



**General Certificate of Secondary Education
2017**

Home Economics

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

[GHE11]

TUESDAY 30 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) The '8 tips for eating well' are shown in the diagram below. Four of them have been completed for you; fill in the blanks in the **four** remaining tips. (AO1)

Don't skip **breakfast**

Drink plenty of **water**

Eat more **fish**

Try to eat less **salt**

(4 × [1])

[4]

- (b) Write down **two** foods that are rich sources of starch. (AO1)

Any two foods that are rich sources of starch, e.g.:

- pasta
- bread
- rice
- beans
- pulses
- potatoes

(2 × [1])

[2]

- (c) Explain how eating more fruit and vegetables benefits our health. (AO1, AO2, AO3)

Answers may include any of the following points:

- contains intrinsic sugars – less damaging to teeth – lowers risk of dental caries
- high in insoluble fibre – will reduce the risk of bowel problems, constipation
- high in soluble fibre, controls blood sugar levels – will help to manage diabetes
- fruit and vegetables are high in vitamin C – helps immune system
- antioxidant properties – protects cells from damage, which reduces risk of CHD and cancers
- less risk of obesity as fruit and vegetables are almost fat-free

All other valid responses will be given credit

[1] basic explanation, [2] competent explanation, [3] highly competent explanation

(1 × [3])

[3]

- (d) Justify why we are advised to 'cut down on saturated fat and sugar.' (AO1, AO2, AO3)

Answers may include any of the following points:

- sugar provides 'empty' calories without other nutritional benefits. If the energy is not used from sugar it is stored as fat in the body and can lead to weight gain
- can increase the risk of diabetes
- can increase the risk of tooth decay
- saturated fat can increase blood cholesterol levels
- fat can increase the risk of coronary heart disease and obesity

[1] basic justification, [2] adequate justification, [3] competent justification,

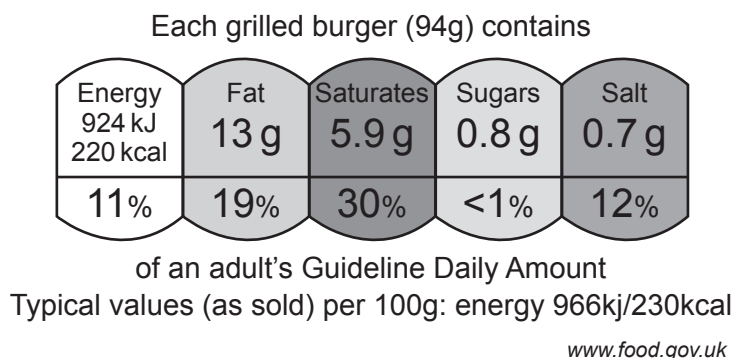
[4] highly competent justification

(1 × [4])

[4]

13

- 2 (a) Explain **two** advantages of having the following information on a food label.
(AO1, AO2)



Answers may include any two of the following points:

- provides a simple and clear layout which is easy to understand
- portion size is clearly given – consumer can easily calculate their intake
- traffic light system is colour coded to help consumers make healthy choices
- quick to read when shopping for food
- % of guideline daily amount of nutrients and energy is given
- energy content is given in both kilocalories and kilojoules which is useful to consumers
- allows for comparison with other similarly labelled foods

All other valid responses will be given credit.

[1] basic explanation, [2] competent explanation

(2 × [2])

[4]

- (b) Discuss **two** factors that can affect a person's energy requirements.
(AO1, AO2)

Answers may include any two of the following points:

- stage – childhood and adolescent requirements increase to meet the demands of growth and development
- age – ageing reduces energy needs as growth has ceased and levels of physical activity may decline
- gender – males often have a larger body size and a higher BMR and require more energy
- body mass/basal metabolic rate – children have a proportionately higher BMR for their size to meet growth and development demands. Men usually have a higher BMR than women due to greater muscle mass. Older people usually have a lower BMR as muscle mass tends to decrease
- pregnancy/lactation – more energy is required for growth and development of the foetus
- illness – energy requirements increase to recover from illness
- level of physical activity – people who exercise regularly or have physically demanding jobs require more energy than those who are sedentary

All other valid responses will be given credit.

[1] basic discussion, [2] competent discussion

(2 × [2])

[4]

AVAILABLE
MARKS

8

- 3 (a) Explain why a higher intake of carbohydrate is important in the diet of an adolescent who plays sport. (AO1, AO2)

Answers may include any of the following points:

- energy requirements increase substantially for athletes; on average they need 500–1000 kcal more per day than a sedentary adolescent
- carbohydrate provides energy for the duration of the sport
- carbohydrate is stored in the muscles and liver as glycogen and is needed to ensure the muscles work effectively and to maximise performance
- carbohydrate loading prior to the sports event involves increasing carbohydrate intake by more than 70% – gives more available carbohydrate for energy
- carbohydrates in the form of glycogen need to be replenished after exercise

[1] basic explanation, [2] competent explanation, [3] highly competent explanation

(1 × [3])

[3]

- (b) Discuss **two** benefits of having soluble NSP in the diet. (AO1, AO2)

Answers may include any two of the following points:

- absorbs water from food, slowing digestion; feeling fuller and satiety
- fat-binding action helps reduce blood cholesterol levels
- helps to control blood sugar levels making it easier to manage diabetes
- additional nutritional benefits – protein, vitamins – from having food sources supplying soluble NSP, e.g. peas, beans, oats, barley, lentils and some fruits and vegetables

[1] basic discussion, [2] competent discussion

(2 × [2])

[4]

- (c) Physical inactivity increases the risk of hypertension.
Suggest **two** other factors which may lead to hypertension. (AO1)

Answers may include any two of the following points:

- being overweight
- a diet high in salt
- a diet low in fruit and vegetables – leads to increased cholesterol levels
- high alcohol consumption
- nicotine in cigarette smoke stimulates the body to produce adrenaline raising blood pressure
- high levels of stress
- family history

All other valid responses will be given credit.

(2 × [1])

[2]

AVAILABLE
MARKS

9

4 (a) Describe the diet of a vegan. (AO1, AO2)

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MARKS

Answers should include some of the following points:

- a vegan diet is based on grains, pulses, nuts, seeds, vegetables and fruits
- vegans do not eat dairy products, eggs, or any other products which are derived from animals

[1] basic description, [2] competent description

(1 × [2])

[2]

(b) Discuss how a vegan can ensure an adequate intake of the following nutrients: (AO1, AO2)

Answers may include any of the following points:

(i) Iron

- should consume iron from non-haem sources, e.g. cereals, green leafy vegetables, dried fruit, nuts and pulses, non-haem iron is absorbed less efficiently than iron from meat (haem iron) so to promote absorption these foods should be eaten with foods rich in vitamin C – citrus fruits, broccoli, sweet potato, kiwi fruit
- tannins in tea can affect the absorption of iron and so tea should not be taken with meal
- oxalates in vegetables and fruit reduces absorption of iron
- phytates in cereals reduces absorption of iron

(ii) Vitamin B₁₂

- fortified foods are the best sources of B group vitamins
 - soya milk,
 - meat alternatives, e.g. tofu (N.B. not Quorn)
 - breakfast cereals
- vitamin B₁₂ supplement

All other valid points will be given credit

[1] basic discussion, [2] competent discussion

(2 × [2])

[4]

(c) Explain what is meant by the term 'protein complementation'. (AO1, AO2)

Answers should include some of the following points:

- protein from plant sources has a lower biological value (LBV) than protein from animal sources (HBV)
- when two foods providing vegetable protein are eaten at a meal, the amino acids of one protein may compensate for the limitations of the other, resulting in a combination of higher biological value
- the indispensable amino acids (IAAs) which are limited in one are provided by the other, thus sufficient IAAs are available in the diet
- examples include beans and toast, lentils and rice, peas/beans and rice

[1] basic explanation, [2] competent explanation, [3] highly competent explanation

(1 × [3])

[3]

(d) List **three** ways a vegan can reduce their risk of osteoporosis. (AO1)

Answers may include any three of the following points:

- calcium rich plant foods, e.g. dark green leafy vegetables, nuts and seeds should be eaten
- vegans should eat foods fortified with calcium, e.g. white bread, soya milk, soya yoghurts and breakfast cereals as they do not obtain their calcium from dairy foods
- maintain a good intake of vitamin D. This may be obtained from fortified margarine, breakfast cereals and the action of sunlight on skin
- should include weight-bearing exercise, such as jogging, aerobics, tennis, weight training, dancing and brisk walking
- avoid excess alcohol as this can increase the risk of osteoporosis
- avoid smoking as this may make calcium unavailable in the body

(3 × [1])

[3]

AVAILABLE
MARKS

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- 5 Suggest and justify dietary advice for an older person (65+ years) wishing to meet their nutritional needs. (AO1, AO2, AO3)

AVAILABLE
MARKS

Answers should include some of the following points:

- energy requirements decline due to decreased basal metabolic rate
- a reduced level of physical activity should be met by consuming complex starchy carbohydrates – pasta, rice, bread, potatoes rather than non-milk extrinsic sugars which are high in calories, but provide a limited range of other nutrients
- it is important that older adults still eat fibre-rich foods to avoid constipation and other bowel related disorders
- protein requirements may increase to help repair of tissues and recovery from illness – can be provided by meat, eggs, milk, cheese and fish
- an adequate intake of calcium from milk and dairy products and some green vegetables can help to slow age-related bone loss which may result in osteoporosis
- iron rich foods such as meat, green vegetables and dried fruit are essential for healthy blood
- vitamin C in fruits and some vegetables should be consumed to improve immunity and increase iron absorption – iron absorption may be lower in older adults (this can be linked to medication) and iron deficiency anaemia is common at this age
- vitamin A intake from fruits, vegetables and dairy foods should be maintained for continued protection against CHD and some cancers
- vitamin D from oily fish, eggs, butter and meat is needed for the absorption of calcium from food for bone health – important for those who are housebound
- there is still a requirement for the B group vitamins for healthy blood and nerve function
- saturated fats found in meat and butter, should be reduced or low-fat versions used as they increase cholesterol and the risk of CHD
- sodium intake should be cut down to reduce the risk of high blood pressure, stroke and CHD
- water intake is important at this stage to maintain body temperature, hydration and prevent constipation. Regular consumption of water, soups or drinks is required

Must suggest foods and relate response to older person 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]

AVAILABLE
MARKS

9

- 6 Analyse the food safety advice that should be followed when buying and storing food. (AO1, AO2, AO3)

AVAILABLE
MARKS

Answers should include some of the following points which relate to reducing the conditions for growth of bacteria, cross contamination and food poisoning:

Buying:

- check dates on food labels and ensure that perishable food is within its 'use by' date to reduce risk of food poisoning
- don't buy products from counters where raw and cooked foods are displayed together – could increase risk of cross contamination
- don't buy cans or packets of food that are opened or damaged as food contamination could have occurred
- buy chilled and frozen foods last and pack them together preferably in an insulated bag or cool box
- observe the personal hygiene standards of staff handling and serving food, especially the procedures followed for handling both raw and cooked foods to reduce likelihood of contamination by food handler – staphylococcus aureus

Storing:

- when storing foods rotate stock so that foods are used within date in order to reduce the risk of food poisoning and food waste
- pack raw foods, e.g. meat, chicken away from fruit and vegetables or ready-to-eat foods to reduce risk of cross contamination
- check that chilled and frozen food cabinets are operating at the correct temperatures. Chill cabinets/household fridges should operate between 0–5 °C and frozen food cabinets and household freezers should operate between –18 and –24 °C to avoid the optimum conditions for growth of bacteria
- get chilled and frozen products home as quickly as possible and store appropriately to minimise length of time in the danger zone
- check that chilled and frozen food cabinets are not overloaded and therefore food is stored safely before purchase
- if a household freezer is turned off dispose of food that has not been handled safely, i.e. thawed properly and cooked according to the guidance on the packaging
- foods should be stored in the correct place at the correct temperature for the correct length of time, e.g. raw foods at the bottom of the fridge and cooked at the top

Must refer to buying and storing food 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 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]

Section A**AVAILABLE
MARKS**

9

60

SECTION B – Consumer Awareness

AVAILABLE
MARKS

- 7 (a) Explain **one** way the Consumer Rights Act (2015) protects a consumer who has bought a product which is faulty. (AO1, AO2)

Answers should include one of the following points:

- consumers have 30 days to reject a faulty item and ask for a refund
- they have a right to a repair, a replacement or a refund of goods purchased that are not:
 - of satisfactory quality
 - fit for purpose
- retailers get one chance to repair or replace a faulty item before the consumer can ask for a full or partial refund
- goods must be installed correctly if that is part of the contract
- it may also be possible for the consumer to claim compensation for any losses they may have suffered as a result of faulty goods

All other valid responses will be given credit.

[1] basic explanation, [2] competent explanation

(1 × [2])

[2]

- (b) Compare the use of a credit card with a debit card when paying for goods or services. (AO1, AO2, AO3)

Answers should include some of the following points:

Debit card

- draws funds from the consumer's bank account to pay for the purchases, so no repayments to make – but sufficient funds must be available
- no interest charged unless there is an overdraft on the account
- some debit cards are available to anyone over 11 years of age with a bank account

Credit card

- allows the consumer to borrow money from the card issuer to pay for products or services
- repayments can be spread over a long time, consumer is only required to make minimum payment
- can be a high rate of interest charged for the purchase if not repaid fully
- must be over 18 years to obtain a credit card
- protection on payment of goods with a value of over £100

[1] basic comparison, [2] adequate comparison, [3] competent comparison,

[4] highly competent comparison

(1 × [4])

[4]

- (c) Describe how the Trading Standards Service informs and supports consumers. (AO1, AO2)

Answers should include some of the following points:

- investigates complaints and collects evidence
- provides a website and telephone advice service – ‘Consumerline’ to advise consumers about their legal rights,
- gives advice from its website
- leaflets on how to complain are available in a range of languages and translation service offered by appointment
- ensures that goods offered for sale are accurately described and free from false/misleading descriptions
- it ensures goods sold by weight, volume, length or area are accurately measured
- it ensures that goods and services offered for sale are accurately described and free from false/misleading descriptions
- it checks that traders accurately display the price of all goods
- delivers presentations to schools, voluntary and trade groups

[1] basic description, [2] competent description, [3] highly competent description

(1 × [3])

[3]

9

AVAILABLE
MARKS

- 8 (a) Explain **two** environmental factors which may influence a consumer when shopping for goods. (AO1, AO2)

Answers may include two of the following points:

- choose local products that haven't travelled many miles
- shop closer to home so using less fuel for travelling
- avoid excess packaging – consider buying products in cellophane without cardboard outer or vice versa and look for products that aren't individually wrapped
- choose refill packs for products, e.g. coffee, spices – less expensive than glass packaging
- use reusable bags for shopping or reuse plastic ones
- consider how the goods have been produced, e.g. Fairtrade/organic

[1] basic explanation, [2] competent explanation

(2 × [2])

[4]

- (b) Discuss **two** sources of information a consumer may use when choosing an electrical product. (AO1, AO2)

Answers may include two of the following points:

- internet – provides a wide range of information including reviews
- specialist magazines – give specific advice and technological detail
- shop assistant in specialist electrical store – can provide up-to-date product knowledge
- friends and family – may give more personal advice as they know the consumer's likes and dislikes
- consumer programmes – presented by a range of experts so may give more in-depth information
- energy efficiency label, CE or BEAB

[1] basic discussion, [2] competent discussion

(2 × [2])

[4]

- (c) Evaluate supermarkets as a shopping option. (AO1, AO2, AO3)

Answers may include some of the following points:

Advantages

- supermarkets offer a wide range of goods, services and facilities
- they often have extended opening hours, e.g. 24 hours – giving more flexibility for shopping
- usually have extensive parking which is good for accessibility – disability and parent parking spaces available
- marketing strategies used make shopping a more enjoyable experience, e.g. music, wide aisles
- shopping trolleys allow young children to be transported around store
- may offer value for money
- offer a range of financial incentives, e.g. loyalty cards

Disadvantages

- if the supermarket is situated out of town, a car or public transport is essential for access
- supermarkets are often busy, which can make shopping stressful
- supermarkets can be very large, which can make navigation difficult and time consuming

AVAILABLE
MARKS

- special offers can encourage buying on impulse, increasing expenditure
- All other valid responses will be given credit.

Level 1 ([1]–[2])

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.

Level 2 ([3]–[4])

Overall impression: competent

- Identifies and comments on some key points relevant to the question
- A competent evaluation 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 evaluation applied accurately within the context of the question.

N.B. advantages and disadvantages must be included to be awarded full marks

(1 × [6])

[6]

14

AVAILABLE
MARKS

- 9 (a) Explain **two** barriers that may prevent individuals from being effective consumers. (AO1, AO2)

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MARKS

Answers should include two of the following points:

- disability – mobility may be affected so travel to and within shops may be difficult
- age – older/younger people often treated poorly in shops
- ethnicity – may not be aware of/understand consumer laws, may be treated poorly in shops – racial discrimination
- knowledge – consumer law is complicated so rights may not be understood
- resources – lack of time, money, energy or access to internet may make it more difficult to shop for goods/exercise consumer rights
- geographical – distance from shops, lack of transport may make it difficult to shop for goods/exercise consumer rights
- language – people who have English as an additional language may find it more difficult to complain/go to court/exercise their rights

All other valid responses will be given credit.

[1] basic explanation, [2] competent explanation

(2 × [2])

[4]

- (b) Discuss **one** advantage and **one** disadvantage of advertising as a marketing strategy. (AO1, AO2)

Answers should include one of each of the following points:

Advantage

- gives consumers factual information on existing products and services
- increases awareness of new products or services
- may save consumer money if special offers are advertised
- increases levels of product recognition encouraging increased purchases
- TV advertising can be entertaining
- promotes brand loyalty
- increasing sales and therefore profits

Disadvantage

- can develop a sense of dissatisfaction with current possessions leading to increased consumer spending
- adverts aimed at children can put pressure on parents – ‘pester power’
- may result in unnecessary purchases resulting in waste or debt
- may create an unrealistic image and lead to consumer frustration in an attempt to have what the advert offers
- can be very expensive depending on medium used
- unused flyers/posters/coupons may create environmental waste

[1] basic discussion, [2] competent discussion

(2 × [2])

[4]

8

- 10** Discuss the importance of budgeting for a young couple who have recently moved into a new home. (AO1, AO2, AO3)

Answers should include some of the following points:

- helps to prioritise needs over wants so essentials will be purchased, e.g. accommodation, electricity, food
- allows them to identify areas of overspending so they can address this before it gets out of control
- sets up good money management habits for the future
- can avoid lack of control over finances – allows them to be more organised
- helps them get into the habit of saving for emergencies
- can identify expensive times of the year, e.g. Christmas, birthdays and be able to develop strategies to deal with these
- may be able to avoid expensive credit cards or loans if money is properly managed
- will help them deal with any removal costs
- lack of budgeting could result in poor consequences, e.g. debt, stress and related illness, relationship difficulties, loss of home, car etc.

[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

40

Total

100

**AVAILABLE
MARKS**