



General Certificate of Secondary Education

Home Economics: Food & Nutrition 3562/F Foundation Tier

Mark Scheme

2005 examination - June series

Mark schemes are prepared by the Principal Examiner and considered, together with the relevant questions, by a panel of subject teachers. This mark scheme includes any amendments made at the standardisation meeting attended by all examiners and is the scheme which was used by them in this examination. The standardisation meeting ensures that the mark scheme covers the candidates' responses to questions and that every examiner understands and applies it in the same correct way. As preparation for the standardisation meeting each examiner analyses a number of candidates' scripts: alternative answers not already covered by the mark scheme are discussed at the meeting and legislated for. If, after this meeting, examiners encounter unusual answers which have not been discussed at the meeting they are required to refer these to the Principal Examiner.

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GCSE Home Economics: Food and Nutrition

Foundation Tier 5

Home Economics: Food and Nutrition Foundation Tier**3562/F****Question 1**

- (a) Minced beef. (1 mark)
- (b) Skinless chicken.
- (c) Chicken and beef are animal foods. Dietary fibre is only found in plant foods. (1 mark)
- (d) Tofu is soya (bean curd). Accept soya. (1 mark)
- (e) Growth, repair, energy, maintenance. **Any 2.** (2 marks)
- (f) Meat, fish, cheese, eggs, milk, soya. **Any 3** (3 marks)
- (g) Good examples are cereals and pulses e.g. beans on toast. **Credit any suitable combination.** (1 mark)

Total 10 marks**Question 2**

- (a) 2-3 litres / 6-8 glasses / 4-6 pints (1 mark)
Accept anything within the ranges
- (b) Fruits e.g. melon, citrus fruits, vegetables, soups, gravy, custard, milk. **Any 3 relevant answers** (3 marks)
- (c) 70 % human body is water.
Required for all body fluids- digestive juices, blood, sweat, urine etc. (Accept body fluids as separate answers)
Helps absorption of certain nutrients.
Lubricates joints and membranes.
Vital to life.
Prevents dehydration. (4 marks)

Total 8 marks**Question 3**

- (a) (i) Sugar
Dextrose
Glucose syrup
Honey
Molasses
Lactose
Invert sugar / syrup
Any five – must copy types of sugar accurately (5 marks)
- (ii) Flavouring
Emulsifier

Colour
 Stabiliser / or may give the name of any additive listed e.g. soy, lecithin, titanium dioxide, xanthan gum.
 Modified starch. (4 marks)

(iii) It contains beef / gelatine (accept dried egg white)
 (accept milk chocolate). (1 mark)

(b) (i) Use-by Used for highly perishable foods / foods which could be dangerous to human health / foods that deteriorate quickly.

Best-before For products with a long shelf life of 3 months or more. Non perishable foods.
OWTTE (2 marks)

(ii) Best before. (1 mark)

Total 13 marks

Question 4

(a) A / Retinol
 D / Choleocalciferol
 Accept E and K
Accept either name or letter (2 marks)

(b) C / Ascorbic Acid
 B group / Riboflavin, Thiamine, Nicotinic acid
 Accept B₁, B₂, etc. also
Accept either name or letter (2 marks)

(c)

Vitamin	Use by the body	Good sources
A	Night Vision. Healthy skin and tissue. Affects growth. Mucous membrane. Throat, Bronchial and excretory. Bones and teeth.	Liver, oily fish, whole milk, butter, margarine, cheese, eggs. Green / red / orange fruit or vegetables.
C	Maintains body's connective tissue. Wound healing. Iron absorption. Anti-oxidant. Maintenance of skin. Building strong bones and teeth.	Citrus fruits (only accept one named citrus fruit), blackcurrants, kiwi fruit, potatoes.

Simple answer- maximum 4 marks, up to 2 marks each
Detailed answer- up to 8 marks, vitamin for sources

(8 marks)

(d) A and D *(2 marks)*

(e) Contains too much vitamin A.
Can harm new born baby.
Can lead to damage and defects in unborn baby.
OWTTE. *(2 marks)*

Total 16 marks

Question 5

(a) Low Fat / Healthy Eating ranges.
Single portion sizes.
Less washing up.
Saves time and fuel.
Quick and easy to prepare.
Easy to store.
Useful for emergencies.
Wide variety.
Little waste. *(4 marks)*
Any 4 valid responses

(b) May be more expensive than fresh foods.
May be low in dietary fibre.
Servings may be small.
Nutrients may be lost in processing.
May be too high in fat or sugar.
Excessive packaging / damage to the environment.
High in sodium.
High in additives.
Any 4 valid responses *(4 marks)*

(c) (i) Look for a variety of fresh and convenience foods as well as a meal that is colourful and nutritious.

1-2 Simple menu. May include too many convenience foods. Show little understanding of how to combine fresh and convenience foods. Basic communication skills.

3-4 Answer shows a general understanding of how fresh and convenience foods can be combined to show variety of

taste, texture, colour and nutritive value. Satisfactory communication skills.

5-6 A clear understanding is shown of how fresh and convenience foods can be combined to produce colourful, tasty and nutritional well balanced meals. Good communication skills. (6 marks)

(ii) Look to relevant references to a range of nutrients. **Give one mark for each nutrient mentioned. Do not award marks for casual mention of vitamins and minerals.** (6 marks)

Total 20 marks

Question 6

(a) Concentrated source of energy.
Protection of vital organs.
Insulating layer under skin.
Source of fat soluble vitamins.
Texture and flavour / palatability of food.
Satiety
Any 2 (2 marks)

(b) 9 kcals (38 kJ) (1 mark)

(c) Use low fat dairy products (yoghurt, cheese and milk).
Eat more poultry and white fish.
Avoid fried food, grill or bake instead.
Use low fat spreads. (3 marks)
Avoid hidden fats, e.g. sausages, crisps, pastries etc.
Choose fat reduced products e.g. mayonnaise.
Remove visible fats from meat and skin from chicken.
Any 3

(d) (i) In saturated fats all the carbon atoms are saturated with hydrogen atoms.
These fats are usually solid at room temperature.
Found in animal fats.
Polyunsaturated fats have one or more double bonds.
Vegetable oils. (6 marks)
Thought to be less likely to cause CHD
OWTTE

(ii) Dairy foods including milk, butter, coconut oil, beef fat, lard, block margarine, meat, egg yolk.
Any 2 (2 marks)

- (iii) Fish oils.
Vegetables / seed oils.
Polyunsaturated margarine.
Nuts.
Avocados.
Oily fish.
(Accept 2 named oils) (2 marks)

- (e) In the small intestine. **1**
Bile **1** emulsifies fats to disperse them in the liquid in small droplets. **1**
Pancreatic lipase. **1**
Breaks fat into glycerol **1** and fatty acids. **1**
Any 4 (4 marks)

Total 20 marks

Question 7

- (a) In (descending) order by weight. (1 mark)

- (b) Average weight per pack.
Some packs weigh slightly more than average, some weigh slightly less.
OWTTE (1 mark)

- (c) (i) Sale of Goods Act- Goods must be of merchantable quality / fit for their purpose / satisfactory quality. Consumers are entitled to a refund, replacement or compensation if not. (2 marks)

- (ii) Food Safety Act- Covers production, processing, storage, distribution and retail. Food must meet food safety requirements. Food must be as described. Customers must not be misled. (2 marks)

- (iii) Weights and Measures Act- Controls weighing and measuring equipment. Requires quantities of goods to be displayed on packets. (2 marks)

- (d) Advertising Standards Authority. (1 mark)

Total 9 marks

Question 8

Broccoli:
Water soluble vitamins, C and B group are destroyed by cooking and will leach out into cooking water.
Colour changes. Chlorophyll becomes bright green when the

vegetables are first cooked. If over cooked it changes to olive green / brown.
Dietary fibre becomes softer when heated with liquid / texture becomes softer.

Pasta:

Contains tiny granules of starch. Water passes through the starch granules and the granules become swollen and may absorb water.

Release starch.

Gelatinisation.

Dried pasta absorbs water through osmosis causing cells inside to swell and the pasta becomes larger in size.

Becomes softer.

Nutritional value not altered.

Criteria for award of marks.

0-2 Answers may be muddled and information superficial. A limited number of points will have been made and candidates will only have basic understanding of the effects of heat on foods.

Answers may concentrate mainly on one area e.g. colour or texture.

Little or no use of appropriate terminology and only basic communication skills.

3-5 Answers will be fairly well organised and clearly presented.

A good range of points will be given which will show a good understanding of various effects of cooking on each foodstuff.

There will be some use of relevant and appropriate terminology and satisfactory communication skills.

6-8 Answers will be well organised and clearly presented.

A good range of points referring to colour, taste, texture and nutritive value.

There will be good use of terminology and good communication skills.

(8 marks)

Total 8 marks

Total for paper: 104 marks