

GAUTENG DEPARTMENT OF EDUCATION
SENIOR CERTIFICATE EXAMINATION

HOME ECONOMICS HG

POSSIBLE ANSWERS OCT / NOV 2006

SECTION A

QUESTION 1A

1.1	A	B	C	D
1.2	A	B	C	D
1.3	A	B	C	D
1.4	A	B	C	D
1.5	A	B	C	D
1.6	A	B	C	D
1.7	A	B	C	D
1.8	A	B	C	D
1.9	A	B	C	D
1.10	A	B	C	D
1.11	A	B	C	D
1.12	A	B	C	D
1.13	A	B	C	D
1.14	A	B	C	D
1.15	A	B	C	D
1.16	A	B	C	D

16x2=(32)

QUESTION 1B

1.17	<u>Cooking methods</u>	1.18	<u>Changes in Meat</u>
1.17.1	A	1.18.1	E
	E	1.18.2	D
1.17.2	C	1.18.3	G
	D	1.18.4	F
1.17.3	B	1.18.5	A
	F (6)	1.18.6	B (6)
	(Comp)		(Expl)
1.19	<u>Gelatinisation</u>	1.20	<u>Eggs</u>
1.19.1	A	1.20.1	E
	D	1.20.2	H
1.19.2	B	1.20.3	D
	C	1.20.4	I
1.19.3	A	1.20.5	C
	D	1.20.6	G (6)
1.19.4	B		(Appl)
1.19.5	C (8)		
	(Comp)		

1.21 Changes in red cabbage

1.21.1	A
	D
	E (3)
1.21.2	B (1)
1.21.3	B
	D (2)
1.21.4	A
	E
	F (3)
1.21.5	A (1)
	(Appl)

1.22 Human Needs

1.22.1	D
1.22.2	C
1.22.3	B
1.22.4	G
1.22.5	F (5)
	(H. Cog)

1.23 Changes in fruit

	B
	D
	G
	H (4)
	(Know)

1.24 Physical demands

	B
	D
	G
	H (4)
	(Explain)

Any order 1.23, 1.24, 1.25, 1.27

1.25 Planning stage

B
C
E
G (4)
(Know)

1.26 Community

ECONOMICS	COMMUNITY	POLITICS
E, F (2)	B, D, G (3)	A, C (2)

(H. Cog)

1.27 Design elements and principles

A
B
F
H 4x2=(8)
(H. Cog)

TOTAL FOR SECTION A: [100]

SECTION B

QUESTION 2

2.1.1 Causes of food spoilage

- Enzymes
- Non-enzymatic spoilage
- Withering
- Insects and rodents
- Yeast or mould
- Oxidation
- Maillard's Reaction
- Mechanical bruising
- Unhygienic handling
- Poor storage

PP

Knowledge	Food Hygiene	Syll. 2.7	(Any 2)	(2)
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2.1.2 Protection of food against spoilage

- Use a high concentration of sugar.
- Exclude air and expose food to a high temperature.
- Reduce moisture content.
- Reduce temperature – freeze or refrigerate.
- Use preservatives.
- Use chemicals like sulphur dioxide.
- Smoking of food.
- Pasteurisation of milk.

PPPP

Appl. Syll. 2.7	Food Hygiene	Syll. 2.7	(Any 4)	(4)
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2.2 Mixed salad

2.2.1 Ingredients that turn brown

Avocado blocksP
Banana slicesP
Sliced green applesP

(3)

2.2.2 What causes the browning

- Exposure to air (oxidation)
- Partly enzyme action and
- Partly tannin component of fruit

PP

(Any 2)

(2)

2.2.3 Prevention of browning of the ABOVE ingredients

- Cover the peeled, cut fruit in a citrus juice e.g. lemon juice
- Prepare just before serving
- Cover with sugar or syrup to prevent oxidation on cut surfaces. (not in a savoury mixed salad)

PP

(Comprehension 3, Explain. 4)	Syll 2.14	Fruit and Veggies.	(Any 2)	(2)
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2.3 **Ways of serving fish**

- Cold, cooked in a saladP
- Leftover fish made into a rechaufféP
- Made into a mould e.g. a mousseP
- Soup e.g. bisqueP
- As an hors d'oeuvre e.g. pickled herring, shrimp, etcP

(Comprehension) Syll. 2.11 Fish (5)

2.4 **Effect of heat on fish**

- The muscle of raw fish has a small amount of connective tissue.
- It degrades easily.
- Fish collagen separates readily and fish flakes easily.
- Heat coagulates the muscle fibre proteins – collagen, and dissolves the gelatine.
- The colour changes from translucent to white. PPPP
- Excess heat – fish shrinks excessively, and becomes tough and dry because of excessive coagulation of the proteins.

(Explanation) Syll. 2.7 Fish (Any 4) (4)

2.5 **Evaluate given menu**

DISH	2.5.1 BASIC FOOD GROUP	2.5.2 PORTIONS	2.5.3 SHORTAGE OF PORTIONS (MOTIVATION)
Chicken pie	Meat and alternativesP Grain and productsP	1P 1P	Short of one portion of fats and oilsP
Rice	Grain and productsP	1P	Daily portion required is 4P 3 portions already consumedP 3 in menu i.e. 2 more than requiredP
Steam pudding	Grain and productsP	1P	
Carrots	Fruit and Veggies Vitamin AP	1P	No Vitamin CP in menu Too many other fruits and veggiesP Vitamin A in carrotsP
Beetroot	Fruit and Veggies OtherP	1P	

Note: Milk and milk products – correct daily portions

(Appl. 12, H. Cog 6) (Syll 2.1.) (Meal planning) (18)
[40]

QUESTION 3

3.1 **Recipe analysis**3.1.1 **Inclusion of air**

- Beat egg yolksP
- Sift dry ingredientsP
- Beat egg white stifflyP

(Comprehension)	(Syll. 2.17)	Baked products	(3)
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3.1.2 **Raising agent**

- ChemicalP – baking powder (carbon dioxide) P

(Know (1) and Appl. (1))	(Syll 2.17)	Baked products	(2)
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3.1.3 **Characteristics of stiff-peak stage**

- No longer foamy
- Very small air bubbles
- Mixture very white
- Shiny, smooth and moist P P P P
- Forms stiff peaks when beaters are lifted
- Mixture slides if bowl is tipped – no longer flows

(Knowledge)	(Syll. 2.10)	Eggs	(Any 4)	(4)
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3.1.4 **Reason why beaten egg white is folded in lightly**

If the mixture is not carefully handled, the air bubbles will breakP and the volume of the mixture will be reduced. P

(Explanation)	(Syll. 2.10)	Eggs	(2)
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3.1.5 **Changes in milk**(a) **Skin forms on the surface of the milk**

- Gases are driven off while milk is heatedP
- Milk albumin and milk globulin coagulateP and rise to the surfaceP with the fat and mineral salts
- The gases and coagulated protein form small vesicles that makes the froth. P
- Surface evaporation of water takes placeP
- Coagulated protein forms the skinP

(Application)	(Syll. 2.9)	Dairy products	(6)
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(b) Deposit at bottom of pot

Caused by the precipitated whey proteins^P and calcium phosphate^P

(Application) (Syll. 2.9) Dairy products (2)

3.2 Thickening ability of eggs, starch and gelatine**3.2.1 Name of thickening process**

Coagulation^P

(Knowledge) (Syll. 2.10) Eggs (1)

3.2.2 Changes that take place during thickening process

Eggs

- Protein denatures^P
- Coagulation begins at 80°C^P
- Egg white changes to a white, opaque, solid mass^P

(Explanation) (Syll. 2.10) Eggs (3)

3.3**3.3.1 Rules to decrease the setting time of gelatine dishes**

- Chill the ingredients.
- Chill the mould.
- Use a metal mould. PPP
- Add chilled liquid once gelatine has been dispersed.

(Comprehension) (Syll. 2.14) Gelatine (Any 3) (3)

3.3.2 Effect of raw pineapple on gelatine

- The enzyme bromelin^P in raw pineapple digests or hydrolyses the protein in gelatine^P
- A gel will not form^P
- The end product will not have set or will have a poor texture. P

(Explanation) (Syll. 2.14) Gelatine (3)

3.4 **To prevent lumps in starch cooking**

The starch granules must be screened before being thickened in the liquid.
This can be done by:

- mixing (suspending) them in a small amount of cold water.
- separating them with sugar granules. PPP
- coating them with butter or oil roux.

(Comprehension)	(Syll. 2.8)	Cereals	(Any 3)	(3)
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3.5 **Starch mixture thickened with eggs**

Reasons for the problem

- Starch gelatinises at 95°C – 100° C. P Too high for cooking eggsP
- Eggs coagulate at 60° C – 65° CP. Too low for cooking starch mixturesP (4)

Overcoming this problem

- Boil the starch mixture until it is cooked, before the eggs are added. P
- Allow mixture to cool to 60° C before adding the eggs. P
- Add eggs and heat till eggs are just coagulated. P
- Always add the hot mixture to the cold mixture, never vice versa. P

(H Cog)	(Syll. 2.8)	Cereals	(4)
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[40]

TOTAL FOR SECTION B: [80]

SECTION C

QUESTION 4

4.1 **Microwave cooking**

- 4.1.1 Thin area becomes hard and dry / thick area is not cooked properlyP
- 4.1.2 Unevenly cooked – small portions will cook quicker and / or be ready before large portionsP
- 4.1.3 Food at the bottom will take longer to cook / uneven rate of cookingP
- 4.1.4 Food will boil overP

(Comprehension) (Syll. 2.4) Methods of cooking (4)

4.2 **Premortal effect on tenderness and taste of meat**4.2.1 **Age**

- Muscle tissue in older animals is not as tender as in a young animal. P
- Mature meat, however, is tastier than young meat as a result of an increase in the concentration of flavouring constituents. P

4.2.2 **Muscle activity**

- Muscles involved in a lot of movement are less tender than one that is fairly inactiveP
- BUT they are usually more tastyP

(Comprehension) (Syll. 2.12) Meat (4)

4.3 **Bread baking**4.3.1 **Heat transference**

- Heat is reflected (radiated) off the black sides of the oven. P
- Convection currents circulate the heat around the bread in the oven. P
- Heat is conducted from the bread pan to the bread itself. P
- Heat is conducted through the dough P and the bread cooks. P (5)

4.3.2 **Maillard's reaction**

- Carbohydrate (starch in flour) P plus protein (gluten) P
- In the presence of heatP react to form a brown colour

(Explanation) (Syll. 2.17) Baked Products (3)

4.4 Unmoulding a gelatine mould

- Rinse the plate onto which the mould is to be unmoulded with a little water to allow the mould to be moved. P OR Put a few drops of water on the plate to allow the mould to be moved
- If the mould was not brushed or sprayed with oil, dip into hot water for a few seconds. P
- Cover the mould with a plate and quickly turn it over. P Shake lightly and allow the mould to fall out on to the plate. P
- Move the mould to the middle of the plate if necessary. P

(Knowledge)	(Syll. 2.14)	Gelatine	(5)
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4.5

4.5.1 Guidelines for the division of work

- Be flexible about who does what.
- Allow everyone to do the job they are best suited to.
- No one is too young to help. Use everyone, irrespective for their age or sex.
- Take everyone's personal schedule into account. Make allowances for someone who is having a crisis (availability).
- Keep standards flexible. P P P P P
- Biological factor e.g. men do more strenuous work
- Stereotyping e.g. women traditionally do housework and bring up the children

(Knowledge)	(Syll. 1.1.3)	Home and environment	(Any 5)	(5)
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4.5.2 Developing a workplan

- Recognise or identify problems that have an adverse effect on household routines.
- The family should set goals for the division of tasks.
- Establishing standards acceptable to the family.
- Develop a plan with regards to:
 - The family situation
 - How often and how thoroughly the house should be cleaned
 - Total number of tasks that should be done regularly as well as those done occasionally
 - Time available P P P P P P P
- Evaluate continuously and adapt if the plan is not going well.

(Application)	(Syll 1.1.3)	Home and environment	(Any 7)	(7)
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4.6 **Functionality of lamp**

Lamp A

- Lamp A provides sufficient lightP
- Position of light source is in front and on the left hand side of a right-handed personP
- Lamp is in front of person and the lamp shade is below eye levelP
- The cone-shaped lamp shade will allow more light to shineP

Lamp B

- Does not provide sufficient lightP
- Position of light source is behind the person: he is sitting in his own shadowP
- When the lamp is behind a person, the bottom of the shade should be above eye level / the shoulder. P
- The narrow, tubular shape of the lampshade provides less light

(H Cog) (Syll. 3.1.1) Interior

(7)

TOTAL FOR SECTION C: [40]

SECTION D

QUESTION 5

5.1

5.1.1 **Type of kitchen layout**

- One-wall kitchen P (1)

Disadvantages of this kitchen layout

- A small kitchen
- Limited storage space PP
- When work space is limited

(Knowledge (2) Appl. (1)	(Syll. 3.1.1)	Interior	(Any 2)	(2)
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5.1.2 **Three areas around which activities in the kitchen are centered**

- The food storage area (NOT fridge, pantry, storage cupboards) P
- The preparation area (NOT work area and the sink) P
- The cooking area (NOT stove, oven and portable electrical equipment) P

(Comprehension)	(Syll. 3.1.1)	Interior		(3)
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5.1.3 **Arrangement of areas for efficient work performance**

- These three areas must be positioned to allow for easy, efficient movement to save time and energy. Ideally they should form a triangle.
- The sink is placed in the most important location because most of the work is done at the sink. P
- The cooking and mixing areas are placed so that the three areas form the corners of the triangle P
- The total distance between the three centres should not exceed 6,5 metres
- This will allow enough space for movement without the distance being too large. P

(Explanation)	(Syll. 3.1.1)	Interior		(3)
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5.1.4 **Requirements for suitable floor and wall finishes**
Work surfaces must be:

- Durable P
- Able to withstand the hot, moist, greasy atmosphere in the kitchen P
- Smooth and easy to clean P
- Ceramic tiles or laminated plastic sheeting should be provided on the walls above the work surfaces. P
- Vinyl flooring with a cushion backing will help reduce fatigue created by standing for a long time. P

(Explanation)	(Syll. 3.1.1)	Interior		(5)
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5.1.5 **Analogous colour scheme**

- Yellow, yellow-orange, orange PPP
- Red, red-orange, red
- Yellow, yellow-green, green
- Red, red-purple, purple (Any set but all three must be correct)

(Application)	(Syll. 3.1.1)	Interior	(3)
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5.1.6 **Safety rules in the bathroom**

- The bottom of the bath should be textured or have a non-slip mat.
- Baths should have secure handholds (handles).
- Mats should be non-slip or securely fastened down.
- Flooring should not become slippery when wet.
- Floors should be electrically non-conductive.
- No electrical sockets should be in the bathroom
- The electrical socket for a shaving point should be near to the mirror.
PPPPPP
- Only special, permanently fixed heaters should be used in the bathroom.
- Medicine cupboards should be out of reach of children.

(Comprehension)	(Syll. 3.1.1)	Interior	(Any 6)	(6)
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5.1.7 **Controlling the temperature in the house****Motivation:**

Bedroom number 1 faces west and will be very hot in summer.
Should therefore be cooled P

Methods of cooling the house:

- Wide eaves at windows
- Awnings and blinds
- Curtains PPP
- Tinted glass

(Application)	(Syll. 3.1.1)	Interior	(Any 3) PPP	(4)
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5.2 Socialisation during adolescence

- This is the time when a young person develops his / her own identity and becomes independent.
- Teenagers must adjust to bodily and mental changes.
- Teenagers begin to move away from their parents.
- The influence of the peer group is important.
- The peer group will help the teenager to determine his / her place in society
- AND have an influential role in ending his / her period of dependence on adults.

(Knowledge)	(Syll. 4.3)	Socialisation	(Any 3)	(3)
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5.3 Management process

Goals – everyone should get enough practical experience – kitchenPP

Needs – hot waterPP

Resources – microwave ovens, ovens, dishwasherPP

Standards – best subject, clean classroomPP

Values – clean classroom for the next lesson, what is important and what is less importantPP

(H Cog)	(Syll. 1.1.1)	Management process
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5x2=(10)
[40]

QUESTION 6**6.1 Money income, non-money income, fringe benefits**

MONEY INCOME	NON-MONEY INCOME	FRINGE BENEFITS
SalaryP Bonus chequeP	Use of own belongings – own houseP Home production – veg / herb gardenP LibraryP	House subsidyP Car subsidyP
(2)	(3)	(2)

(Comprehension)	(Syll 1.2.2)	Financial Management	(7)
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6.2 Guidelines for budgeting

- They must accept the limitations of their income.
- They must be more objective about their financial affairs.
- They should gain better insight into their needs and objectives.
- They should spend their money more purposefully and eliminate wasteful spending.
- They need to pinpoint faults in their present spending pattern.
- They need to plan better for the future and invest wisely.
- Their budget should be set up specifically for them.
- The budget should be flexible to provide for emergencies. PPPP
- Their budget should be realistic and not make impossible demands.

(Application)	(Syll. 1.2.2)	Financial Management	(Any 4)	(4)
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6.3 General rules for the purchasing of insurance

- Take out the type of insurance you can afford. Endowment policies are more expensive than whole life policies. P
- Make provision for your immediate needs as well as future needs. P
- Have a savings element in your insurance. P

(Knowledge)	(Syll. 1.2.2)	Financial Management	(3)
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6.4 Emotional demands

EMOTIONAL DEMANDS	EXAMPLE
Work methods	Sand between her fingers ^P
Lack of skills	Battles to make straight row in the garden ^P
Lack of good equipment	Vacuum cleaner is broken and she has to use the broom ^P
Strenuous work	Dawn has to work hard ^P in the house

(Application) (Syll 1.1.4) Work Study (4)

6.5 Decision-making process

STEPS IN DECISION-MAKING PROCESS	EXAMPLE FROM CASE STUDY
Identify the problem	• She has no milk for tea ^P (1)
Identify alternatives	• Creamer ^P • Borrow milk from neighbour ^P • Go to shops and buy milk ^P • Serve fruit juice ^P (4)
Weigh alternatives against one another	• (Creamer) – not nice with rooibos tea ^P • (Neighbour) – not at home – does not know when she will be back ^P • (Shops) – too far and too hot ^P • (Fruit juice) – maybe not every one drinks fruit juice ^P (4)
Make a decision	• Decides to serve fruit juice with ice ^P (1)
Evaluate the result of the decision	• The guests enjoy ice-cold fruit juice. ^P (1)

(H Cog) (Syll. 1.2.2) Decision-making

6.6 Level of decision-making

6.6.1 Routine decision^P6.6.2 Extensive decision^P6.6.3 Limited decision^P

(Knowledge) (Syll. 1.2.2) Decision-making (3)

6.7 **Solving of conflict situation**
Constructive conflict

- Take a positive attitude about your feelings and stand your ground – the other person will respect more.
- Speak up and do not bottle up grievances. If you speak up problems can be solved right away.
- Refrain from belittling or blaming each other.
- Be open-minded and listen to each other’s point of view.
- Focus on the issue and not dig up old grievances.
- Show empathy for each other.
- Respect each other’s feelings and views.
- Listen to the other person’s opinion without interruption. If you do not listen, you do not know what the other person thinks or feels.
- Refrain from being intentionally stubborn and hard-headed. PPPP

(Explanation)	(Syll. 4.5)	Family Studies	(Any 4)	(4)
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6.8 **Shared responsibilities**

- Family unity is increased and family relationships strengthened.
- Mutual respect is encouraged.
- Capabilities of family members are discovered and personalities are developed.
- The value of time allocation and co-ordination is learned.
- The load on the adults is lightened and they both have more leisure time.
- An attitude of give-and-take is developed.
- Good personal habits are developed. PPPP
- Sound communication patterns are developed.

(Explanation)	(Syll. 4.5)	Family Studies	(Any 4)	(4)
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[40]

TOTAL FOR SECTION D: [80]

TOTAL: 300