

General Certificate of Secondary Education

Home Economics: Food and Nutrition

3562/F

Mark Scheme

2006 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.

It must be stressed that a mark scheme is a working document, in many cases further developed and expanded on the basis of candidates' reactions to a particular paper. Assumptions about future mark schemes on the basis of one year's document should be avoided; whilst the guiding principles of assessment remain constant, details will change, depending on the content of a particular examination paper.

Foundation Tier 3562/F

Question 1

- (a) When food is eaten plaque forms on the surface of the tooth (1)
 Plaque is made up of bacteria, plus water and sugar (1)
 When sugar is eaten plaque turns it into acid (1)
 The acid attacks the enamel (1)
 Enamel dissolves leaving weak spots (1)
 Weak spot gets larger and deeper until a hole or cavity is formed (1)
 Rots the teeth (1) **OWTTE max 5** (5 marks)
- (b) Avoid sweet and sugary foods
 Avoid fizzy drinks (acid)
 Avoid sweet drinks (sugar)
 Avoid eating sweet foods between meals
 Importance of fluoride (toothpaste, water)
 Use plaque disclosing tablets
 Brush teeth regularly
 Regular dental checkups
 Eat all sweets in one go/less acid attack
Accept any 3 relevant answers (3 marks)
- (c) (i) Hidden sugars are added by manufacturers during food processing.
 Said to provide empty calories (1 mark)
- (ii) Sugar which has been added to food products – soups, pasta sauces, breakfast cereals, canned vegetables etc. Accept one sweet source e.g. cakes, biscuits, soft drinks
Any 2 suitable food examples (2 marks)
- (d) Do not add sugar to weaning foods
 Do not introduce sweetened fruit juices/squashes too young
 Encourage children to drink water between meals
 Do not give sweetened dummies
 Read labels on baby foods
Any 2 (2 marks)
- (e) milk green vegetables hard water
 cheese white bread
 yogurt fish with bones (e.g. canned salmon) (2 marks)

Total 15 marks

Question 2

- (a) Mouth
 Stomach
 Small Intestine/Ileum
 Large Intestine max 4 (4 marks)
- (b) Teeth – tear, rip and grind food into pieces small enough to swallow

Tongue – pushes food around the mouth and down the throat
Salivary glands – produce saliva to moisten food and make it easier to swallow

OWTTE. Simple response 3 marks

Detailed response 6 marks

max 6

(6 marks)

- (c) Pepsin/Protease
Lipase
Amylase
Any 2 digestive enzymes
max 2

(2 marks)

Total 12 marks

Question 3

- (a) Hygienic storage and packaging
To protect it from damage during storage and transport/easier to transport
To give information to customers
To attract customers
For customers convenience
Prevents tampering
Can be used during the reheating of food
To reduce waste by protecting from damage e.g. eggs in cartons
To increase the life of foods by canning, MAP etc/keep them fresh
Some foods have to be sold in prescribed amounts e.g. butter

Any 3

(3 marks)

- (b) (i) Material can be recycled

(1 mark)

- (ii) Glass
Cans/aluminium/steel/tins
Paper
Plastics
Any 2

(2 marks)

- (c) Identification at the till
Pricing
Stock

Any 2

(2 marks)

Total 8 marks

Question 4

- (a) Size in relation to kitchen space
Family size
Choice of fuel – gas, electric, combination, solid fuel etc
Running costs
Cost to buy
Cost to run
Installation
Maintenance

Ease of use
Ease of cleaning/self cleaning/pyrolytic
Safety labels
Appearance – colour, style, etc
Reliability
Guarantee
Split level
Double oven
Ceramic hobs
Economy features
Manufacturers name/well known name/reliable manufacturer **NOT** energy efficiency label
Any 6 relevant points (6 marks)

(b) (i) Microwaveable label (1)
Power output/rating in watts ~ 800W D (1)
Heating category (1) (how efficiently the oven will heat a small amount of food ABCDE)
A needs the longest heating time, E the shortest (1)
Any 3 relevant points (3 marks)

(ii) To inform consumers how to cook foods properly (1)
to prevent food poisoning (1)
to make sure people using different ovens get the same results when they cook food (1)
Any 2 suitable responses (2 marks)

(c) To destroy bacteria
Short term preservation
To destroy natural toxins (e.g. in kidney beans)
To make food easier to digest
To make food easier to eat
To make food more appetizing and attractive
To enhance the flavour of food
To give variety
To reduce bulk
To provide hot food
Any 4 (4 marks)

(d) (i) Roasting – adds fat/calories (1)
More fibre if they mention that baked potatoes are often left in their skins
(2 marks)

(ii) Steaming – less loss of vitamins (1) must state vitamins not just nutrients.
Water soluble/vitamins B and C (1)

OR

Boiling – loss of water soluble vitamins (1)
Vitamins B and C (1) (2 marks)

Total 19 marks

Question 5

Constipation	Increase liquid Increase fibre Reduce fat and sugar Wholemeal flour/bread Wholemeal cereals Fruits esp. skins of apples etc Vegetables, especially leafy, pulses Seeds
Anaemia	Increase vitamin C Eat more iron rich foods Eat more red meat Offal Green vegetables Pulses Plain chocolate etc
High blood pressure	Lower salt intake Lo salt alternatives eg Cut down on salty foods Credit suitable food suggestions

Max 3 per condition – max 9

(9 marks)

Total 9 marks

Question 6

- (a) To add variety to the diet
To make foods available out of season
To make use of food when it is cheap and plentiful
To help foods keep longer
To preserve foods in ways to make new products out of the food e.g. jam

Any 3

(3 marks)

- (b) Freezing
Sterilized/pasteurised
UHT
Condensed
Evaporated
Dried

Any 4

(4 marks)

- (c) Canned tomatoes/tomato soup
Tomato puree
Tomato sauce
Chutney
Dried tomatoes

Only allow the method of preservation once

Any 2

(2 marks)

- (d) Name of vegetable – 1 mark for a suitable vegetable

(1 mark)

- Use vegetables in best condition i.e. (1)
- Wash/peel (1)
- Cut into smaller pieces as necessary (1)
- Blanch (1)
- Plunge into boiling water (1)
- Immerse into ice cold water to cool down (1)
- Pat dry to prevent sticking together (1)
- Place into container/freezer bag (1)
- Remove air (1)
- Seal (1)
- Label (1)
- Date and name of vegetable (1)
- (Put into coldest part of freezer/freeze quickly)
- Maximum of 3 if candidate does not show an understanding of freezing

Any 6 relevant points

(6 marks)

Total 16 marks

Question 7

- | | | |
|-----|-------------------------------------------------|--------------------|
| (a) | Use ham/lean/back bacon/less bacon | less saturated fat |
| | Use less oil | less fat |
| | Remove/cut down butter/change to low fat spread | less saturated fat |
| | Add more vegetables | more fibre |
| | Change white rice to brown rice | more fibre |
| | Reduce soy sauce | less salt |
| | Reduce number of eggs | cholesterol (less) |

1 mark per suggestion, 1 mark per person
Max 8

(8 marks)

- (b) You know what has been added
The recipe can be adapted to make it healthier
No MSG/salt
Less risk of food poisoning
You know whether it has been reheated
Cheaper

Any 2

(2 marks)

- (c) Gelatinisation (1)
Starch grains absorb the water (1)
Rice grains soak up the water (1)
Grains increase in size (1)
Changes occur as the temperature increases (1)
Soften cell wall (1)
Starch escapes (1)

Max 5

(5 marks)

Total 15 marks

Question 8

Lifestyle

Less time for food preparation
More demand for convenience/quick cook foods
Microwaveable meals
One stop shopping
Financial factors – 2 incomes means more money to spend on food/eating out/takeaways etc
Prepared to pay extra for convenience e.g. ready prepared/salads
Linked to jobs

Living in a multi-cultural society

More variety of foods
Influence of ethnic foods in shops
Restaurants
Festivals/traditions
Dietary restrictions, eg fasting, food combinations, and foods they cannot eat

Changes in technology

Cheaper versions of basic foods – margarines
Low fat spreads
Cholesterol lowering spreads
Novel foods – Quorn etc
Quick to prepare foods – cook chill meals/one pot meals/steam cuisine etc
Kitchen equipment
Improved packaging to enable us to eat away from home

Advertising

15% all advertising on food/big business
Children's TV/high sugar and fat foods
Take away foods
Sporting heroes promoting unhealthy foods – crisps etc
Doctors/experts promoting a 'healthy' image

Criteria bands

1-4 Answers muddled. Information very superficial. No real understanding shown of the range of factors which influence food choice. Answer may concentrate on only one factor. Little or no use of appropriate terminology. Basic communication skills. Poor spelling.

5-8 A limited number of points will have been made. Candidates may have concentrated on only 1 or 2 types of factors influencing food choice. Some use of relevant terminology. Satisfactory communication skills. Candidate will have reasonable spelling.

9-12 Fairly well organised answer dealing with 2-3 types of factors affecting food choice. A good range of points will have been included. Some use of relevant terminology. Quite good communication skills.

13-16 Answers will be well organised and clearly presented. A good range of points referring to most of the types of factors. Reference will have been made to at least 3 of the categories. There will have been good use of terminology and good communication skills. *(16 marks)*

Total 16 marks
Paper Total 110 marks