



Rewarding Learning

**ADVANCED SUBSIDIARY (AS)
General Certificate of Education
2016**

Home Economics
Assessment Unit AS 2

assessing

Priority Health Issues

[AN121]

TUESDAY 31 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) Describe the role of glycemic index in diabetes management. (AO1, AO2, AO3)

Mark Band ([0]–[3])

Overall impression: basic

- inadequate knowledge and understanding of glycemic index
- demonstrates a limited ability to apply this knowledge and understanding to the question
- demonstrates a limited ability to describe the role of glycemic index in diabetes management
- quality of written communication is basic

Mark Band ([4]–[7])

Overall impression: reasonable to good

- reasonable to good knowledge and understanding of glycemic index
- demonstrates a reasonable to good ability to apply this knowledge and understanding to the question
- demonstrates a reasonable to good ability to describe the role of glycemic index in diabetes management
- quality of written communication is reasonable to good

Mark Band ([8]–[10])

Overall impression: very good to highly competent

- clear knowledge and understanding of glycemic index
- demonstrates a very good to highly competent ability to apply this knowledge and understanding to the question
- demonstrates a very good to highly competent ability to describe the role of glycemic index in diabetes management
- quality of written communication is very good to highly competent

Examples of suitable points to be examined by the candidate:

- glycemic index; is the term used to describe in a quantitative way the rise in blood glucose that different carbohydrate foods produce, it is measured by the rise in blood glucose following ingestion of 50g of the test carbohydrate food
- high GI foods; these foods break down quickly during digestion so they raise blood sugar levels faster, e.g. white rice, potatoes, this can be useful for a diabetic to know what to avoid or what to eat before exercise or when they need glucose quickly
- low GI foods; these foods break down more slowly releasing glucose gradually into the bloodstream, e.g. beans, pasta, apple juice and fruit, foods with a low GI may help control blood glucose levels and improve satiety
- intake of low GI foods for diabetes; this results in slower digestion and absorption of sugar into the bloodstream, this is beneficial for diabetics because it helps to regulate blood sugar levels and prevents fluctuations

All other valid points will be given credit

[10]

10

- (b) Explain why being overweight increases the risk of developing Type 2 diabetes. (AO1, AO2, AO3)

AVAILABLE
MARKS

Mark Band ([0]–[3])

Overall impression: basic

- inadequate knowledge and understanding of Type 2 diabetes
- demonstrates a limited ability to apply this knowledge and understanding to the question
- demonstrates a limited ability to explain how being overweight can increase risk of developing Type 2 diabetes
- quality of written communication is basic

Mark Band ([4]–[7])

Overall impression: reasonable to good

- reasonable to good knowledge and understanding of Type 2 diabetes
- demonstrates a reasonable to good ability to apply this knowledge and understanding to the question
- demonstrates a reasonable to good ability to explain how being overweight can increase risk of developing Type 2 diabetes
- quality of written communication is reasonable to good

Mark Band ([8]–[10])

Overall impression: very good to highly competent

- clear knowledge and understanding of Type 2 diabetes
- demonstrates a very good to highly competent ability to apply this knowledge and understanding to the question
- demonstrates a very good to highly competent ability to explain how being overweight can increase risk of developing Type 2 diabetes
- quality of written communication is very good to highly competent

Examples of suitable points to be explained by the candidate:

- insulin resistance; Type 2 diabetes occurs when the body does not make enough insulin or does not respond to insulin as it should which is known as insulin resistance; obesity is believed to trigger changes in the body that may lead to insulin resistance
- fat metabolism; fat cells are more resistant to insulin than muscle cells, and if an individual has more fat cells due to being overweight, the insulin becomes less effective
- central obesity; carrying excess weight around the middle increases the risk of Type 2 diabetes; the suggested theory is that abdominal fat causes fat cells to release pro-inflammatory; chemicals which can disrupt insulin responsive cells to cause insulin resistance

All other valid points will be given credit

[10]

10

2 (a) Describe how each of the following can help adults achieve good mental health:

- self help strategies; and
- complementary therapies. (AO1, AO2, AO3)

Mark Band ([0]–[3])

Overall impression: basic

- inadequate knowledge and understanding of good mental health
- demonstrates a limited ability to apply knowledge and understanding to the question
- demonstrates a limited ability to describe how self help strategies and complementary therapies can help to achieve good mental health
- quality of written communication is basic

Mark Band ([4]–[7])

Overall impression: reasonable to good

- reasonable to good knowledge and understanding of good mental health
- demonstrates a reasonable to good ability to apply knowledge and understanding to the question
- demonstrates a reasonable to good ability to describe how self help strategies and complementary therapies can help to achieve good mental health
- quality of written communication is reasonable to good

Mark Band ([8]–[10])

Overall impression: very good to highly competent

- clear knowledge and understanding of good mental health
- 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 describe how self help strategies and complementary therapies can help to achieve good mental health
- quality of written communication is very good to highly competent

Examples of suitable points to be outlined by the candidate:

Self help strategies

- physical activity; exercise can help promote a sense of achievement, can help adults achieve good mental health by increasing mood and raising emotions because exercise releases uplifting chemicals and endorphins into the body
- adequate sleep; sleeping well can help to deal with anxiety and help to lower tension, stress and fatigue which can be contributory factors to poor mental health
- balanced diet; mood can be affected by food or lack of food eaten and a balanced diet is essential in maintaining good mental health
- relaxation; particularly useful for those with anxiety and stress, it reduces the breathing rate, blood pressure and muscle tension, all of which are contributory factors for poor mental health

Complementary therapies

- holistic approach; the use of complementary therapies is in line with a more holistic approach and many adults find various therapies relaxing and helpful in achieving good mental health
- physical complementary treatments; e.g. reiki, aromatherapy, massage, acupuncture, reflexology and yoga can all help with anxiety and stress and promote better sleep which can help adults achieve good mental health

- herbal remedies; uses plants in many forms which are believed to be more natural with fewer side effects than medication
- All other valid points will be given credit [10]

(b) Outline some of the reasons why Northern Ireland needs a Mental Health Strategy to promote good mental health. (AO1, AO2, AO3)

Mark Band ([0]–[3])

Overall impression: basic

- inadequate knowledge and understanding of good mental health
- demonstrates a limited ability to apply knowledge and understanding to the question
- demonstrates a limited ability to outline why Northern Ireland needs a Mental Health Strategy to promote good mental health
- quality of written communication is basic

Mark Band ([4]–[7])

Overall impression: reasonable to good

- reasonable to good knowledge and understanding of good mental health
- demonstrates a reasonable to good ability to apply knowledge and understanding to the question
- demonstrates a reasonable to good ability to outline why Northern Ireland needs a Mental Health Strategy to promote good mental health
- quality of written communication is reasonable to good

Mark Band ([8]–[10])

Overall impression: very good to highly competent

- clear knowledge and understanding of good mental health
- 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 outline why Northern Ireland needs a Mental Health Strategy to promote good mental health
- quality of written communication is very good to highly competent

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

- improve people’s mental and emotional well-being; this focuses on people at risk or vulnerable people with identified problems
- reduce cost to the NHS; mental health problems are among the most common forms of ill health and approximately one in four people suffer from a mental health problem
- prevent or reduce the impact of mental health issues on society; the aim is to reduce or prevent the impact of mental and emotional distress, anxiety, suicide and mental illness on society
- to promote good mental health; prevention of ill health and early intervention when mental health issues occur
- reduce inequalities, stigma or barriers; promoting mental health is about strengthening individuals or increasing resilience, strengthening communities and reducing structural barriers to mental health through education, housing and support services
- mental health problems in NI; research shows that people in NI are at greater risk of poor mental health than those in Scotland and England, poverty and community conflict have affected individuals

All other valid points will be given credit [10]

Section A

AVAILABLE MARKS

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Section B

AVAILABLE
MARKS

- 3 Examine a range of dietary and lifestyle risk factors for cardiovascular disease. (AO1, AO2, AO3)

Mark Band ([0]–[5])

Overall impression: basic

- inadequate knowledge and understanding of cardiovascular disease
- demonstrates a limited ability to apply knowledge and understanding to the question
- demonstrates a limited ability to examine dietary and lifestyle risk factors for cardiovascular disease
- quality of written communication is basic

Mark Band ([6]–[10])

Overall impression: adequate to minimally competent

- adequate to minimally competent knowledge and understanding of cardiovascular disease
- demonstrates adequate to minimally competent ability to apply knowledge and understanding to the question
- demonstrates adequate to minimally competent ability to examine dietary and lifestyle risk factors for cardiovascular disease
- 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 cardiovascular disease
- demonstrates a reasonable to good ability to apply knowledge and understanding to the question
- demonstrates a reasonable to good ability to examine dietary and lifestyle risk factors for cardiovascular disease
- quality of written communication is reasonable to good

Mark Band ([16]–[20])

Overall impression: very good to highly competent

- clear knowledge and understanding of cardiovascular disease
- 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 examine dietary and lifestyle risk factors for cardiovascular disease
- quality of written communication is very good to highly competent

Examples of suitable points to be examined by the candidate:

Dietary factors

- fat intake; high intake of saturated and trans fats raise total cholesterol, especially LDL cholesterol thus increasing the risk of cardiovascular disease, monounsaturated fatty acids will lower LDL cholesterol and a diet low in these fats may mean that higher amounts of saturated fats are consumed
- low intake of n-6 and n-3 polyunsaturated fatty acids; n-6 lowers HDL and LDL cholesterol, n-3 lowers blood triglycerides and LDL cholesterol without lowering the HDL cholesterol, low intakes of these polyunsaturated fatty acids may increase the risk of cardiovascular disease
- high salt/sodium intake; high intakes of sodium can increase hypertension especially for those with existing hypertension, eating processed foods can increase sodium intake and can influence blood pressure increasing CVD risk
- low fibre consumption; fibre rich foods especially soluble fibre, helps to lower blood cholesterol and can help to reduce obesity by improving satiety

Lifestyle factors

- being overweight; excess weight is a risk factor for cardiovascular disease because being overweight increases the risk of hypertension and angina both risk factors for CVD
- lack of exercise; being active strengthens the heart muscle and raises HDL cholesterol which can help to reduce the risk of cardiovascular disease
- binge drinking; alcohol consumption and drinking more than one or two units of alcohol daily increases the likelihood of developing cardiovascular disease
- cigarette smoking; cigarette smoking reduces the capacity for oxygen to be carried in the cells and smoking narrows blood vessels which is a risk factor
- high stress level; stress may increase hypertension, relaxation reduces stress and anxiety which can help to lower blood pressure

All other valid points will be given credit

[20]

AVAILABLE
MARKS

20

4 Explain how the following advice may help to reduce the risk of cancer:

- increase fruit and vegetable consumption;
- reduce total fat intake;
- reduce salt intake; and
- increase consumption of non-starch polysaccharides (NSP). (AO1, AO2, AO3)

Mark Band ([0]–[5])

Overall impression: basic

- inadequate knowledge and understanding of the listed advice
- demonstrates a limited ability to apply knowledge and understanding to the question
- demonstrates a limited ability to explain how the advice may help to reduce the risk of cancer
- 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 listed advice
- demonstrates adequate to minimally competent ability to apply knowledge and understanding to the question
- demonstrates adequate to minimally competent ability to explain how the advice may help to reduce the risk of cancer
- 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 listed advice
- demonstrates a reasonable to good ability to apply knowledge and understanding to the question
- demonstrates a reasonable to good ability to explain how the advice may help to reduce the risk of cancer
- 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 listed advice
- 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 explain how the advice may help to reduce the risk of cancer
- quality of written communication is very good to highly competent

Examples of suitable points to be discussed by the candidate:

Increase fruit and vegetable consumption

- antioxidants; fruit and vegetables contain antioxidants which can help prevent dietary cancers because they prevent free radical damage, fruit and vegetables provide vitamins C and E, beta carotene, that prevent oxidative damage to the DNA by free radicals and may inhibit the activation of carcinogens in the body
- phytochemicals; lycopene and flavonols found in red/orange fruit and vegetables act like antioxidants and help to lower the risks of some cancers
- NSP; can help protect against bowel cancer because NSP helps speed transit time of waste from colon – carcinogenic substances have less contact time with the walls of the intestine

Reduce total fat intake

- avoid weight gain; a reduction in total fat intake can help maintain body weight, being overweight increases the risk of specific cancers, e.g. breast, colon and womb
- hormonal imbalances; a reduction in total fat can help to prevent hormonal changes, e.g. oestrogen which may increase the risk of specific cancers, e.g. breast cancer

Reduce salt intake

- stomach cancer; high intakes of salt and salt preserved foods may contribute to stomach cancer
- reduction in nitrates; a reduction in salt preserved foods, including processed and cured food may reduce the risk of cancers

Increase consumption of Non-Starch Polysaccharides (NSP)

- increased transit time; high levels of NSP in the diet can lead to increased bulk and therefore faster transit time through the colon; this means that harmful carcinogenic substances are present in a more dilute form and are in contact with the colonic mucosa for a shorter time, reducing the risk of cancer
- increased satiety; insoluble NSP can give a feeling of satiety, this helps displace fat in the diet reducing the risk of obesity and decreases cancer risk

All other valid points will be given credit

[20]

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- 5 Identify the two targets set out in the Northern Ireland Physical Activity Strategy and describe some of the health benefits associated with regular physical activity. (AO1, AO2, AO3)

Mark Band ([0]–[5])

Overall impression: basic

- inadequate knowledge and understanding of the Northern Ireland Physical Activity Strategy
- demonstrates a limited ability to apply knowledge and understanding to the question
- demonstrates a limited ability to identify the two targets and describe some of the benefits associated with regular physical activity
- 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 Northern Ireland Physical Activity Strategy
- demonstrates adequate to minimally competent ability to apply knowledge and understanding to the question

- demonstrates adequate to minimally competent ability to identify the two targets and describe some of the benefits associated with regular physical activity
- 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 Northern Ireland Physical Activity Strategy
- demonstrates a reasonable to good ability to apply knowledge and understanding to the question
- demonstrates a reasonable to good ability to identify the two targets and describe some of the benefits associated with regular physical activity
- 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 Northern Ireland Physical Activity Strategy
- 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 identify the two targets and describe some of the benefits associated with regular physical activity
- quality of written communication is very good to highly competent

Examples of suitable points to be described by the candidate:

Targets

- to reduce the proportion of men and women aged 16+ who are classified as sedentary from 20% to 15%
- to increase the proportion of men and women aged 16+ who achieve recommended age-related activity levels from 30% of men and 20% of women to 35% of men and 25% of women in these age groups

Health Benefits

- control of body weight; being active and taking regular exercise increases energy output to maintain a healthy weight; this reduces the risk of obesity and related diseases such as Type 2 diabetes and CVD
- reduced risk of heart disease; exercise can help improve the balance of HDL and LDL cholesterol, control weight and reduce blood pressure
- improved mental health; regular physical activity reduces the risk of mild anxiety and stress, exercise releases endorphins and neurotransmitters in the brain, these chemicals may improve mood
- builds skeletal muscle and bone; increases body strength; activity that is weight bearing reduces the risk of osteoporosis
- reduced risk of bowel cancer; regular exercise leads to regular bowel movements, this means that cancer-causing substances in undigested food pass through the bowel more quickly
- joints; lubricates joints, avoids limitation in movement and maintains flexibility

All other valid points will be given credit

[20]

AVAILABLE MARKS

20

Section B

40

Total

60