



**General Certificate of Secondary Education
2013**

Home Economics

**Unit 1: Diet and Health
and Consumer Awareness**

[GHE11]

THURSDAY 16 MAY, MORNING

**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) List **two** reasons why the body needs energy. (AO1)

Answers may include any of the following points.

- to make our muscles move
- to maintain normal body temperature/warmth
- for normal body functions – heartbeat, breathing, digestion, metabolism
- for tissue growth and repair
- to repair body after illness or during pregnancy
- to stay alive.

All other valid responses will be given credit

(2 × [1])

[2]

- (b) The table below shows the average energy requirements of males and females at different ages.

Using the information from the table:

1. Write down the energy requirement of a female child. (AO1)

1600 Kcal/day.

(1 × [1])

[1]

2. Identify the age and gender with the highest energy requirement. (AO1)

Male aged 12–18 years (both age and gender must be given).

(1 × [1])

[1]

- (c) Explain **two** factors that may affect a person's energy requirement. (AO1, AO2)

Answers may include any two of the following points explained:

- basal metabolic rate (BMR) – when BMR is higher there will be greater demand for energy – higher in children than adults, higher in men than women
- age – energy requirements change through lifespan to meet demands of growth
- gender – males generally require more than females as they have a greater muscle mass
- body size – those with a greater body size or body weight will require more energy to move
- specific need, e.g. during illness or pregnancy – increased foetal growth requires more energy especially towards end of pregnancy
- level of physical activity – those with physically active jobs have greater energy requirements than those in sedentary occupations.

All other valid responses will be given credit

[1] basic explanation, [2] competent explanation

(2 × [2])

[4]

- (d) Write down the name of the vitamin that helps release energy from nutrients. (AO1)

Answer should be B group vitamins.

(1 × [1])

[1]

9

- 2 (a) Identify **three** foods in the table which are valuable sources of vitamin A. (AO1)

Answers are:

- carrots
- eggs
- cheese.

(3 × [1])

[3]

- (b) Write down **two** functions of vitamin A. (AO1)

Answers should include two of the following points:

- healthy eyesight
- healthy skin
- normal growth and development
- healthy immune system
- antioxidant properties protecting cells from damage
- maintenance of moist mucous membranes
- embryonic development.

All other valid responses will be given credit

(2 × [1])

[2]

- (c) Outline the effect on health of having too much vitamin A in the diet. (AO1)

Answers should include one of the following points:

- too much vitamin A in the body is poisonous
- high levels can accumulate as it is stored in the body
- retinol can be dangerous in excess in pregnancy – can cause birth defects
- can affect joints
- may cause drowsiness, irritability, skin and bone disorders
- linked to osteoporosis as it affects calcium absorption
- may cause the liver to become enlarged or damaged.

[1] basic outline, [2] competent outline

(1 × [2])

[2]

7

3 The “eatwell plate” is divided into five food groups.

(a) Identify **one** of the main nutrients provided by each food group in the table below: (AO1)

Answers should include any one of the following nutrients:

- bread, rice, potatoes, pasta: carbohydrates, NSP, B vitamins, iron, calcium
- milk and dairy foods: protein, calcium, vitamin A, D and fat
- meat, fish, eggs and beans: protein, vitamins A, B and D, iron, fat
- fruit and vegetables: NSP, vitamins A and C, iron, calcium, carbohydrates
- foods and drinks high in fat and/or sugar; carbohydrates, fat.

(5 × [1])

[5]

(b) Discuss how a vegetarian can ensure an adequate supply of the following nutrients in their diet: (AO1, AO2)

Answers may include any of the following points:

Iron:

- increase consumption from non-haem sources, e.g. egg yolk, dried fruit, cereals, green leafy vegetables, nuts, pulses, fortified breakfast cereals
- to promote absorption these foods should be eaten with foods rich in vitamin C, e.g. citrus fruits
- avoid consumption of tea with meals as tannins can restrict absorption of iron
- phytates (wholemeal cereals) should be reduced as they affect absorption, as do oxalates in spinach and rhubarb.

Protein:

- increase consumption of dairy products and eggs
- plant foods, e.g. pulses, cereal products, nuts can be eaten in combination – protein complementation
- soya and tofu products can be consumed.

Not supplements

[1] basic discussion, [2] competent discussion

(2 × [2])

[4]

- (c) According to the Food Standards Agency approximately one third of the food we buy is thrown out.

Discuss how leftover food can be stored and reused safely. (AO1, AO2, AO3)

Answers may include any of the following points:

- always place cooked meat and poultry in the fridge to avoid food poisoning bacteria growing and multiplying
- cover foods or place in clean covered containers before storing in the fridge operating between 0-5°C
- don't put hot food in the fridge – let it cool first
- follow instructions on labels/check use by dates
- leftovers should be kept covered on shelves above raw meat and poultry
- consume food within 2–3 days
- if food is frozen, ensure it is thawed properly before use if necessary and reheated only once
- if using leftover meat to make a pie or a curry, only reheat the meat once
- ensure that the dish is heated to 70°C or piping hot all the way through.

All other valid responses will be given credit

Personal hygiene or kitchen/equipment hygiene should not be the main focus

Storage and reusing must both be discussed to award Level 3 marks

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

Level 1 ([1]–[2])

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.

Level 2 ([3]–[4])

Overall impression: competent

- identifies and comments on some key points relevant to the question
- a competent discussion 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 discussion applied accurately within the context of the question.

(1 × [6])

[6]

(d) Outline the protection offered to the consumer by the Food Safety (N.I.) Order 1991. (AO1)

Answers should include any of the following:

- provides enforcement authorities with powers to:
 - issue improvement and prohibition notices
 - inspect food premises and seize suspect food
- makes it an offence to sell or produce food that:
 - is unfit for human consumption
 - has been declared injurious to health
 - has been made harmful by the addition or removal of certain substances
 - is so contaminated, it could not be eaten
 - is not of the nature, substance or quality demanded by the consumer
 - is falsely or misleadingly labelled or presented
 - fails to meet safety requirements.

[1] basic outline, [2] competent outline
(1 × [2])

[2]

17

4 (a) Describe the condition “diabetes”. (AO1, AO2)

- the amount of glucose in the blood is too high/blood sugar levels too high
- insulin required to help glucose enter the cells
- the body does not produce sufficient insulin
- insulin produced does not work effectively
- Type 1 – cannot make insulin – insulin dependent
- Type 2 – insulin does not work properly – non-insulin dependent.

[0] is awarded for a response not worthy of credit, [1] basic description, [2] competent description, [3] highly competent description

(1 × [3])

[3]

(b) Discuss **two** factors that may increase the risk of developing Type 2 diabetes. (AO1, AO2)

Answers may include any of the following points:

- age – increased risk in older people
- being overweight or obese
- leading an inactive lifestyle
- family history – closer the relative, the greater the risk
- other health problems – high blood pressure, CHD, stroke, circulation problems.

All other valid responses will be given credit

[1] basic discussion, [2] competent discussion

(2 × [2])

[4]

(c) Discuss the **dietary** advice you would give someone to manage Type 2 diabetes. (AO1, AO2, AO3)

Answers may include any of the following points:

- eat a well balanced diet with foods from main food groups
- include plenty of fruit and vegetables
- have regular meals
- try to eat foods low in sugar, especially NMES to avoid rapid spikes in blood sugar
- base meals on complex carbohydrates to give a gradual release of sugars
- keep weight under control
- monitor fat intake as diabetics are more susceptible to cardiovascular disease.

All other valid responses will be given credit

[0] is awarded for a response not worthy of credit, [1] basic discussion, [2] adequate discussion, [3] competent discussion, [4] highly competent discussion

(1 × [4])

[4]

11

5 Discuss the benefits of eating breakfast. (AO1, AO2, AO3)

Answers may address some of the following points:

- one of the eight tips for eating well
- it kick starts the metabolism/breaks the fast
- improves concentration and performance in work
- linked to improved behaviour in school children
- supplies one of three balanced meals a day
- if fruit eaten on its own or with cereal it contributes to five-a-day fruit guidelines
- dairy produce helps achieve three-a-day calcium guidelines
- provides essential energy for day
- source of essential nutrients, e.g.
 - protein – egg, bacon in cooked breakfast, wheat in cereal, bread
 - carbohydrates and NSP – cereals, toast
 - vitamins – fruit/fruit juice
 - iron – egg, meat
 - calcium – milk, yoghurt, cheese
- fills you up – prevents snacking on high sugar/fat foods mid-morning
- helps maintain healthy weight
- establishes good eating habits.

All other valid points will be given credit

NB – Discussion should include a range of key points in addition to nutritional benefits to access Level 3.

[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

- 6 Evaluate the impact of “fast foods” on the health and lifestyle of an adolescent. (AO1, AO2, AO3)

Answers may address some of the following points:

Health

- energy dense rather than nutrient dense
- high in fat, salt and sugar – increasing risk of dietary disorders, e.g. CHD, hypertension, diabetes
- may lead to poor eating habits
- provides some nutrients, e.g.
 - chicken curry provides protein in chicken, carbohydrates in rice
 - cheeseburger provides iron in meat, calcium in cheese, vitamins in salad
 - sandwiches/subs may provide range of nutrients in fillings and carbohydrate in bread
 - pizza base provides carbohydrate, vegetable topping may contribute to 5-a-day
- contributes to a three meal a day eating pattern as opposed to grazing and snacking.

Lifestyle

- may encourage disregard for environment – wastage of resources, litter
- can be expensive over a period of time
- widely available, sometimes open 24 hours
- wide range of dishes
- special offers so may save money
- convenient due to no preparation
- no cooking skills required so may restrict development of skills
- no cooking equipment needed – useful if in limited accommodation, e.g. student housing
- ability to socialise easily with friends at fast food outlet
- widens palate as new foods (foreign dishes) can be experienced.

All other valid points will be given credit

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

NB – Must include positive and negative comments related to health **and** lifestyle of adolescent to be awarded full marks.

Level 1 ([1]–[3])

Overall impression: basic

- identifies and comments on a few obvious points relevant to the question
- a limited evaluation 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 evaluation 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 evaluation applied accurately within the context of the question
- quality of written communication is highly competent.

(1 × [9])

[9]

Section A

9

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Section B – Consumer Awareness

AVAILABLE
MARKS

7 (a) Identify **two** products that display this type of label. (AO1)

Answers should include any **two** of the following:

- refrigerators, freezers and combined appliances
- washing machines, tumble dryers and combined appliances
- dishwashers
- ovens
- water heaters and hot water storage appliances
- air conditioners
- light bulbs
- television.

(2 × [1])

[2]

(b) Explain why consumers may find this symbol useful when buying goods. (AO1, AO2)

Answers may include any of the following points:

- when used for appliances, it indicates how expensive it will be to run
- colour banded so efficiency easily indicated
- shows the energy efficiency of the product: “A” represents the most efficient – uses least energy, “G” represents the least efficient – uses most energy
- allows them to compare similar products.

All other valid responses will be given credit

[1] basic explanation, [2] competent explanation

(1 × [2])

[2]

(c) Discuss how Citizens Advice supports consumers. (AO1, AO2, AO3)

Discussion may include any of the following points:

- offers free, confidential, impartial advice about a range of issues
- interviews consumers in person and by telephone and email
- writes letters and telephones companies on behalf of consumers
- helps consumers with form filling
- represents consumers in court and at tribunals
- gives advice through its website adviceguide.org.uk
- initiates campaigns to inform people about consumer issues
- influences policy makers.

[0] is awarded for a response not worthy of credit, [1] basic discussion, [2] adequate discussion, [3] competent discussion, [4] highly competent discussion

(1 × [4])

[4]

8

8 (a) Discuss the influence of friends when shopping. (AO1, AO2)

Answers may include any of the following points:

- peer pressure – latest fashion trends
- friends/family shopping habits
- family loyalty to brand or store
- may give useful advice but could be biased
- encouragement
- could be distracting – don't get what you planned to buy
- could be unqualified in their knowledge.

All other valid responses will be given credit

[1] basic discussion, [2] competent discussion
(1 × [2])

[2]

(b) Explain **two** ways the layout of a supermarket encourages a consumer to buy more goods. (AO1, AO2)

Answers may include any **two** of the following points:

- essentials placed at back of store so customers walk past tempting goods and may buy them
- luxuries placed at eye-level, essentials on lower shelves
- sweets and magazines placed beside tills for impulse purchases
- freshly baked bread often at entrance of store to tempt customers when they enter
- fruit and vegetables placed near front of store – associated with freshness
- special offers and impulse purchases placed on end of aisles where customers slow down – more chance of purchase
- products often grouped together in aisle – encourage customers to purchase more than they planned.

All other valid responses related to store layout will be given credit

[1] basic explanation, [2] competent explanation
(2 × [2])

[4]

(c) Evaluate an adult’s decision to do their food shopping in a small independent shop. (AO1, AO2, AO3)

Answers may address any of the following points:

Positive:

- offer personal and friendly service
- usually in residential areas – ease of access, local
- will sell goods in small quantities – helps customers to save money and reduce waste
- supports local business.

Negative

- may be more expensive
- stock may not be rotated or replaced regularly
- range of products for sale may be limited.

All other valid responses will be given credit

NB – Must include positive and negative comments to be awarded full marks

[0] is awarded for a response not worthy of credit, [1] basic evaluation, [2] adequate evaluation, [3] competent evaluation, [4] highly competent evaluation

(1 × [4])

[4]

10

- 9 (a) Explain how redundancy or job loss can affect how a person manages their: (AO1, AO2)

Answers may include any of the following points:

Money:

- loss of job affects disposable income
- may cause change in spending habits, e.g. cheaper stores/brands/products
- may prioritise needs and wants
- redundancy payment may provide lump sum – may be used for special purchase, e.g. car, kitchen, holiday
- taking up a sport or hobby may mean more purchases.

Time:

- loss of job may free up more time for leisure activities, travel, to look for another job
- additional commitments, e.g. voluntary work/family causes change in how time is managed
- may become bored if no structure to their day, i.e. too much time available.

All other valid responses will be given credit

[1] basic explanation, [2] competent explanation
(2 × [2])

[4]

- (b) Consider the use of a credit card when buying a plasma screen television. (AO1, AO2, AO3)

Answers may include any of the following points:

- useful for large or unexpected purchases – can spread the cost of the television
- convenient to carry between shops
- can offer the consumer protection against fraudulent purchases or company in administration
- useful if buying the television from online store
- may incur interest charges if balance is not paid
- may incur additional charges, e.g. delivery of television
- may encourage overspending as not actually paying with cash
- could lead to debt if spending is not managed
- increases risk of credit card fraud.

All other valid responses will be given credit

NB – Must relate to the purchase of the TV

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

Level 1 ([1]–[2])

Overall impression: basic

- identifies and comments on a few obvious points relevant to the question
- a limited consideration 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 consideration 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 consideration applied accurately within the context of the question.

(1 × [6])

[6]

- (c) Write down the name of the Act that protects consumers from misleading or aggressive business practice. (AO1)

Answer should be:

The Unfair Trading Regulations 2008 (date not required).

(1 × [1])

[1]

11

10 Older people (65+ years) can be effective consumers. Evaluate this statement. (AO1, AO2, AO3)

Answers may address some of the following points:

Positive

- have more experience in purchasing products so may make wiser choices
- may have more disposable income so may not be so restricted to cheaper options
- may have built up brand or store loyalty so may have better shopping experience
- may have more time available to shop around or pursue consumer concerns
- may be quick to complain if goods or services are not up to standard as they may know their rights
- don't like to get into debt so many prefer to use cash rather than credit
- may receive discount by purchasing with cash.

Negative

- may be less confident at handling problems with faulty products or poor service
- may have sight, hearing or health problems that restricts their ability to be an effective shopper
- mobility problems may make choice of shopping options more restricted – includes no transport to shops
- may be managing on less income so may need to purchase within a budget
- may find consumer legislation confusing
- small print on contracts often very difficult to read
- may be less likely to avail of bargains online – lack of computer knowledge
- may find shopping incentives impractical due to large quantities offered
- may find increasing use of technology in supermarkets confusing, e.g. self-scan
- someone else has to do the shopping for them – may miss out on cheaper alternatives.

All other valid responses will be given credit

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

NB – Must include positive and negative comments to be awarded full marks

Level 1 ([1]–[3])

Overall impression: basic

- identifies and comments on a few obvious points relevant to the question
- a limited evaluation 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 evaluation 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 evaluation applied accurately within the context of the question
- quality of written communication is highly competent.

(1 × [9])

[9]

9

Section B

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Total

100