



**L-Università
ta' Malta**

**MATSEC
Examinations Board**



Examiners' Report IM Home Economics & Human Ecology

First Session 2025

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A. STATISTICAL INFORMATION

The total number of candidates who registered to sit for IM Home Economics & Human Ecology was **68**, which is **3** candidates more than in 2024.

Table 1 shows the distribution of grades for the First 2025 session of the examination.

GRADE	A	B	C	D	E	F	ABS	TOTAL
NUMBER	3	8	16	15	5	4	17	68
% OF TOTAL	4.4	11.8	23.5	22.1	7.4	5.9	25	100

Table 1: Distribution of grades for IM Home Economics & Human Ecology 2025 First Session

B. GENERAL REMARKS

General Remarks on the Written Examination

Questions related to the family in society were most popular, followed by questions related to nutrition and questions related to food spoilage and food safety. Question related to Organic Farming and GMO foods was least popular.

C. GENERAL COMMENTS ON PAPER

Section A

Note: Average marks obtained per question are shown below.

Question 1

Candidates fared well in this question as revealed in the average mark of 2.2 marks out of 3 marks. The question focused on the difference between macronutrients and micronutrients.

Many candidates did outline that macronutrients are required in large amounts in the body whilst micronutrients in small amounts. Another difference outlined by many candidates was the units these nutrients are calculated in, grams and micrograms respectively. A good number of the respondents also outlined the fact that macronutrients provide energy whilst micronutrients do not. Many candidates did give examples of both these categories of nutrients; however, some candidates swapped them. It was also noted that a few candidates gave NSP (fibre) as an example of a macronutrient. This was marked as incorrect.

Average Mark: 2.2

Question 2

This question focused on the relationship between calcium and bone health. Candidates performed averagely in this question as revealed in the average mark of 3.1 marks out of 6 marks.

Many candidates did link calcium with the development of strong bones and teeth, and its critical role in bone mineralisation.

For the second part of the question, outline dietary choices that can enhance absorption, the majority of candidates referred to consuming Vitamin D rich foods as this vitamin enhances the absorption of calcium in the intestines. As for the second food source, a good number of candidates outlined that magnesium and phosphorus rich foods will also aid in calcium utilisation.

Answering the third part of the question, candidates did not perform well. Many candidates did mention wholegrain foods will inhibit calcium absorption but only a few candidates knew the chemicals name phytates and oxalates. A good number outlined alcohol consumption and high sodium intake as inhibitors.

Common incorrect responses to this question were: excessive intakes of fat and cholesterol, iron rich foods, the intake of Vitamin E foods and high sugar consumption. A few candidates also mentioned smoking - this was marked as incorrect as it is not a dietary source.

Average Mark: 3.1

Question 3

The majority of the candidates performed well in this question. The maximum score of this question was 3. Two candidates did not attempt this question.

In this question candidates had to explain how complementary proteins can address the limitations of plant-based diets in providing all essential amino acids.

Many candidates did explain this, however some candidates answered that this means including more animal-based proteins in the diet, or including tofu in the diet, without giving a correct explanation.

When asked to provide practical examples of how complementary proteins can be incorporated into the diet, the most common responses given were: beans on toast, peanut butter sandwiches, rice and bean salad.

Average Mark: 2.1

Question 4

Potassium was the theme of this question. Candidates' performance was average in this question.

Candidates had to describe the role of potassium in managing blood pressure. Candidates did know that there is a link between potassium and blood pressure, but the explanation given as how this is linked, was not clear for many of the candidates. Some linked it with the iron in the blood and others outlined that it controls cholesterol levels.

As for the potassium-rich foods, the most common responses given were banana, kiwi and potatoes. Other correct responses were legumes, nuts and isotonic drinks. Incorrect responses were liver and red meat.

Average Mark: 1.3

Question 5

This question delved in the social and economics factors that can affect an individual's food choice. Candidates performed very well in this question as evident in both the median mark attained and the mean value.

The first part of the question, the candidates had to discuss how social factors can affect an individual's food choice. Candidates outlined various social factors, with the most popular were:

- Friends and colleagues due to peer pressure.
- Traditions of the family and the country of one's origin. Some even outline religious beliefs with this.
- Eating habits formed in childhood as were commonly noted in candidates' responses.
- Social gatherings and occasions were also discussed.

As for the second part, which focused on economic factors, candidates mainly outlined:

- The economics status of the family: the wages/salary that the family has.
- Affordability of the food by the family. If a family is poor, it cannot buy food that is expensive and normally relies on carbohydrate-rich food.
- Sales available and maybe coupon/point schemes also impact the shopping practices of a family.

Average Mark: 3.5

Question 6

Overall, it can be revealed from the statistics that the candidates fared very well in this question that focused on the habits and practices that can help prevent dental caries and promote oral health.

Common correct dental/oral hygiene practices, that need to be followed given by candidates were:

- Limiting sugary foods and beverages, as they can erode enamel and promote tooth decay
- Brushing teeth at least twice a day using fluoride toothpaste
- Floss daily to remove plaque and food particles between teeth where a toothbrush can't reach.
- Eating vitamin D and calcium rich foods.

Average Mark: 1.0

Question 7

Unfortunately, the candidates did not perform well in this question which focused on engineered landfill, as evident from the average mark of 1 attained.

Candidates did not give a correct definition of an engineered landfill. Some mixed it up with a bring-in site or a civic amenity site. Others thought it was some type of new technology agricultural system or machinery. A few even defined it as a site to create new renewable energy.

When outlining the purposes of an engineered landfill, those who knew what it was did give correct responses mainly:

- Ensure safe containment and management of waste while reducing environmental impact.
- Prevent contamination of soil and groundwater.
- Manage gas emissions (methane) responsibly.

Average Mark: 1.0

Question 8

The candidates performed well in this question as can be revealed in the mean mark (2.0) of this question. The question was assigned a total of 3 marks.

This question focused on labels on textiles. Candidates had to describe the purposes of labels on textiles. The majority of the candidates explained correctly the two purposes outlining that they serve as guidance on how to care for garments including washing and drying, they outline the fibre content of the textile, as well as size information.

Candidates also had to give one advantage of using phosphate-free detergents for laundering clothes. Common correct responses given were:

- Less risks of skin irritation and allergies.
- Polluting less the water system.
- Less damage to the marine eco-system: less algae growth and less harm to aquatic life.

Average Mark: 2.0

Question 9

The candidates performed averagely well in this question which focused on niacin. The maximum mark candidates could score in this question was 4 marks. One candidate did not attempt this question.

The candidates were asked to outline the primary function of niacin. Many candidates outlined the role of niacin is enabling energy to be released from food in body cells during respiration. None of the candidates outlined niacin's role in the production of hormones including oestrogen and insulin.

Candidates were also asked to give two symptoms of niacin deficiency. Some candidates did outline correct symptoms, that is:

- Deficiency can result in dermatitis, diarrhoea and dementia (Pellagra)
- Lack of niacin prevents the brain and nervous system from working properly

However, these were only the minority. Many gave incorrect symptoms like fatigue and bloating.

As for niacin rich food sources, common correct responses given were eggs, cows' milk and pulses. Incorrect responses were fruit, vegetables and green leafy vegetables.

In the last part of this question, candidates had to explain how the body synthesizes niacin from an indispensable amino acid. The majority of the candidates did not answer this part of the question correctly. Only a handful of candidates did know that niacin is synthesized from tryptophan.

Average Mark: 1.5

Question 10

In this question that focused on promotional strategies used in retail, candidates performed well as evident in the above statistics. The maximum mark candidates could attain in this question was 3 marks.

Candidates had to identify and explain one type of promotional strategy used in retail and give an example.

The most common promotional strategies that candidates outlined were:

- Reduction in prices
- Loyalty schemes
- Social media promotions
- Advertisements
- Setting prices strategically
- Offering delivery service

Many candidates did give a good explanation and examples of the promotional strategy they outlined.

Average Mark: 2.4

Question 11

Active ageing was the main focus of this question. Candidates performed very well in this question, with candidates scoring a median mark of 4 and a mean mark of 3.8. The maximum mark that the candidates could score was 4 marks.

In the first part of the question the candidates had to explain an advantage of active aging for the individual whilst in the second part they had to explain an advantage of active aging for the family members. Various correct responses were giving. The most common ones were:

Advantage of active aging for the individual:

- Enhanced mental well-being: Staying active can reduce feelings of isolation, depression, and anxiety.
- Improved physical health: Regular activity can reduce the risk of chronic illnesses like heart disease, diabetes, and arthritis.
- Increased independence: Maintaining physical and cognitive abilities allows elderly individuals to perform daily tasks without assistance and help keep him living longer in his own home.
- Sense of purpose: Engaging in meaningful activities fosters a sense of accomplishment and satisfaction, that they're still valid and able to give back to the community.

Advantage of active aging for family members:

- Help with family tasks: Active seniors can assist with babysitting, household chores, or other responsibilities.
- Reduced caregiving burden: Active elderly individuals require less assistance with daily tasks, easing stress for family members.
- Stronger family bonds: Shared activities like exercise or hobbies can create more opportunities for family interactions.
- Family members not needing to worry about their elderly family members.

The candidates were also asked to describe practical ways how an elderly person can stay active and engaged while contributing to their family and community. Many candidates gave correct examples, like:

- Doing community volunteer work.
- Engaging in hobbies
- Attending University of the old age.
- Support families in childcare
- Being involved in religious and spiritual activities
- Teaching and mentoring young children and youths

Average Mark: 3.8

Question 12

Overall, it can be revealed from the statistics that the candidates fared well in this question that focused on physical activity for children.

The majority of the candidates gave correct reasons why physical activity is essential for children between the ages of 1 to 4.

Candidates also had to identify one type of play and explain how it contributes to their physical development. The most common type of play identified in the candidates' responses were:

- Active play: Activities such as running, jumping, and climbing help develop muscle strength, improve coordination, and refine motor skills.
- Ball play: Kicking, throwing, and catching a ball promote hand-eye coordination and contribute to motor skill development.
- Dancing and movement games: Dancing or engaging in movement games enhances balance, coordination, and rhythm, while also being enjoyable and stimulating.

Candidates gave correct explanations how the play activity they identified, contributes to the children's physical development.

Average Mark: 2.8

Section B

Note: The average marks obtained per question are shown below. All questions are out of 20 marks.

Question 1

This question was chosen by over 70% of the candidates.

- a) The vast majority of participants did not correctly define dietary fibre and distinguish between soluble and insoluble types. The responses were generally brief and fell short of an intermediate level. Nevertheless, some were able to provide two examples of food sources for each type.
- b) Very few candidates were able to give the daily recommended intake of dietary fibre for an adult according to the National Dietary Guidelines.
- c) A good number of candidates performed well in this section since they were able to identify two ways how dietary fibre could decrease the risk of colorectal cancer.
- d) Overall, candidates performed well in this question, as they were able to suggest practical tips for how a parent could include dietary fibre in her children's packed lunches.
- e) Several candidates were able to suggest three dietary habits that help reduce the risk of colorectal cancer, aside from increasing water and fibre intake. However, a significant number provided irrelevant answers, such as ways to increase water intake or the importance of physical activity. While not incorrect, in theory, these responses did not address the question as asked.
- f) The majority of candidates were able to explain that water and insoluble fibre add bulk to stools and help them move more easily through the digestive tract. They also recognised that water is essential for softening fibre, making it more effective in promoting regular bowel movements. However, fewer candidates were able to explain that soluble fibre dissolves in water to form a gel-like substance, which helps slow digestion, stabilise blood sugar levels, and reduce cholesterol.
- g) The vast majority of candidates were able to name four symptoms of dehydration and suggest four effective strategies to encourage young children to drink more water.

Average mark: 11.5%

Question 2

This question was answered by 57% of the candidates.

- a) Candidates performed well in this part of the question, as most were able to explain what organic farming is. However, marks were deducted for those who provided a very brief outline. Most candidates also provided valid reasons for its growing popularity.

- b) A number of candidates did not correctly outline two common farming techniques used in organic farming that distinguish it from conventional methods. Those who answered correctly mainly referred to crop rotation, the use of cover crops, hand-picking of weeds, and companion planting.
- c) The majority of candidates were able to state one of the two requested environmental benefits of growing crops organically in Malta. Common answers included the reduction of chemical runoff into surrounding soil and water tables, as well as the enhancement of soil organic matter through organic farming.
- d) Most candidates performed well in this question regarding the disadvantages of organic farming for the farmer. The majority identified relevant points, such as the increased need for manual labour, particularly for weeding and pest control, which results in higher labour costs. Lower crop yield was also commonly mentioned.
- e) Most candidates performed very well in this question, as they were able to identify two effective strategies to raise awareness of the benefits of organic farming, with most including educational interventions as part of their response.
- f) The vast majority of candidates performed poorly in this section. Only a few were able to list four examples of GMO foods permitted in EU countries.
- h) While most candidates found it difficult to outline the benefits of GMO's in the context of sustainable farming, the majority were able to discuss two health and/or environmental concerns commonly raised by critics of GMO's.

Average mark: 12.5%

Question 3

This question was selected by over 75% of the candidates.

- a) The vast majority of candidates successfully identified two of the primary types of organisms involved in food spoilage. However, when required to state the conditions necessary for their growth, many provided vague responses, often mentioning only "temperature" without sufficient detail.
- b) Most candidates were able to list three distinct measures to ensure hygiene and safety during yoghurt production.
- c) A notable number of candidates lost marks on this section. While many correctly identified two types of food spoilage resulting from oxidation and overripening, some failed to provide two specific examples for each category. Instead, they gave general or combined answers, which resulted in lost marks. A significant portion of candidates listed food items (e.g., bananas) instead of describing spoilage types. Nonetheless, the majority demonstrated a good understanding of how to minimize the effects of oxidation and overripening.

- d) In the question regarding common food sources of *Salmonella*, *Bacillus cereus*, and *Escherichia coli*, many candidates were not specific enough in their responses. While most were knowledgeable about *Salmonella*, there was a noticeable gap in understanding of the other two pathogens. Despite this, nearly all candidates correctly identified common symptoms associated with foodborne illnesses caused by these bacteria.
- e) Almost all candidates accurately identified key information required on food labels to meet food safety regulations. However, a small number confused the question with unrelated topics, such as CE markings on toys. Most candidates were also able to articulate reasons why food labelling is important for consumer safety.

Average mark: 12%

Question 4

This question was answered by 96% of the candidates.

- a) Candidates performed very well on this part of the question. The majority successfully identified two responsibilities parents have toward their children, as well as two responsibilities parents have toward each other.
- b) When asked to define a one-parent family, a small number of candidates simply repeated the term in their response. However, most were able to list two common challenges faced by one-parent families. In the follow-up question regarding government support for such families, a high proportion of candidates provided one-word responses, indicating a lack of depth and development in their answers.
- c) While most candidates correctly defined gross and disposable income, a notable number inaccurately stated that gross income refers to earnings after deductions such as tax and home loans. Those who demonstrated a clear understanding of both terms were generally able to give a valid reason for their importance in family budgeting, whereas those with incorrect definitions struggled to provide appropriate explanations.
- d) Many candidates had difficulty identifying forms of non-wage income for a business, with the most common incorrect response being the suggestion to take a part-time job, which reflects a misunderstanding of the concept.
- e) This question was answered particularly well, with most candidates effectively identifying strategies for budgeting future expenses.
- f) Some candidates did not accurately explain common causes of falling into debt. A few responses consisted of one-word answers, such as "car loan," without further explanation. While certain one-word answers were self-explanatory, many required additional detail to earn full marks. Candidates were also asked to explain how excessive debt can impact relationships. Although most responses were relevant and correct, a significant number of candidates gave repeated or overly simplistic answers—such as writing "stress" for all parts—resulting in lost marks.

Average mark: 13%

D. CONCLUDING COMMENTS

Candidates performed well in questions related to macronutrients, micronutrients, protein, factors affecting food choice, dental caries, labels on textiles, promotional strategies used in retail, Active Ageing, identifying strategies for budgeting future expenses and physical activity for children.

Candidates answered poorly questions related to engineered landfills, potassium, niacin, calcium absorption, dietary fibre, farming techniques used in organic farming, GMO foods, food spoilage and identifying non-wage income for a business.

Chairperson

Examiners Panel 2025