



Rewarding Learning

ADVANCED
General Certificate of Education
2016

Home Economics
Assessment Unit A2 1

assessing

Consumer Issues

[AN211]

MONDAY 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

AVAILABLE
MARKS

- 1 (a) Briefly explain how buying local and seasonal food can reduce greenhouse gas emissions. (AO1, AO2)

Mark Band ([0]–[3])

Overall impression: basic

- inadequate knowledge and understanding of local and seasonal food choices
- inadequate ability to briefly explain how these food choices can reduce greenhouse gas emissions
- demonstrates a limited ability to apply knowledge and understanding to the question
- quality of written communication is basic

Mark Band ([4]–[7])

Overall impression: reasonable to good

- reasonable to good knowledge and understanding of local and seasonal food choices
- demonstrates a reasonable to good ability to briefly explain how these food choices can reduce greenhouse gas emissions
- demonstrates a reasonable to good ability to apply knowledge and understanding to the question
- quality of written communication is reasonable to good

Mark Band ([8]–[10])

Overall impression: very good to highly competent

- clear knowledge and understanding of local and seasonal food choices
- demonstrates a very good to highly competent ability to briefly explain how these food choices can reduce greenhouse gas emissions
- demonstrates a very good to highly competent ability to apply knowledge and understanding to the question
- quality of written communication is very good to highly competent

Some examples of suitable points to be explained by the candidate:

- food miles; buying local and seasonal food means that the food has travelled a shorter distance than if it was transported in ships, trains, planes; all of these fossil fuelled-based modes of transport emit carbon dioxide and other greenhouse gases
- greenhouse gas emissions; these are at their worst around refrigerated, unseasonable, perishable produce, especially airfreighted produce and food grown in heated glasshouses
- organic farming; local food may also support organic farming methods which are usually less energy-intensive than industrial agriculture; these do not use artificial fertilisers which takes a large amount of water and energy to produce and results in emissions of nitrous oxide
- supermarkets; large supermarkets tend not to be very energy efficient, often out of town and so responsible for traffic on the roads which also contributes to the production of carbon dioxide; the rise of supermarkets also means that more food has to go through regional distribution centres, mainly travelling by heavy goods vehicles
- packaging; local food is often sold loose reducing impact on gas emissions from landfill and packaging production

All other valid points will be given credit

[10]

10

- (b) Define the term genetic modification (GM) and describe the main environmental concerns over the use of GM in food. (AO1, AO2)

AVAILABLE
MARKS

Mark Band ([0]–[5])

Overall impression: basic

- inadequate knowledge and understanding of GM
- demonstrates a limited ability to define the term and describe the main environmental concerns over the use of GM in food
- demonstrates a limited ability to apply knowledge and understanding to the question
- quality of written communication is basic

Mark Band ([6]–[10])

Overall impression: reasonable to good

- reasonable to good knowledge and understanding of GM
- demonstrates a reasonable to good ability to define the term and describe the main environmental concerns over the use of GM in food
- demonstrates a reasonable to good ability to apply knowledge and understanding to the question
- quality of written communication is reasonable to good

Mark Band ([11]–[15])

Overall impression: very good to highly competent

- clear knowledge and understanding of GM
- demonstrates a very good to highly competent ability to define the term and describe the main environmental concerns over the use of GM in food
- demonstrates a very good to highly competent ability to apply knowledge and understanding to the question
- quality of written communication is very good to highly competent

Some examples of suitable points to be described by the candidate:

Definition

- GM is the process of altering the genes of a plant, animal or microorganism or inserting a gene from another organism. Genes carry the instructions for all the characteristics that an organism inherits

Environmental concerns

- increased use of chemicals; genetically engineering plants to be herbicide-tolerant will lead to increased use of chemicals in agriculture and further contamination of the environment; pests will eventually evolve that are resistant to herbicides, meaning that stronger chemicals will be needed to get rid of the pests
- genetic pollution; herbicide and pesticide resistance can be spread among plants by the wind or by pollination of bees; the new plant spin-offs can lead to very harmful effects on the environment, e.g. some seeds can remain in the soil for 20 to 30 years before they germinate, once GM plants have produced seeds it would be almost impossible to eliminate them
- cross-pollination; plant pollen is transported by insects and the wind even over long distances, when this happens, the genetically modified plants are able to contaminate other vegetable species, including wild species
- loss of biodiversity; there are a number of ways in which the biodiversity of an ecosystem could be compromised by GM crops for example any crop that is engineered to be resistant to pests or herbicides can influence biodiversity because it may not only affect the target insect; also indirectly the GM crop could harm biodiversity through a reduction in the insects that serve as a food source for another kind of wildlife such as birds

All other valid points will be given credit

[15]

15

2 (a) Summarise the current food additives legislation used in the UK. (AO1, AO2)

AVAILABLE
MARKS

Mark Band ([0]–[3])

Overall impression: basic

- inadequate knowledge and understanding of the current food additives legislation used in the UK
- demonstrates a limited ability to summarise this legislation
- demonstrates a limited ability to apply knowledge and understanding to the question
- quality of written communication is basic

Mark Band ([4]–[7])

Overall impression: reasonable to good

- reasonable to good knowledge and understanding of the current food additives legislation used in the UK
- demonstrates a reasonable to good ability to summarise this legislation
- demonstrates a reasonable to good ability to apply knowledge and understanding to the question
- quality of written communication is reasonable to good

Mark Band ([8]–[10])

Overall impression: very good to highly competent

- clear knowledge and understanding of the current food additives legislation used in the UK
- demonstrates a very good to highly competent ability to summarise this legislation
- demonstrates a very good to highly competent ability to apply knowledge and understanding to the question
- quality of written communication is very good to highly competent

Some examples of suitable points to be summarised by the candidate:

- principal provisions; the principal provisions of the Regulations (Regulation EC 1333/2008) stipulate which food additives are permitted for use and sale direct to the consumer, specify purity criteria for permitted additives and set out conditions of additive use including the setting of maximum levels for certain additives
- general philosophy; food additives may only be approved if it has been demonstrated that they serve one or more of the following purposes: preserve the nutritional quality of the food; provide necessary ingredients for foods manufactured for groups of consumers with special dietary needs; enhance the keeping quality or stability of a food or improve its texture; aid in the manufacture, processing, preparation, treatment, packing, transport or storage of food
- sweeteners; the use of sweeteners to replace sugar is justified for the production of energy-reduced foods, non-cariogenic foods and foods without added sugars for the extension of shelf life through the replacement of sugar
- colours; colour may be used to restore the original appearance of the food whose colour has been affected by processing or storage and to make food visually appealing and give colour to otherwise colourless food

All other valid points will be given credit. Credit will be given to candidates who summarise the 1995 Regulations.

[10]

10

(b) Describe the process used to test the safety of additives. (AO1, AO2)

AVAILABLE
MARKS

Mark Band ([0]–[5])

Overall impression: basic

- inadequate knowledge and understanding of the safety of food additives
- demonstrates a limited ability to describe the process used to test the safety of additives
- demonstrates a limited ability to apply knowledge and understanding to the question
- quality of written communication is basic

Mark Band ([6]–[10])

Overall impression: reasonable to good

- reasonable to good knowledge and understanding of the safety of food additives
- demonstrates a reasonable to good ability to describe the process used to test the safety of additives
- demonstrates a reasonable to good ability to apply knowledge and understanding to the question
- quality of written communication is reasonable to good

Mark Band ([11]–[15])

Overall impression: very good to highly competent

- clear knowledge and understanding of the safety of food additives
- demonstrates a very good to highly competent ability to describe the process used to test the safety of additives
- demonstrates a very good to highly competent ability to apply knowledge and understanding to the question
- quality of written communication is very good to highly competent

Some examples of suitable points to be described by the candidate:

- Committee on Toxicity of Chemicals in Food, Consumer Products and the Environment (COT); the safety of all food additives is rigorously tested and periodically re-assessed by COT in the UK
- European Food Safety Authority (EFSA); at European level, all additives approved for use in current legislation have been evaluated by EFSA; only additives approved in this way are given an 'E' number
- Acceptable Daily Intake (ADI); the EFSA allocates an ADI, this is the amount of a substance that they consider may be safely consumed daily through a lifetime; their assessment is used to set the maximum amount of a particular additive permitted in a specific food. The No Observed Adverse Effect Level (NOAEL) which is the highest dose of an additive that can be fed to the most sensitive animal species on a daily basis with no toxic effects, is determined
- safety factor; in establishing the ADI, a safety factor is always built in, usually 100 fold, to ensure that intake of any additive is unlikely to exceed an amount that is close to being toxicologically harmful
- changes in consumption; the EU legislation requires that intake studies be carried out to assess any changes in consumption patterns following adoption of the legislation
- the Joint Expert Committee on Food Additives (JECFA); this committee provides a further level of evaluation at international level
- toxicological tests required; studies on absorption, distribution, metabolism and excretion are usually conducted following single and short-term repeat dosing; reproductive and developmental toxicity studies are also usually required as well as genotoxicity studies to assess the ability of a substance to interfere with DNA

All other valid points will be given credit

[15]

25

Section A

25

Section B

**AVAILABLE
MARKS**

3 Explain how each of the following can help achieve financial stability:

- budgeting;
- saving;
- responsible borrowing; and
- managing debt. (AO1, AO2, AO3)

Mark Band ([0]–[5])

Overall impression: basic

- inadequate knowledge and understanding of budgeting, saving, borrowing and managing debt
- demonstrates a limited ability to apply knowledge and understanding of these financial management strategies to the question
- demonstrates a limited ability to explain how each of these strategies can help to achieve financial stability
- quality of written communication is basic

Mark Band ([6]–[10])

Overall impression: adequate to minimally competent

- adequate to minimally competent knowledge and understanding of budgeting, saving, borrowing and managing debt
- demonstrates adequate to minimally competent ability to apply knowledge and understanding of these financial management strategies to the question
- demonstrates adequate to minimally competent ability to explain how each of these strategies can help to achieve financial stability
- quality of written communication is adequate to minimally competent

Mark Band ([11]–[15])

Overall impression: reasonable to good

- reasonable to good knowledge and understanding of budgeting, saving, borrowing and managing debt
- demonstrates a reasonable to good ability to apply knowledge and understanding of these financial management strategies to the question
- demonstrates a reasonable to good ability to explain how each of these strategies can help to achieve financial stability
- quality of written communication is reasonable to good

Mark Band ([16]–[20])

Overall impression: very good to highly competent

- clear knowledge and understanding of budgeting, saving, borrowing and managing debt
- demonstrates a very good to highly competent ability to apply knowledge and understanding of these financial management strategies to the question
- demonstrates a very good to highly competent ability to explain how each of these strategies can help to achieve financial stability
- quality of written communication is very good to highly competent

Some examples of suitable points to be explained by the candidate:

Budgeting

- gives control; spending is intentional rather than impulsive, allows planning for spending, reduces the stress of unexpected expenses
- keeps focus; unnecessary spending is reduced, financial goals can be reached, less likely to overspend
- can identify problems early; potential problems can be seen in advance so that adjustments can be made before the problem escalates

Saving

- security; provides security if there are financial difficulties as a result of job loss or illness
- reduces the risk of debt; loans can be used to pay for unexpected expenses but these may cost money in terms of interest and could lead to debt problems if the repayments are not managed
- provides for future spending; provides funds for specific spending in the future such as a wedding or retirement
- developing skills; regular saving establishes good habits for financial stability

Responsible borrowing

- helps achieve financial goals; some financial goals may not be possible without access to long term credit such as a mortgage loan for house purchase
- builds a strong credit history; using short term credit successfully can help gain access to longer term credit
- borrowing responsibly; can purchase major items when they are on sale using interest free borrowing options and making payments on time
- responsible approach; shop around for the best interest rate and read small print

Managing debt

- prioritise debts; identify the debts with serious consequences of not paying such as rent or mortgage arrears, gas and electricity arrears, court fines, income tax, TV licence
- contact creditors; get in touch as early as possible to avoid court action, try to make an arrangement to pay back what can be afforded

All other valid points will be given credit

[20]

20

- 4 Discuss the work of the Food Standards Agency in relation to food safety. (AO1, AO2, AO3)

Mark Band ([0]–[5])

Overall impression: basic

- inadequate knowledge and understanding of the work of the Food Standards Agency (FSA) in relation to food safety
- demonstrates a limited ability to apply knowledge and understanding to the question
- demonstrates a limited ability to discuss the work of the Food Standards Agency (FSA) in relation to food safety
- quality of written communication is basic

Mark Band ([6]–[10])

Overall impression: adequate to minimally competent

- adequate to minimally competent knowledge and understanding of the work of the Food Standards Agency (FSA) in relation to food safety
- demonstrates adequate to minimally competent ability to apply knowledge to the question
- demonstrates adequate to minimally competent ability to discuss the work of the Food Standards Agency (FSA) in relation to food safety
- quality of written communication is adequate to minimally competent

Mark Band ([11]–[15])

Overall impression: reasonable to good

- reasonable to good knowledge and understanding of the work of the Food Standards Agency (FSA) in relation to food safety
- demonstrates a reasonable to good ability to apply knowledge and understanding to the question

- demonstrates a reasonable to good ability to discuss the work of the Food Standards Agency (FSA) in relation to food safety
- quality of written communication is reasonable to good

Mark Band ([16]–[20])

Overall impression: very good to highly competent

- clear knowledge and understanding of the work of the Food Standards Agency (FSA) in relation to food safety
- demonstrates a very good to highly competent ability to apply knowledge and understanding to the question
- demonstrates a very good to highly competent ability to discuss the work of the Food Standards Agency (FSA) in relation to food safety
- quality of written communication is very good to highly competent

Some examples of suitable points to be discussed by the candidate:

- food alerts; the FSA issues information about product withdrawals and recalls to let consumers and local authorities know about problems associated with food; notices and alerts are often issued in conjunction with a product withdrawal or recall by a manufacturer, retailer or distributor
- allergy intolerance; the FSA funds research that will help increase knowledge and understanding of food allergy and intolerance; they strengthen food labelling rules to help consumers who need to avoid certain ingredients; they help to raise awareness of food allergy and intolerance among caterers
- food poisoning; the FSA promotes the microbiological safety of food throughout the food chain; it is responsible for the strategy for reducing foodborne illness, promoting a hazard analysis based approach to food safety and providing guidance for producers, retailers, caterers and the general public for example, the FSA works in partnership with the industry and Defra as part of a Joint Working Group on campylobacter
- catering and retail; the FSA provides guidance and advice for caterers and retailers to help provide safer food for customers including safe catering, the 'Safer food, better business' pack and food hygiene legislation guidance. The FSA in partnership with local authorities operate the Food Hygiene Rating Scheme
- promotion; the FSA's work includes promoting good food hygiene in businesses and at home through an annual Food Safety Week; campaigns such as 'Acting on Campylobacter Together' and tools such as 'Kitchen Check' as well as fact sheets available on their website

All other valid points will be given credit

[20]

**AVAILABLE
MARKS**

20

Section B

20

- 5 Consider the following statement:
Advertising strategies and labels on food are reducing parents' ability to make healthy choices for their children. (AO1, AO2, AO3)

Mark Band ([0]–[7])

Overall impression: basic

- inadequate knowledge and understanding of advertising strategies and labels on food
- demonstrates a limited ability to apply knowledge and understanding to the question
- demonstrates a limited ability to consider the statement: advertising strategies and labels on food are reducing parents' ability to make healthy choices for their children
- quality of written communication is basic

Mark Band ([8]–[14])

Overall impression: adequate to minimally competent

- adequate to minimally competent knowledge and understanding of advertising strategies and labels on food
- demonstrates adequate to minimally competent ability to apply knowledge and understanding to the question
- demonstrates adequate to minimally competent ability to consider the statement: advertising strategies and labels on food are reducing parents' ability to make healthy choices for their children
- quality of written communication is adequate to minimally competent

Mark Band ([15]–[20])

Overall impression: reasonable to good

- reasonable to good knowledge and understanding of advertising strategies and labels on food
- demonstrates a reasonable to good ability to apply knowledge and understanding to the question
- demonstrates a reasonable to good ability to consider the statement: advertising strategies and labels on food are reducing parents' ability to make healthy choices for their children
- quality of written communication is reasonable to good

Mark Band ([21]–[25])

Overall impression: very good to highly competent

- clear knowledge and understanding of advertising strategies and labels on food
- demonstrates a very good to highly competent ability to apply knowledge and understanding to the question
- demonstrates a very good to highly competent ability to consider the statement: advertising strategies and labels on food are reducing parents' ability to make healthy choices for their children
- quality of written communication is very good to highly competent

Some examples of suitable points to be considered by the candidate:

- television; advertising of food on television has been attributed to rising statistics for childhood obesity such as advertising unhealthy foods high in fat, salt or sugar (HFSS) and the scheduling of adverts aimed at children who may then pester parents for these foods
- marketing online; because of the stricter controls on television advertising, food companies are marketing unhealthy food and drinks online using techniques which children may find difficult to identify as advertising such as

competitions, Internet adver gaming. Parents may be unaware of the power of this form of advertising

- nutritional claims; such as 'free from artificial colours and flavours' and 'a good source of calcium' are usually presenting a partial picture as the product may be a good source of calcium but not necessarily a healthy choice, this can cloud the parent's judgement
- health claims; some claims relate to the product's ability to boost health, happiness and/or development for example 'good for growing kids', these play on parental aspirations to provide a healthy diet
- images; use of images that appeal to parents by referring to childhood or family life create feelings of nostalgia as a subtle marketing strategy, this can have a negative impact on the ability of the parent to make a choice based on the health of the product
- endorsement; endorsement by a charity, nutritionist or popular figure such as a sports personality or celebrity can influence both parents and children to give the product more credibility than it may deserve
- nutritional information; a lack of consistency in the presentation of nutritional information on labels is not useful for parents when making food choices to allow them to distinguish HFSS foods from healthier alternatives
- too much information; food labels are overcrowded with information making it difficult for parents to make a healthy choice

All other valid points will be given credit

[25]

Section C

Total

**AVAILABLE
MARKS**

25

25

70