

**Published Mark Schemes for  
GCE AS Home Economics**

**January 2010**

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**NORTHERN IRELAND GENERAL CERTIFICATE OF SECONDARY EDUCATION (GCSE)  
AND NORTHERN IRELAND GENERAL CERTIFICATE OF EDUCATION (GCE)**

**MARK SCHEMES (2010)**

**Foreword**

***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 16- and 18-year-old 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 a 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.

The Council hopes that the mark schemes will be viewed and used in a constructive way as a further support to the teaching and learning processes.



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*Rewarding Learning*

**ADVANCED SUBSIDIARY (AS)  
General Certificate of Education  
January 2010**

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**Home Economics**  
**Assessment Unit AS 1**  
*assessing*  
**Nutrition for Optimal Health**  
**[AN111]**

**MONDAY 11 JANUARY, AFTERNOON**

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**MARK  
SCHEME**

**Section A**

**1** Identify **three** nutrients which have antioxidant functions. (AO1)

Any three from:

- beta carotene
- vitamin C
- vitamin E
- selenium

All other valid points will be given credit.

[3]

**2** State **four** dietary sources of vitamin B12. (AO1, AO2)

Any four from:

- liver
- meat
- milk
- fish
- eggs
- fortified breakfast cereals

All other valid points will be given credit.

[4]

**3** Explain the role of the mineral fluorine. (AO1, AO2)

- it protects teeth against dental decay due to the production of hard, caries-resistant enamel
- also accelerates the remineralization process when teeth have started to demineralize in the presence of low oral pH.

All other valid points will be given credit.

[4]



**Section A**

**4** Consider the nutritional significance of bread as a source of carbohydrate. (AO1, AO2)

- contains complex carbohydrates in the form of starch, but some can provide NSP (wholewheat varieties)
- provides a source of minerals such as iron and calcium
- a good source of B group vitamins and vitamin E in wholegrain versions
- other nutrients such as protein which can help with the complementary action of amino acids

All other valid points will be given credit.

[5]

**5** Examine the factors that assist the absorption of calcium. (AO1, AO2)

- vitamin D causes the synthesis of a calcium-binding protein in the intestinal cells that transports calcium into the plasma
- phosphorous, an essential ingredient in calcium phosphate must be present in the correct proportion
- lactose present in dairy products enhances absorption by keeping it in a soluble form
- more can be absorbed to meet the needs of the body, for example during periods of rapid growth in young people or during pregnancy
- the acidic environment of the digestive tract improves solubility of calcium

All other valid points will be given credit.

[5]

**Section A**

6 Explain the functions of protein. (AO1, AO2, AO3)

**Mark Band ([0]–[2])**

Overall impression: basic

- inadequate knowledge and understanding of the functions of protein
- demonstrates a limited ability to apply appropriate knowledge and understanding to the question
- demonstrates a limited ability to explain the functions of protein
- demonstrates a limited ability to focus on the functions of protein
- quality of written communication is basic

**Mark Band ([3]–[5])**

Overall impression: reasonable to good

- reasonable to good knowledge and understanding of the functions of protein
- demonstrates a reasonable to good ability to apply appropriate knowledge and understanding to the question
- demonstrates a reasonable to good ability to explain the functions of protein
- demonstrates a reasonable to good ability to focus on the functions of protein
- quality of written communication is reasonable to good

**Mark Band ([6]–[8])**

Overall impression: very good to highly competent

- clear knowledge and understanding of the functions of protein
- demonstrates a very good to highly competent ability to apply appropriate knowledge and understanding to the question
- demonstrates a very good to highly competent attempt to explain the functions of protein
- demonstrates a very good to highly competent ability to focus on the functions of protein
- quality of written communication is very good to highly competent

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

- growth; each cell contains protein as part of the cell membrane and within its cytoplasm, muscles, bones, connective tissues, blood cells all contain protein
- enzymes; protein is necessary for the production of enzymes which facilitate most of the chemical reactions in the body
- hormones; protein is needed for production of hormones which can regulate metabolic rate, blood glucose levels
- energy; can serve as a source of energy, but this is not its primary role

All other valid points will be given credit.

[8]

**Section A**

7 Describe the effects of dietary fats on blood cholesterol levels. (AO1, AO2, AO3)

**Mark Band ([0]–[2])**

Overall impression: basic

- inadequate knowledge and understanding of dietary fats
- demonstrates a limited attempt to apply knowledge and understanding to the question
- demonstrates a limited ability to describe the effects of dietary fats on blood cholesterol levels
- demonstrates a limited ability to focus on the effects of dietary fats on blood cholesterol levels
- quality of written communication is basic

**Mark Band ([3]–[5])**

Overall impression: reasonable to good

- reasonable to good knowledge and understanding of dietary fats
- demonstrates a reasonable to good ability to apply knowledge and understanding to the question
- demonstrates a reasonable to good ability to describe the effects of dietary fats on blood cholesterol levels
- demonstrates a reasonable to good ability to focus on the effects of dietary fats on blood cholesterol levels
- quality of written communication is reasonable to good

**Mark Band ([6]–[8])**

Overall impression: very good to highly competent

- clear knowledge and understanding of dietary fats
- 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 the effects of dietary fats on blood cholesterol levels
- demonstrates a very good to highly competent ability to focus on the effects of dietary fats on blood cholesterol levels
- quality of written communication is highly very good to highly competent

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

- saturated fats; can raise total cholesterol, especially LDL cholesterol
- monounsaturated fatty acids; will lower LDL cholesterol and raise/maintain HDL cholesterol which is beneficial in the diet
- n-6 polyunsaturated fatty acids; will lower HDL and LDL cholesterol
- n-3 polyunsaturated fatty acids; will lower blood triglycerides and LDL cholesterol without lowering the HDL cholesterol which is beneficial
- trans fatty acids; lower HDL and raise LDL cholesterol which increases the risk of developing CVD

All other valid points will be given credit.

[8]

**Section A**

8 Evaluate the role of supplementation in adolescence. (AO1, AO2, AO3)

**Mark Band ([0]–[2])**

Overall impression: basic

- inadequate knowledge and understanding of supplementation
- demonstrates a limited ability to apply appropriate knowledge and understanding to the question
- demonstrates a limited ability to present the role of supplementation in adolescence
- demonstrates a limited ability to evaluate this role
- quality of written communication is basic

**Mark Band ([3]–[5])**

Overall impression: reasonable to good

- reasonable to good knowledge and understanding of supplementation
- demonstrates a reasonable to good ability to apply appropriate knowledge and understanding to the question
- demonstrates a reasonable to good ability to present the role of supplementation in adolescence
- demonstrates a reasonable to good ability to evaluate this role
- quality of written communication is reasonable to good

**Mark Band ([6]–[8])**

Overall impression: very good to highly competent

- clear knowledge and understanding of supplementation
- demonstrates a very good to highly competent ability to apply appropriate knowledge and understanding to the question
- demonstrates a very good to highly competent ability to present the role of supplementation in adolescence
- demonstrates a very good to highly competent ability to evaluate this role
- quality of written communication is very good to highly competent

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

- certain groups; may be beneficial e.g. teenage pregnancy and folic acid; strict vegetarians and vitamin B<sub>12</sub>
- growth and development; iron supplements during menstration for girls; Omega 3 for possibly brain development, concentration and behaviour; Calcium for bone development if diet is limited or there is a history of osteoporosis in the family

**Disadvantages**

- excess vitamin A can cause liver & bone damage, hair loss, double vision, vomiting, headaches; excess vitamin B6 can cause neurological problems, excess folic acid can mask a vitamin B<sub>12</sub> deficiency
- eating habits; could encourage poor eating habits; expensive if overdependent; high doses are not natural extensions of the diet, nor do they have additional health benefits; not a substitute for a healthy diet

All other valid points will be given credit.

[8]

**Section B**

- 9 (a) Discuss the specific nutritional requirements of school children.  
(AO1, AO2, AO3)

**Mark Band ([0]–[3])**

Overall impression: basic

- inadequate knowledge and understanding of the specific nutritional requirements of school children
- demonstrates a limited ability to apply appropriate knowledge and understanding to the question
- demonstrates a limited ability to discuss the specific nutritional requirements of school children
- quality of written communication is basic

**Mark Band ([4]–[7])**

Overall impression: reasonable to good

- reasonable to good knowledge and understanding of the specific nutritional requirements of school children
- demonstrates a reasonable to good ability to apply appropriate knowledge and understanding to the question
- demonstrates a reasonable to good ability to discuss the specific nutritional requirements of school children
- 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 specific nutritional requirements of school children
- demonstrates a very good to highly competent ability to apply appropriate knowledge and understanding to the question
- demonstrates a very good to highly competent ability to discuss the specific nutritional requirements of school children
- quality of written communication is very good to highly competent

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

- energy; the energy requirements of children increase rapidly because they are growing quickly and becoming more active
- protein; protein is required for the development and growth that occurs at this stage in the lifecycle and the development of muscles
- minerals; calcium aids development of strong bones and teeth, adult teeth are formed at this early stage, iron is needed due to an increase in blood volume as the child grows, it is needed for growth, brain development and the immune system, zinc is essential for adequate growth and sexual development
- water soluble vitamins; B group including thiamine, riboflavin and niacin assist in the release of energy from macronutrients in the body and vitamin B12 and folate aid development of nervous system and making new cells for the body, vitamin C to aid absorption of iron, development of immune system and formation of connective tissue

**Section B**

- fat soluble vitamins; vitamin A is critical for good development of eyesight and the immune system, vitamin D is essential for adequate calcium absorption but this can be obtained by action of sunlight on skin

All other valid points will be given credit. [10]

- (b) Propose and justify the advice you would give to parents who want to reduce the risks of childhood obesity. (AO1, AO2, AO3)

**Mark Band ([0]–[5])**

Overall impression: basic

- inadequate knowledge and understanding of childhood obesity
- demonstrates a limited ability to apply knowledge and understanding to the question
- demonstrates a limited ability to propose appropriate advice for parents to reduce the risks of childhood obesity
- demonstrates a limited ability to justify the advice for parents to reduce the risks of childhood obesity
- quality of written communication is basic

**Mark Band ([6]–[10])**

Overall impression: reasonable to good

- reasonable knowledge and understanding of childhood obesity
- demonstrates a reasonable to good ability to apply knowledge and understanding to the question
- demonstrates a reasonable to good ability to propose appropriate advice for parents to reduce the risks of childhood obesity
- demonstrates a reasonable to good ability to justify the advice for parents to reduce the risks of childhood obesity
- quality of written communication is reasonable to good

**Mark Band ([11]–[15])**

Overall impression: very good to highly competent

- clear knowledge and understanding of childhood obesity
- 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 propose appropriate advice for parents to reduce the risks of childhood obesity
- demonstrates a very good to highly competent ability to justify the advice for parents to reduce the risks of childhood obesity
- quality of written communication is very good to highly competent

**Section B**

**Some examples of suitable points to be proposed and justified by the candidate:**

- dietary energy from fat; restrict proportion of dietary energy derived from fat to 35% in order to reduce the energy density of the diet:
  - reduce consumption of processed foods such as sausages, burgers, pies, potato products
  - for family meals consider changing methods of cooking from frying to grilling
- dietary energy from sugar; restrict proportion of dietary energy derived from sugar to 11%
  - reduce consumption of ready-made desserts, cakes and biscuits
  - providing alternatives to sweet foods for packed lunches and break-time snacks
  - reduce intakes of sugar-coated breakfast cereals restrict intakes of confectionery and fizzy drinks
- fruit and vegetables; ensure an intake of five portions of fruit and vegetables are consumed as snacks, main meals or incorporated into drinks or soups
- starchy foods; ensure meals are based on starchy foods e.g. pasta, bread, rice and potatoes and to consume wholegrain whenever possible as these are low in energy density in comparison to fat
- physical activity; ensure child does not engage completely in a sedentary lifestyle, restrict use of computer games and television viewing and encourage physical activities
- parental role; parents must act as a role model by demonstrating healthy eating patterns at home and encouraging participation in physical activities and sports to ensure energy balance

All other valid points will be given credit.

[15]

**Section B**

- 10 (a)** Discuss the health risks and benefits to adult women of including alcohol in the diet. (AO1, AO2, AO3)

**Mark Band ([0]–[3])**

Overall impression: basic

- inadequate knowledge and understanding of alcohol in the diet
- demonstrates a limited ability to apply knowledge and understanding to the question
- demonstrates a limited ability to discuss the health risks and benefits to adult women of including alcohol in the diet
- demonstrates a limited ability to select specific health risks and benefits to adult women
- quality of written communication is basic

**Mark Band ([4]–[7])**

Overall impression: reasonable to good

- reasonable to good knowledge and understanding of alcohol in the diet
- demonstrates a reasonable to good ability to apply knowledge and understanding to the question
- demonstrates a reasonable to good ability to discuss the health risks and benefits to adult women of including alcohol in the diet
- demonstrates a reasonable to good ability to select specific health risks and benefits to adult women
- quality of written communication is reasonable to good

**Mark Band ([8]–[10])**

Overall impression: very good to highly competent

- clear knowledge and understanding of alcohol in the diet
- 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 health risks and benefits to adult women of including alcohol in the diet
- demonstrates a very good to highly competent ability to select health risks and benefits to adult women
- quality of written communication is very good to highly competent

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

Health risks

- pregnancy; fetal alcohol syndrome; could be a risk in babies and children if mother consumes alcohol in excess during pregnancy, the newborn baby may show growth retardation and facial deformities; fertility can be affected by excess alcohol intake
- cancer; increased risk of breast cancer
- weight gain; alcohol in excess can increase energy intake, the risk of being overweight is a consequence
- bone health; can affect absorption of vitamin D, this can influence the bioavailability of calcium and impact on bone health



**Section B**

## Benefits

- CHD; evidence to support that having 1–2 units of alcohol per day can help protect against CHD for women after the menopause
- cancer; some alcoholic drinks contain a range of phytochemicals, e.g. red wine contains polyphenols which are believed to have cancer fighting properties

All other valid points will be given credit.

[10]

- (b) Explain the health problems related to diet and nutrition in older people.  
(AO1, AO2, AO3)

**Mark Band ([0]–[5])**

Overall impression: basic

- inadequate knowledge and understanding of diet and nutrition in older people
- demonstrates a limited ability to apply knowledge and understanding to the question
- demonstrates a limited ability to explain the health problems related to diet and nutrition in older people
- quality of written communication is basic

**Mark Band ([6]–[10])**

Overall impression: reasonable to good

- reasonable knowledge and understanding of diet and nutrition in older people
- demonstrates a reasonable to good ability to apply knowledge and understanding to the question
- demonstrates a reasonable to good ability to explain the health problems related to diet and nutrition in older people
- quality of written communication is reasonable to good

**Mark Band ([11]–[15])**

Overall impression: very good to highly competent

- clear knowledge and understanding of diet and nutrition in older people 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 the health problems related to diet and nutrition in older people
- quality of written communication is very good to highly competent

**Section B**

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

- gastrointestinal disorders; constipation and diverticulosis are more common in elderly people due to an inadequate intake of NSP, fluids and food
- osteoporosis; prevention of fracture risk depends on calcium and vitamin D status, supplementation with calcium and vitamin D is recommended, low protein intakes are also associated with fracture risk
- dental health; few or no natural teeth leads to a more restricted range of foods and this can affect intakes of many minerals and vitamins
- immune system; immune system reduces with age and is exacerbated by poor nutritional status in protein, zinc and vitamin levels; this can lead to more serious problems such as wound infections
- cognitive function; antioxidant nutrients betacarotene, C, E and selenium are correlated with memory and integrity of blood vessels in brain, therefore low intakes of these nutrients may be linked to reduced cognitive function and stroke
- obesity; a very common disorder in Western society due to a more sedentary lifestyle and can be a risk factor for diabetes and hypertension
- anaemias; nutritional anaemias are usually caused by low dietary iron intake, but medication and contributions from other complicating diseases may increase risk of iron, folate and B12 deficiencies

All other valid points will be given credit.

[15]

New  
Specification



*Rewarding Learning*

**ADVANCED SUBSIDIARY (AS)  
General Certificate of Education  
January 2010**

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**Home Economics**  
**Assessment Unit AS 2**  
*assessing*  
**Priority Health Issues**  
**[AN121]**  
**MONDAY 18 JANUARY, MORNING**

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**MARK  
SCHEME**

## Section A

- 1 (a) Outline the dietary risk factors for cardiovascular disease. (AO1, AO2, AO3)

**Mark Band ([0]–[3])**

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 outline dietary risk factors for cardiovascular disease
- demonstrates a limited ability to select relevant risk factors
- quality of written communication is basic

**Mark Band ([4]–[7])**

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 outline dietary risk factors for cardiovascular disease
- demonstrates a reasonable to good ability to select relevant risk factors
- quality of written communication is reasonable to good

**Mark Band ([8]–[10])**

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 outline dietary risk factors for cardiovascular disease
- demonstrates a very good to highly competent ability to select relevant risk factors
- quality of written communication is very good to highly competent

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

- fat; a high fat intake and a high intake of saturates and trans fats can increase the amount of cholesterol produced in the liver and so the amount in the blood
- obesity; obese people tend to have higher levels of blood cholesterol, high blood pressure, having fat deposited around the waist increases the risk of CVD
- alcohol; excessive alcohol intake raises blood pressure which may increase risk of CVD
- sodium; individuals with high blood pressure/hypertension may have a greater risk of getting CVD
- low levels of fruit and vegetables; low intake of antioxidant nutrients may contribute to CVD

All other valid points will be given credit.

[10]

**Section A**

- (b) Describe five of the the targets which relate specifically to cardiovascular disease. (AO1, AO2, AO3)

**Mark Band ([0]–[3])**

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 describe five of the targets which relate specifically to cardiovascular disease
- demonstrates a limited ability to select five specific targets related to cardiovascular disease
- quality of written communication is basic

**Mark Band ([4]–[7])**

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 describe five of the targets which relate specifically to cardiovascular disease
- demonstrates a reasonable to good ability to select five specific targets related to cardiovascular disease
- quality of written communication is reasonable to good

**Mark Band ([8]–[10])**

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 describe five of the targets which relate specifically to cardiovascular disease
- demonstrates a very good to highly competent ability to select five specific targets related to cardiovascular disease
- quality of written communication is very good to highly competent

**Section A**

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

- reduce all fats; replace some sources of saturated fats and polyunsaturated fats with monounsaturated fats to lower blood cholesterol
- fruit and vegetables; individuals should aim to eat five portions of fruit and vegetables each day to provide antioxidant nutrients
- fish; eat at least two servings of fish weekly, one of which should be oily e.g. salmon, trout, mackerel to provide omega 3 fats which lower LDL cholesterol
- increase complex carbohydrates; eat more bread, potatoes, rice, pasta and cereals, choose wholegrain to increase contribution to dietary energy to 50% thus displacing fat
- reduce salt; reduce salt intake from 9g to 6g to reduce risk of high blood pressure

All other valid points will be given credit.

[10]

- 2 (a) Explain how a high fat diet and low levels of activity can contribute to overweight and obesity. (AO1, AO2, AO3)

**Mark Band ([0]–[3])**

Overall impression: basic

- inadequate knowledge and understanding of obesity
- demonstrates a limited ability to apply knowledge and understanding to the question
- demonstrates a limited ability to focus on high fat diet and low levels of activity
- demonstrates a limited ability to explain how these factors can contribute to overweight and obesity
- quality of written communication is basic

**Mark Band ([4]–[7])**

Overall impression: reasonable to good

- reasonable to good knowledge and understanding of obesity
- demonstrates a reasonable to good ability to apply knowledge and understanding to the question
- demonstrates a reasonable to good ability to focus on high fat diet and low levels of activity
- demonstrates a reasonable to good ability to explain how these factors can contribute to overweight and obesity
- quality of written communication is reasonable to good

**Section A****Mark Band ([8]–[10])**

Overall impression: very good to highly competent

- clear knowledge and understanding of obesity
- 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 focus on high fat diet and low levels of activity
- demonstrates a very good to highly competent ability to explain how these factors can contribute to overweight and obesity
- quality of written communication is very good to highly competent

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

High fat diet

- energy balance; Western diet is high in fat which is affecting the control of energy balance, as the proportion of fat in the diet increases, BMI increases
- dietary fat; a fat rich diet has a high energy content per g and can lead to a positive energy balance
- low carbohydrate; percentage of fat has increased at the expense of carbohydrate which is higher satiety than fat; easier for individuals to overeat on high fat diet

Low levels of activity

- energy balance; difficult to maintain if activity levels are low
- lifestyle; Western work activity is predominantly sedentary and technology has reduced the need for physical activity
- leisure activity; reduced physical activity in leisure time

All other valid points will be given credit.

[10]

- (b)** Examine the role of glycemic index in the management of diabetes.  
(AO1, AO2, AO3)

**Mark Band ([0]–[3])**

Overall impression: basic

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

**Section A****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 knowledge and understanding to the question
- demonstrates a reasonable to good ability to examine the role of glycemic index
- demonstrates a reasonable to good ability to focus on the role of glycemic index in the management of 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 glycemic index
- 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 the role of glycemic index
- demonstrates a very good to highly competent ability to focus on the role of glycemic index in the management of diabetes
- quality of written communication is very good to highly competent

**Some examples of suitable points to be examined by the candidate:**

- glycemic index; this is a way of measuring the effects of food on blood sugar levels, when a carbohydrate food is eaten there is a rise and then a decrease in blood sugar levels
- starchy foods; some starchy foods are high GI which are digested rapidly and absorbed quickly raising blood sugar levels, wholegrain varieties have a lower GI
- sugary foods; many sugary foods such as confectionery produce dramatic increases in blood sugar levels and are high GI
- blood sugar levels; a high intake of low GI foods results in slower digestion of starches and slower absorption of sugar into the bloodstream, this helps regulate blood sugar levels for those with diabetes
- weight reduction; eating wholegrain foods which are low GI is important as it may promote satiety, low GI foods tend to be low in fat which benefits weight control and the management of diabetes

All other valid points will be given credit.

[10]



**Section B**

- 3 Explain how an individual's food choice could increase their risk of developing certain cancers. (AO1 AO2 AO3)

**Mark Band ([0]–[5])**

Overall impression: basic understanding

- inadequate knowledge and understanding of certain cancers
- demonstrates a limited ability to apply knowledge and understanding to the question
- demonstrates a limited ability to explain how an individual's food choice could increase their risk of developing certain cancers
- demonstrates a limited ability to focus on food choice and cancers
- quality of written communication is basic

**Mark Band ([6]–[10])**

Overall impression: adequate to minimally competent

- adequate to minimally competent knowledge and understanding of certain cancers
- demonstrates adequate to minimally competent ability to apply knowledge and understanding to the question
- demonstrates adequate to minimally competent ability to explain how an individual's food choice could increase their risk of developing certain cancers
- demonstrates adequate to minimally competent ability to focus on food choice and cancers
- 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 certain cancers
- demonstrates a reasonable to good ability to apply knowledge and understanding to the question
- demonstrates a reasonable to good ability to explain how an individual's food choice could increase their risk of developing certain cancers
- demonstrates a reasonable to good ability to focus on food choice and cancers
- quality of written communication is reasonable to good.

**Mark Band ([16]–[20])**

Overall impression: very good to highly competent

- clear knowledge and understanding of certain cancers
- 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 an individual's food choice could increase their risk of developing certain cancers
- demonstrates a very good to highly competent ability to focus on food choice and cancers
- quality of written communication is very good to highly competent.

**Section B**

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

- red meat; researchers suggest that eating red meat in excess is linked with DNA damage which raises the risk of bowel cancer;
- fatty foods; fat is a promoter of carcinogenesis and is associated with breast, colon and prostate cancer
- salty foods; sodium chloride has been associated with stomach cancers
- processed meats; ham, bacon and sausages are preserved using nitrates and nitrites and increase the risk of stomach and colon cancer
- crisps and chips; these can contribute carcinogens such as acrylamides; these chemicals are most often generated in the cooking process; for example, grilling, high temperature oven baking or frying of meat, fats, and starchy carbohydrates such as potatoes making crisps, chips, and baked snacks
- smoked, burnt, grilled or barbequed foods; these can contribute carcinogens such as polycyclic or aromatic hydrocarbons; carcinogens can generate super oxide free radicals which damage DNA, rearrange the genes within cells leading to the development of cancer
- non organic fruit and vegetables; these could contain high levels of pesticides, herbicides, fungicides, fertilizers; some of these have direct carcinogenic affects, increasing the risk of hormone related cancers such as breast, ovary and uterus

All other valid points will be given credit.

[20]

**Section B**

- 4 Exercise, diet and friendships are examples of self help strategies recommended for achieving good mental health. Discuss this statement. (AO1, AO2, AO3)

**Mark Band ([0]–[5])**

Overall impression: basic understanding

- inadequate knowledge and understanding of strategies for good mental health
- demonstrates a limited ability to apply knowledge and understanding to the question
- demonstrates a limited ability to discuss exercise, diet and friendships as strategies for achieving good mental health
- demonstrates a limited ability to focus on these strategies
- quality of written communication is basic

**Mark Band ([6]–[10])**

Overall impression: adequate to minimally competent

- adequate to minimally competent knowledge and understanding of strategies for good mental health
- demonstrates adequate to minimally competent ability to apply knowledge and understanding to the question
- demonstrates adequate to minimally competent ability to discuss exercise, diet and friendships as strategies for achieving good mental health
- demonstrates adequate to minimally competent ability to focus on these strategies
- 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 strategies for good mental health
- demonstrates a reasonable to good ability to apply knowledge and understanding to the question
- demonstrates a reasonable to good ability to discuss exercise, diet and friendships as strategies for achieving good mental health
- demonstrates a reasonable to good ability to focus on these strategies
- quality of written communication is reasonable to good

**Mark Band ([16]–[20])**

Overall impression: very good to highly competent

- clear knowledge and understanding of strategies for 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 discuss exercise, diet and friendships as strategies for achieving good mental health
- demonstrates a very good to highly competent ability to focus on these strategies
- quality of written communication is very good to highly competent

**Section B**

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

**Exercise**

- physical activity; this can boost mental well-being and change outlook on life, it can help people with anxiety but may even prevent problems from developing in the first place
- mood; regular exercise can lift your mood and help to deal with negative emotions, it helps people feel better immediately through the release of uplifting chemicals into the body
- sleep; exercise helps individuals to sleep better, reduce tension levels, feelings of stress or fatigue, it also gives people more energy therefore positive frame of mind
- self-esteem; people feel better about themselves once they start a programme of physical activity, they develop a more positive self-image which improves mental well-being, taking part in an activity gives a sense of achievement
- interacting with others; taking exercise can be an ideal way to meet and enjoy the company of others, walking, going to the gym or going to classes allows people to socialise, promoting good mental health

**Diet**

- balanced diet; this is essential in maintaining good mental health, there are direct links between what individuals eat and mental well-being
- fruit and vegetables; it is essential to have at least five portions of fruit and vegetables per day to keep the immune system healthy, micro-nutrients will help boost the immune system
- supplementation; supplementing the diet with vitamins and minerals can give mental and emotional well-being an extra boost especially for the immune system in autumn and winter examples include vitamin C, zinc, Echinacea

**Friendships**

- keep in touch with friends and loved ones; close friendships have a huge positive impact on how people feel on a daily basis and boost self esteem
- listening ear; friends provide a listening ear to ensure individuals release the tension and worries in a relaxed manner

All other valid points will be given credit.

[20]

**Section B**

- 5 Explain the possible reasons why sexual health is poor in Northern Ireland.  
(AO1, AO2, AO3)

**Mark Band ([0]–[5])**

Overall impression: basic understanding

- inadequate knowledge and understanding of sexual health
- demonstrates a limited ability to apply knowledge and understanding to the question
- demonstrates a limited ability to explain the possible reasons for poor sexual health in Northern Ireland
- demonstrates a limited ability to focus on relevant reasons
- quality of written communication is basic

**Mark Band ([6]–[10])**

Overall impression: adequate to minimally competent

- adequate to minimally competent knowledge and understanding of sexual health
- demonstrates adequate to minimally competent ability to apply knowledge and understanding to the question
- demonstrates adequate to minimally competent ability to explain the possible reasons for poor sexual health in Northern Ireland
- demonstrates adequate to minimally competent ability to focus on relevant reasons
- 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 sexual health
- demonstrates a reasonable to good ability to apply knowledge and understanding to the question
- demonstrates a reasonable to good ability to explain the possible reasons for poor sexual health in Northern Ireland
- demonstrates a reasonable to good ability to focus on relevant reasons
- quality of written communication is reasonable to good

**Mark Band ([16]–[20])**

Overall impression: very good to highly competent

- clear knowledge and understanding of sexual health
- demonstrates a very good to highly competent ability to apply knowledge and understanding to the question
- demonstrates a very good to highly competent explain to explain the possible reasons for poor sexual health in Northern Ireland
- demonstrates a very good to highly competent ability to focus on relevant reasons
- quality of written communication is very good to highly competent

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

- high levels of teenage pregnancy and sexually transmitted infections
- general deterioration in sexual health amongst young people; some young people are engaging in sexual behaviour as it is socially acceptable, they have become complacent or involved in high risk behaviour or mistakenly believe that the contraceptive pill is protective
- increase in sexual partners; some individuals are choosing to have sexual relationships from a younger age and may have multiple partners
- waiting times for appointments at GUM clinics; clinics have restricted opening hours and limited appointments and are not available in all towns, if people are not tested or treated quickly there is the possibility of further spread of infections
- information available; perceptions of sexuality can become distorted as parents or teachers are too embarrassed to discuss sexual issues; misinformation in the media places young people at risk and makes it harder to develop a healthy attitude towards sexual health
- funding; government are advising the public to attend GUM clinics for testing but the resources are not available and therefore long waiting times may increase the spread of STI epidemics
- moral and religious attitudes; these may discourage people from talking about sexual issues
- high risk behaviour; individuals involved in drugs, alcohol or foreign holidays with increased promiscuity
- older people may engage in unprotected sex as likelihood of pregnancy is not an issue

All other valid points will be given credit.

[20]



