentrated solution, this solution which surrounds the micro-organisms, draws water from the cells by osmosis because the sugar solution is more concentrated than the cytoplasm in the microbial cell, causes cell to become dehydrated and inactive, cooking foods at high temperature 100°C kills micro-organisms, enzymes are denatured or inactivated by high temperatures and strong acidic environment, in oven cooking suet is rendered down to a liquid fat which coats the fruit and seals in the juices as it coagulates when cooled, sterilising jars at 180°C for 5 –10 mins. kills micro-organisms, mincemeat covered with waxed disc and lid to prevent re-entry of micro-organisms, frozen mincemeat - water converted to ice crystals, no moisture available for microbial growth, low temperature inactivates bacteria, enzyme action slowed down etc.

Method of making mincemeat must include details of the underlying principle.

Suitable packaging and labelling for homemade mincemeat *e.g. glass jars, plastic containers, plastic covers, parchment covers, non-metallic lids, cling film covers, stick-on labels etc.*

If no packaging investigated – 3 marks

Dishes selected – Mincemeat type.

Evaluation (as specified in assignment) - *practicability of making mincemeat at home e.g. resource issues – cost in comparison to a similar commercial product etc.*

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

Assignment 5

Fats and oils have a wide variety of culinary uses, attributable to their properties, when used in food preparation.
Carry out research on the properties and the related culinary uses of fats and oils, explaining the principle involved in each case. Identify dishes that illustrate the use of each property identified.
Prepare, make and serve **one** of the dishes you have investigated.
Evaluate the assignment in terms of **(a)** implementation and **(b)** success in applying the selected property when making the dish.

Key requirements of the assignment

- *research the properties and the related culinary uses of fats and oils*
- **explain the principle involved in each case**
- *dishes illustrating the use of each property*
- *chosen dish and reasons for choice.*

Properties and culinary uses of fats and oils:

Emulsification: *when two liquids that usually do not mix are forced to do so e.g. oil-in-water or water-in-oil, forms an emulsion, temporary or permanent etc.*
Temporary emulsion *can be made by vigorously shaking a mixture, e.g. French dressing used in making of potato salad - the two main components will separate if left to stand for a period of time etc.*
Permanent emulsion *can be formed by adding an emulsifier e.g. lecithin, the hydrophobic tail attaches itself to the lipid molecule, hydrophilic head attaches itself to the water molecule, a layer is formed around the dispersed droplets and prevents them from separating out, used in- mayonnaise which may be used for egg mayonnaise, prawn cocktail etc. salad or desserts- ice cream etc.*
Plasticity: *this enables fats to change their shape when pressure is applied but remain in that shape when the pressure is removed, the plasticity of fats is due to the mixes of triglycerides with each triglyceride having its own melting point, at a given temperature some of the fat will be liquid and some will be solid, a mixture of triglycerides with a wide range of melting points will form a fat with a wide plastic range e.g. margarine, some fats are formulated so their melting points are low and can be spread straight from fridge, it enables the mixture to become light and creamy e.g., creaming, as in cake making - maderia cake, chocolate chip cookies, butterfly cake or use as a spread etc.*
Shortening: *pastry e.g. shortcrust, biscuits and shortbread all rely on fats to give a characteristic crumbly and short texture, the fat coats the flour particles, prevents moisture absorption and inhibits gluten formation / formation of long gluten strands giving product 'short' crumbly texture etc.*
Effects of heat
Melting Point: *as fats are a mixture of triglycerides they melt over a range of temperatures, solid fats will melt between 30 - 40°C, used in cakes e.g. éclairs, gingerbread, etc.*
Smoke Point*: some oils (corn, sunflower) and fats (lard, dripping) have a high smoke point and are thus suitable for frying and can be used at temperatures up to 250^0 C. The high temperature seals the surface of the food – prevents food from absorbing oil/fat, seals in juices etc. Fats with a lower smoke point (butter) are not suitable for frying at high temperatures as it decomposes etc.*
Flash Point; *when fat or oil is heated to a very high temperature (310-325^0 C) a vapour is given off which when ignited can be used to sear foods e.g. steak*

Properties may also include: *aeration, preservation and anti staling, absorb flavour, hydrogenation etc.*

Principle of each property

Dishes / culinary uses that illustrate the application of each property

Dishes selected – must illustrate a property of fats and oils.
Evaluation (as specified in assignment)

How successful the selected property was applied in the preparation/cooking of the selected dish.

Area of Practice E: Comparative Analysis including Sensory Analysis

Assignment 6

Commercial soft drinks are very popular among young people.
Carry out research on commercially available soft drinks that are popular with teenagers. Include reference to brands, flavours, price, sizes, packaging etc.
Using **two** different brands of soft drink, both with the same flavour, carry out a *difference test* of your choice to determine if testers can differentiate between the brands. Present the results obtained from the test.
Evaluate the assignment in terms of **(a)** implementation and **(b)** the test results obtained (i.e. an analysis of the factors that may have contributed to the test results obtained).

Key requirements of the assignment

- *Investigation of foods appropriate to assignment - different* ***types of commercially available soft drinks -***
  brands, flavours, price, sizes and packaging etc.
- *Investigation, description and possible outcomes of* ***difference test*** *using two different brands of soft drink*
- *Conditions to be controlled during testing*
- *Selected products and selection criteria*

Investigation

- **Research / Investigation of products appropriate to the assignment**
- Investigate the different types of commercially **available soft drinks** with reference to brands, flavours, price, sizes and packaging. **= 20**

- **Difference Tests**

Triangle Test - ***Description:*** *tester is presented with 3 coded samples, two samples are the same, one is different, tester is asked to identify the sample that is different etc.*

Simple Difference Paired Comparison Test -*Description:* *tester is presented with a two coded samples, tester is asked if there is a difference between the samples etc.*

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

Aim of tests: *to identify the sample that is different*
Possible outcomes of tests*: testers can/cannot detect the sample that is different*

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, temperature of samples, coding of samples, hygiene, timing, dietary conditions etc.

- **Selected dish and selection criteria**

Select two types of soft drinks, *same flavour, but different brands.* **(2 types @ 2 marks) = 4**
State reasons for choice. **(2 reasons @ 2 marks each) = 4**

Sources – ***2 x 1 mark (2 marks)*** **= 2**

Preparation and Planning

- **Resources** **= 3**
- **Main equipment needed to carry out assignment**

(tests are based on 6 testers)

Triangle Test – *6 trays, 6 glasses of water, 18 coded containers for soft drinks, 9 samples of soft drink A,*
9 samples of soft drink B, 6 score-cards, record sheets etc.

Simple Difference Paired Comparison Test - *6 trays, 6 glasses of water, 12 coded containers for soft drinks, 6 samples of soft drink A, 6 samples of soft drink B, 6 score-cards, record sheets etc.*

Duo -Trio Test - *6 trays, 6 glasses of water, 18 coded containers for soft drinks, 12 samples of soft drink A, 6 samples of soft drink B, 6 score-cards, record sheets etc.*

Work sequence **=3**

Triangle test: *code containers, set up trays, place soft drinks in containers – balanced presentation, carry out test, record results, reveal codes, present and evaluate results, tidy and wash up, etc.*

Simple Difference Paired Comparison Test: *code containers, set up trays, place soft drink samples in containers in random order, carry out test, collect score-cards, transfer results to prepared record sheet, reveal codes, present and evaluate results, tidy and wash up, etc.*

Duo -Trio Test*: code containers, set up trays, place soft drink samples in containers in random order, carry out test, collect score-cards, transfers results to prepared record sheet, reveal codes, present and evaluate results, tidy and wash up, etc.*

Implementation **= 16**

Procedure followed when carrying out this aspect of the assignment
The full sequence of implementation should be given and findings should be presented for the test i.e.

TriangleTest

Code 18 containers, 6 containers with symbol □, 6 containers with symbol Δ, 6 containers with symbol O, put soft drink samples in each container, set up 6 trays numbered 1-6, each tray has one container labelled with symbol □, one container with symbol Δ, one container with symbol O, must be balanced presentation order i.e. every possible combination of samples must be presented, each soft drink is offered an equal number of times i.e. 9 times, samples presented in random order and no tester gets samples presented in the same sequence, codes on each tray remain the same, soft drink in the container changes each time, testers follow instructions on scorecards and circle on the scorecard which of the three samples (two of which are the same) is different, samples may be re-tasted, scorecards are collected by recorder and results transferred onto the prepared record sheet, when recording results the letter that corresponds with the symbol selected is circled on each scorecard and appropriate column is ticked, correct responses are counted, codes are revealed and results presented, results can be presented on bar chart or pie chart, etc.

Simple Difference Paired Comparison Test

Code 12 containers, 6 containers with symbol □, 6 containers with symbols O, put soft drink samples in each container, set up 6 trays numbered 1-6, each tray has one container labelled with symbol □, one container with symbol O, samples presented in random order on each tray, each soft drink is offered an equal number of times i.e. 6 times, and no tester gets samples presented in the same sequence, samples on the tray can be the same or different, codes on each tray remain the same, testers follow instructions on scorecards, circle on the scorecard if they can detect a difference, scorecards are collected by recorder and results transferred onto the prepared record sheet, when recording results transfer responses by indicating whether testers answered yes or no, tick correct responses, codes are revealed and results presented, results can be presented on bar chart or pie chart, etc.

Duo -Trio Test: *select different people to code 18 containers, 6 with symbol R (reference food), 6 with symbols O, 6 with symbol □, set up trays numbered 1-6, put soft drinks samples in containers, place containers with different symbols on each tray, present samples in random order on each tray , codes remain same on each tray, the soft drinks in container changes, soft drink container coded R is reference food, only the foods in containers O & □, change, label scorecard which specifies taste order i.e. starting from left, taste R sample followed by two coded samples in the order given, circle sample different to R, tasters may re-taste samples, collect score-card from each tester, reveal codes, transfer results to prepared record sheet, present results, 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 soft drink used, sample temperature, uniformity of samples for testing, sufficient amounts, glass of water/or dry cracker included to cleanse the palate, having 6 testers to ensure that every possible combination of samples has been offered (triangle test), presentation of samples in random order so no tester gets samples presented in same sequence, balanced presentation – each food offered equal number of times – 9 times, codes on each tray remain the same, soft drink in the container changes, codes used should not induce any bias among testers, people involved in testing should not be involved in coding and arranging of samples or collating results, importance of silence during testing, etc.

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

- **Safety and hygiene (one safety @ 2 marks + one hygiene @ 2 marks) = 4**

***Safety**: testers with allergies – soft drinks with additives/e-numbers, special diets e.g. diabetic 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**

Testing procedures used
Key factors when conducting the test
Safety and hygiene issues considered
Problems encountered and suggested solutions

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

***The test results obtained** i.e. an analysis of the factors that may have contributed to the test results obtained.*
Students may give reasons as to why the testers could/could not identify the sample that was different etc.

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

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 **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 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 ***not rich in calcium*** - Assignment 2
   - Dish selected shows ***few process skills***
   - 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; no yeast used in dish for Assignment 3; no fat/oil used in dish for Assignment 5 - no marks to be awarded.

9. Where a teacher disallows a practical application, no marks are allowed for Implementation **and** Evaluation of Implementation. **All other areas may** be credited.