



General Certificate of Secondary Education
2014

Home Economics

Unit 1: Diet and Health
and Consumer Awareness

[GHE11]

WEDNESDAY 21 MAY, AFTERNOON

**MARK
SCHEME**

General Marking Instructions

Introduction

Mark schemes are published to assist teachers and students in their preparation for examinations. Through the mark schemes teachers and students will be able to see what examiners are looking for in response to questions and exactly where the marks have been awarded. The publishing of the mark schemes may help to show that examiners are not concerned about finding out what a student does not know but rather with rewarding students for what they do know.

The Purpose of Mark Schemes

Examination papers are set and revised by teams of examiners and revisers appointed by the Council. The teams of examiners and revisers include experienced teachers who are familiar with the level and standards expected of students in schools and colleges.

The job of the examiners is to set the questions and the mark schemes; and the job of the revisers is to review the questions and mark schemes commenting on a large range of issues about which they must be satisfied before the question papers and mark schemes are finalised.

The questions and the mark schemes are developed in association with each other so that the issues of differentiation and positive achievement can be addressed right from the start. Mark schemes, therefore, are regarded as part of an integral process which begins with the setting of questions and ends with the marking of the examination.

The main purpose of the mark scheme is to provide a uniform basis for the marking process so that all the markers are following exactly the same instructions and making the same judgements in so far as this is possible. Before marking begins a standardising meeting is held where all the markers are briefed using the mark scheme and samples of the students' work in the form of scripts. Consideration is also given at this stage to any comments on the operational papers received from teachers and their organisations. During this meeting, and up to and including the end of the marking, there is provision for amendments to be made to the mark scheme. What is published represents this final form of the mark scheme.

It is important to recognise that in some cases there may well be other correct responses which are equally acceptable to those published: the mark scheme can only cover those responses which emerged in the examination. There may also be instances where certain judgements may have to be left to the experience of the examiner, for example, where there is no absolute correct response – all teachers will be familiar with making such judgements.

SECTION A – Diet and Health

AVAILABLE
MARKS

- 1 (a) Identify the meal with the higher saturated fat content (Meal A or B). (AO1)

Answer: Meal B

(1 × [1])

[1]

- (b) Describe **two** ways saturated fat intake could be reduced when preparing meals. (AO1, AO2)

Answers should include any two of the following points:

- Substitute with low-fat or fat-free versions of milk and dairy products – saturated fat content is higher in full-fat versions
- Eat red meat only occasionally, choose lean cuts, or eat smaller portions
- Trim off visible fat
- Always remove the skin from poultry after cooking
- Eat fish at least twice a week, in place of foods high in saturated fat
- Use vegetable oils, such as sunflower or olive oil, instead of saturated fats such as butter
- Flavour foods with herbs and spices instead of saturated fat-laden toppings and sauces
- Read labels carefully to check saturated fat content
- Grilling/baking foods instead of cooking methods requiring fat
- Reduce consumption of ready made meals due to high saturated fat content

All other valid responses will be given credit

[1] basic description

[2] competent description

(2 × [2])

[4]

- (c) Write down **two** functions of fat in the diet. (AO1)

Answers may include any two of the following points:

- Provides energy
- Keeps the body warm
- Insulates organs
- Protects organs from damage
- Provides fat soluble vitamins A & D
- Supplies the essential fatty acids Omega 3 and Omega 6
- Needed for structure of all body cells

All other valid responses will be given credit

(2 × [1])

[2]

- (d) List **four** other factors that may increase the risk of this dietary disorder. (AO1)

Answers may include any four of the following points:

- smoking
- high blood pressure
- lack of exercise
- obesity/being overweight
- family history of heart disease
- stress
- increasing age
- too high a salt intake in the diet
- too much alcohol
- having diabetes
- being male
- ethnicity
- high blood cholesterol

All other valid responses will be given credit

(4 × [1])

[4]

11

- 2 (a) Discuss the importance of sugar and starch in the diet of an adolescent (12–18 years) who plays sport. (AO1, AO2)

Answers should include any two of the following points:

Sugar:

- provides short bursts of energy quickly – useful prior to a game or a long period of exercise
- a sportsperson uses an extra 500–1000kcal per day – so a small amount of sugary foods and drinks can be consumed
- sugary foods/drinks are not bulky or filling – they can be quickly consumed

Starch:

- to keep up glycogen levels starchy carbohydrates should be eaten two to three hours before exercise
- after exercise replenish glycogen stores with starchy carbohydrate snacks
- consume enough carbohydrates as fuel otherwise protein will be used as a source of energy and not for maintaining and repairing tissue
- to enable carbohydrate loading up to 3 days before an endurance event
- provides slow release of energy

[1] basic discussion

[2] competent discussion

(2 × [2])

[4]

- (b) Explain why an adolescent who plays sport needs a good intake of iron.
(AO1, AO2)

- forms haemoglobin to maximise the oxygen that can be transported around the body in the blood
- to boost energy stores
- if female will need to replenish lost iron due to monthly period as low iron levels will affect her ability to play sports

[1] basic explanation

[2] competent explanation

[3] highly competent explanation

(1 × [3])

[3]

- (c) Discuss **two** factors that **affect the absorption** of iron in the body.
(AO1, AO2)

Answers should include any **two** of the following points, explained:

- how it is supplied in the diet – non-haem iron from plant sources is not as easily absorbed as haem iron from meat sources
- presence of inhibiting factors
 - phytate in cereals and wholemeal bread from diet high in NSP, interferes with iron absorption making it unavailable
 - oxalic acid found in spinach and rhubarb also reduces iron absorption
 - tannins in tea or coffee make iron more difficult to absorb
- lack of foods in the diet containing vitamin C reduces ability of body to convert non-haem to haem iron

All other valid responses will be given credit

[1] basic discussion

[2] competent discussion

(2 × [2])

[4]

11

3 Older people are at risk of malnutrition. (AO1, AO2)

AVAILABLE
MARKS

(a) Explain why the following are important in the diet of an **older person**.

Calcium

- Helps to slow age related bone loss, which can result in osteoporosis
- Helps with blood clotting after injury/surgery

NSP

- Makes the content of the bowel soft – waste is easily passed out of the body
- Less likely to suffer from constipation or other bowel disorders
- High fibre foods are filling and reduce the risk of snacking on high fat/sugar foods therefore helps control body weight
- Lowers cholesterol

Water

- Maintains body temperature at 37 °C and so prevents overheating
- Prevents constipation as stools are kept soft and bulky
- Prevents dehydration resulting in confusion

[1] basic explanation

[2] competent explanation

(3 × [2])

[6]

(b) Discuss how low biological value protein can be of benefit in the diet.

- Combining LBV protein sources to obtain all essential amino acids – protein complementation
- A wide variety of LBV protein sources can be utilised – examples can be given
- Foods that contain LBV protein are often low in fat and high in NSP

[1] basic discussion

[2] competent discussion

[3] highly competent discussion

(1 × [3])

[3]

9

- 4 (a) Explain why there may be a high risk of *Staphylococcus aureus* food poisoning from take-away sandwiches bought in a shop. (AO1, AO2)

Answers should include some of the following points, explained and refer specifically to *Staphylococcus aureus*:

- Higher risk from any food bought from food premises as the customer doesn't know how hygienically it has been prepared
- S.a. is often spread to food by poor hygiene practices from food handler – coughing, sneezing or hair falling into food may also spread bacteria, cuts not covered, bacteria on skin of hands or from nose, handling food without using the appropriate utensils.
- Cold food is more at risk as bacteria have not been killed through cooking
- Not stored correctly in shop – if contaminated food is sitting for long time, i.e. sandwiches on a shelf, S.a. bacteria produce a food poisoning toxin and, when ingested, causes sickness

All other valid responses will be given credit

[1] basic explanation

[2] adequate explanation

[3] competent explanation

[4] highly competent explanation

(1 × [4])

[4]

- (b) Write down the job title of the person employed by the council to enforce the Food Safety (Northern Ireland) Order 1991. (AO1)

- Environmental Health Officer

(1 × [1])

[1]

- (c) Explain why there is a 'use by' date on the sandwich packaging. (AO1, AO2)

Answers may include some of the following points, explained:

'Use by' date:

- Found on perishable foods, e.g. meat, as they have a shorter shelf life
- Food should be eaten by this date to reduce the risk of food poisoning
- Food that has a use-by date should be stored according to manufacturer's instructions for the use-by date to be relevant

[1] basic explanation

[2] competent explanation

[3] highly competent explanation

(1 × [3])

[3]

AVAILABLE
MARKS

- (d) Nano foods are becoming more widely used in the food industry.
Write down **one** advantage and **one** disadvantage of nano foods. (AO1)

Advantages

- provides/delivers vitamins and minerals
- can be used to improve the shelf life of food
- used in food processing to limit the loss of nutrients during processing
- used to improve the sensory appeal of food – appearance, flavour, texture, smell
- can create lower fat foods and those with less salt

Disadvantages

- some properties of these tiny particles are unknown, and potentially harmful
- scientists are still trying to determine whether their size affects their toxicity
- consumers are concerned about long-term risks to health
- impact on environmental impact is unknown

All other valid responses will be given credit

(2 × [1])

[2]

10

AVAILABLE
MARKS

- 5 Analyse how 'user-friendly' the nutrition information is on each of the labels below. (AO1, AO2, AO3)

AVAILABLE
MARKS

Answers should include any of the following points:

- Label A – Nutritional panel – gives more detailed information – shows figures for 100g and per serving. Label B only gives figures per 1/2 pack serving
 - typical values per 100g allows for comparison with other products
 - gives figures for energy in kcal, useful for someone watching calorie content of foods
 - shows wider range of nutrients – includes protein, carbohydrate, sodium. Also includes fibre (NSP) – no ref to this in Label B
 - could be confusing as there is so much information to read through, unlike Label B
 - consumer has to work out differences between figures for types of carbohydrate, fat and salt/sodium – only figures for sat fat and fat broken down in Label B
- Label B – Front of pack labelling system – provides simple, clearer layout which is easier to understand, but does not include as much information as Label A
 - traffic light system gives colour coded indication of saturated and total fat, sugar and salt content of food – quicker to read than Label A – % of guideline daily amount given
 - explanation of traffic light system given on label
 - allows for comparison with other similarly labelled foods, unlike Label A
 - displayed on front of pack so consumer can see more clearly rather than nutritional table on reverse
 - portion size is very small so print may not be noticed

All other valid responses will be given credit

[0] is awarded for a response not worthy of credit

Level 1 ([1]–[3])

Overall impression: basic

- Identifies and comments on a few obvious points relevant to the question
- A limited analysis applied in simple terms to the question
- Quality of written communication is basic

Level 2 ([4]–[6])

Overall impression: competent

- Identifies and comments on some key points relevant to the question
- A competent analysis applied accurately to the question
- Quality of written communication is competent

Level 3 ([7]–[9])

Overall impression: highly competent

- Identifies and comments on the key points relevant to the question
- A highly competent analysis applied accurately within the context of the question
- Quality of written communication is highly competent

(1 × [9])

[9]

9

- 6 Justify the dietary advice you would give a parent when planning meals for a toddler (12 months – 3 years). (AO1, AO2, AO3)

Answers should address some of the following points:

- Choose from a wide range of foods/foods on eatwell plate to achieve a balanced diet – although not in same proportions as not designed for very young children
- Should not eat foods high in NSP as too filling and will prevent adequate intake of other nutrients
- Diet should not be low in fat before two years of age to provide fat soluble vitamins and energy
- Foods should not be excessively high in sugar or fat to avoid obesity
- Should not have fully skimmed milk or 1% milk until child is older as it does not contain enough vitamin A or provide sufficient energy
- Ensure eggs are well cooked to prevent risk of salmonella food poisoning
- Dilute fruit juice as it can damage developing teeth or fill up child, reducing intake of other nutrients
- No more than 2g of salt per day
- Bright/colourful foods to encourage consumption

Must have foods mentioned and relate to toddler to access Level 3

All other valid points will be given credit

[0] is awarded for a response not worthy of credit

Level 1 ([1]–[3])

Overall impression: basic

- Identifies and comments on a few obvious points relevant to the question
- A limited justification applied in simple terms to the question
- Quality of written communication is basic

Level 2 ([4]–[6])

Overall impression: competent

- Identifies and comments on some key points relevant to the question
- A competent justification applied accurately to the question
- Quality of written communication is competent

Level 3 ([7]–[9])

Overall impression: highly competent

- Identifies and comments on the key points relevant to the question
- A highly competent justification applied accurately within the context of the question
- Quality of written communication is highly competent

(1 × [9])

[9]

9

Section A

59

AVAILABLE
MARKS

SECTION B – Consumer Awareness

AVAILABLE
MARKS

- 7 (a) Complete the table below identifying **one** advantage and **one** disadvantage for a consumer who uses a wheelchair: (AO1)

Supermarket: Advantages:

- Shop mobility wheelchairs available
- Parking spaces available for wheelchair users
- Wheelchair adapted trolleys available
- Wide aisles for ease of movement when shopping
- Ease of access into store, e.g. automatic doors, lifts

Disadvantages:

- May be spread over large area so could be tiring
- Often busy which can make shopping stressful
- May find it difficult to reach items on shelves

Mail order: Advantages:

- Don't have stress of having to go shopping
- Shopping can be done at home when convenient
- Don't need to try on in changing rooms – may be difficult

Disadvantages:

- Miss the company of adults in shopping environment
- Not as easy to collect/return to PO

All other valid responses will be given credit

(4 × [1])

[4]

- (b) Explain **two** reasons why some people may choose **not** to shop online, despite greater access to the internet. (AO1, AO2, AO3)

Answers should address two of the following points:

- Lower income so no credit card – inconvenient as they would have to borrow one
- Lack of internet knowledge and skills so may find it difficult to shop online
- Can't see the goods before purchase
- Credit card security
- Lack of confidence over online rights
- Difficult to access internet as do not have their own computer – inconvenient if they have to find a public computer
- Need to be at home to receive delivery of goods
- May be tempted to overspend when too convenient leading to debt
- Delivery costs

All other valid responses will be given credit

[1] basic explanation

[2] competent explanation

(2 × [2])

[4]

- (c) Explain **two** barriers that may prevent a consumer from complaining about poor goods or services. (AO1, AO2)

Answers may include any two of the following:

- May have mobility problems due to, e.g. disability or older age – difficulty returning to the shop or provider of service
- May have a lack of confidence, e.g. adolescents, older people or ethnic minority groups
- May not understand/know their rights, e.g. younger people, ethnic minority
- May have a literacy/language barrier, e.g. ethnic minority groups
- May not be able to afford to follow up complaint due to, e.g. location, time or lack of finance – cost of contacting shop/service provider either by phone or in person

[1] basic explanation

[2] competent explanation

(2 × [2])

[4]

- (d) Write down **three** shopping rights consumers have under the Sale and Supply of Goods Act 1994. (AO1)

Answers should include three of the following points:

- Right to expect that goods bought should be
 - of satisfactory quality
 - fit for purpose
 - as described
- Right to a repair
- Right to a replacement
- Right to a refund

All other valid responses will be given credit

(3 × [1])

[3]

15

AVAILABLE
MARKS

- 8 (a) Discuss **two** different marketing strategies used to influence consumers when shopping. (AO1, AO2)

Answers should address two of the following points:

- Different forms of advertising – posters, flyers, leaflets
- In-store promotions, e.g. free samples, tasting sessions, money off coupons
- Special offers, BOGOF, two for one,
- Financial incentives, e.g. store cards offering high spending limits, cash back
- Smells of fresh bread, hot food deli
- Highlight products aimed at children, leads to pester power
- Loss leaders – low prices to attract customers so they will buy more
- Store layout
- Competitions
- Free gifts with purchase, e.g. toys with meals
- Attractive packaging
- Celebrity endorsement

All other valid responses will be given credit

[1] basic discussion

[2] competent discussion

(2 × [2])

[4]

- (b) Analyse the consequences of poor money management for a family. (AO1, AO2, AO3)

Answers should include some of the following points:

- lack of control over finances
- debt
- stress and related illness
- loss of home, car etc.
- relationship difficulties
- not setting a good example for children
- lack of money available for family treats, e.g. meal out, holiday

All other valid responses will be given credit

Level 1 ([1]–[2])

Overall impression: basic

- Identifies and comments on a few relevant points obvious to the question
- A limited analysis applied in simple terms to the question

Level 2 ([3]–[4])

Overall impression: competent

- Identifies and comments on some key points relevant to the question
- A competent analysis applied accurately to the question

Level 3 ([5]–[6])

Overall impression: highly competent

- Identifies and comments on the key points relevant to the question
- A highly competent analysis applied accurately within the context of the question
- Cannot be awarded Level 3 if list like or bullet pointed – must be analysed

(1 × [6])

[6]

AVAILABLE
MARKS

10

- 9 There are many sources of consumer information provided by the media.
(AO1, AO2, AO3)

AVAILABLE
MARKS

- (a) Evaluate consumer programmes as a source of information for adolescents.

Answers should include some of the following points:

- Can be entertaining and interesting for adolescent to watch – lively presentation
- Usually topical – may contain relevant information for this age group, e.g. mobile phone issues
- Not a useful source of information as – may not enjoy this type of programme so will not watch it
- Adolescent may not understand the consumer issues
- Reliable and relevant information

All other valid responses will be given credit

[1] basic evaluation

[2] adequate evaluation

[3] competent evaluation

[4] highly competent evaluation

(1 × [4])

[4]

- (b) Describe the support and information provided to consumers by Advice NI.
(AO1, AO2)

Answers should include some of the following points:

- Produce publications/leaflets
- Advice NI respond to relevant government and financial sector consultations
- Try as far as possible to represent the views and experiences of money advisers who deal with people experiencing debt
- Deliver training via face-to-face workshops and online through the Learning Online website
- Provides confidential advice at a drop-in centre
- Provides a freephone helpline number
- Will refer clients for additional help through a member organisation
- Tax benefits service
- Accompany someone to court
- Ring/write letters on behalf of clients
- Interpretation services
- Debt action

All other valid responses will be given credit

[1] basic description

[2] competent description

[3] highly competent description

(1 × [3])

[3]

7

- 10** Discuss a range of environmental and ethical factors which may influence a consumer when shopping for food.

Answers should address some of the following points: (AO1, AO2, AO3)

- Consider 'food miles' – choose local products that haven't travelled many miles
- Shop closer to home so using less fuel for shopping
- Avoid excess packaging – consider buying products in cellophane without cardboard outers or vice versa
- Look for products that aren't individually wrapped
- Choose recyclable packaging – e.g. not choosing 'Tetrapak' juice containers as they are difficult to recycle
- Choose refill packs of products, e.g. coffee, spices – less expensive than glass packaging
- Use reusable bags for shopping or reuse plastic ones
- Consider how the food has been produced – use of environmentally friendly pesticides or organic produce
- Soil Association
- Buy more fresh food while it is in season
- Fair Trade
- Beliefs, e.g. religious, vegetarian may influence food choice
- Free range chicken or eggs
- Dolphin friendly tuna
- Sustainable foods, e.g. fish certified

Must have both to access Level 3

All other valid points will be given credit

[0] is awarded for a response not worthy of credit

Level 1 ([1]–[3])

Overall impression: basic

- Identifies and comments on a few obvious points relevant to the question
- A limited discussion applied in simple terms to the question
- Quality of written communication is basic

Level 2 ([4]–[6])

Overall impression: competent

- Identifies and comments on some key points relevant to the question
- A competent discussion applied accurately to the question
- Quality of written communication is competent

Level 3 ([7]–[9])

Overall impression: highly competent

- Identifies and comments on the key points relevant to the question
- A highly competent discussion applied accurately within the context of the question
- Quality of written communication is highly competent

(1 × [9])

[9]

9

Section B

41

Total

100