



GCSE MARKING SCHEME

SUMMER 2023

FOOD AND NUTRITION - UNIT 1
3560UA0-1

INTRODUCTION

This marking scheme was used by WJEC for the 2023 examination. It was finalised after detailed discussion at examiners' conferences by all the examiners involved in the assessment. The conference was held shortly after the paper was taken so that reference could be made to the full range of candidates' responses, with photocopied scripts forming the basis of discussion. The aim of the conference was to ensure that the marking scheme was interpreted and applied in the same way by all examiners.

It is hoped that this information will be of assistance to centres but it is recognised at the same time that, without the benefit of participation in the examiners' conference, teachers may have different views on certain matters of detail or interpretation.

WJEC regrets that it cannot enter into any discussion or correspondence about this marking scheme.

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Guidance for examiners

Positive marking

It should be remembered that learners are writing under examination conditions and credit should be given for what the learner writes, rather than adopting the approach of penalising him/her for any omissions. It should be possible for a very good response to achieve full marks and a very poor one to achieve zero marks. Marks should not be deducted for a less than perfect answer if it satisfies the criteria of the mark scheme.

For questions that are objective or points-based the mark scheme should be applied precisely. Marks should be awarded as indicated and no further subdivision made.

Banded mark schemes

For band marked questions mark schemes are in two parts.

Part 1 is advice on the indicative content that suggests the range of food preparation and nutrition, concepts, facts, issues and arguments which may be included in the learner's answers. These can be used to assess the quality of the learner's response.

Part 2 is an assessment grid advising bands and associated marks that should be given to responses which demonstrate the qualities needed in AO1, AO2 and AO4. Where a response is not creditworthy or not attempted it is indicated on the grid as mark band zero.

Examiners should first read and annotate a learner's answer to pick out the evidence that is being assessed in that question. Once the annotation is complete, the mark scheme can be applied.

This is done as a two-stage process.

Stage 1 – Deciding on the band

Beginning at the lowest band, examiners should look at the learner's answer and check whether it matches the descriptor for that band. If the descriptor at the lowest band is satisfied, examiners should move up to the next band and repeat this process for each band until the descriptor matches the answer.

If an answer covers different aspects of different bands within the mark scheme, a 'best fit' approach should be adopted to decide on the band and then the learner's response should be used to decide on the mark within the band. For instance if a response is mainly in band 2 but with a limited amount of band 3 content, the answer would be placed in band 2, but the mark awarded would be close to the top of band 2 as a result of the band 3 content.

Examiners should not seek to mark candidates down as a result of small omissions in minor areas of an answer.

Stage 2 – Deciding on the mark

During standardising (marking conference), detailed advice from the Principal Examiner on the qualities of each mark band will be given. Examiners will then receive examples of answers in each mark band that have been awarded a mark by the Principal Examiner. Examiners should mark the examples and compare their marks with those of the Principal Examiner.

When marking, examiners can use these examples to decide whether a learner's response is of a superior, inferior or comparable standard to the example. Examiners are reminded of the need to revisit the answer as they apply the mark scheme in order to confirm that the band and the mark allocated is appropriate to the response provided.

Indicative content is also provided for banded mark schemes. Indicative content is not exhaustive, and any other valid points must be credited. In order to reach the highest bands of the mark scheme a learner need not cover all of the points mentioned in the indicative content but must meet the requirements of the highest mark band. Where a response is not creditworthy, that is contains nothing of any significance to the mark scheme, or where no response has been provided, no marks should be awarded.

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SECTION A

Question	Answer	Mark	AO1	AO2	AO4	Total
1. (a)	State one function of each ingredient used in bread making. Award 1 mark for each correct response. (i) YEAST – makes bread rise, raising agent, reacts with other ingredients to produce CO₂ (ii) SUGAR – provides ‘food’ for the yeast to feed on and encourage yeast to activate. / sweetness Caramelisation Provides small amount of flavour (iii) SALT – Adds flavour / taste (too much can deactivate the yeast)	3	3			3
(b)	Give three conditions that are required to activate the yeast in bread making. Award 1 mark for each correct condition identified. • Moisture / addition of water / liquid eg. Milk • Warmth / Temperature – doesn't have to be specific • Food supply / Sugar (only fresh) • Time	3	3			3

Question	Answer	Mark	AO1	AO2	AO4	Total
(c)	Explain why the following stages are important when making bread Award 1 mark for a limited explanation Award 2 marks for a good explanation – 1 point explained or two basic points made (2 x2) (i) Kneading the dough Encourages yeast distribution and activation. ○ Gluten is stretched and elasticity is developed ○ To stretch the dough ○ Make the dough smoother /less sticky ○ If not sufficiently kneaded bread will not hold structure of Co2 created by the yeast. (ii) Proving the dough Warm area to allow yeast to activate and produce CO2 – fermentation. ○ Bread will rise when given time to prove/ allow bread to rise ○ Bread may double in size in a warm environment (25C) ○ Enables the yeast to activate It is an “explain” question so no to “one” word answers	2 x 2		4		4
(d)	Identify two benefits of including bread in the diet. Award 1 mark for each correct response. Answers could include: Nutritional • (High starchy) carbohydrate • Provides NSP (Dietary) Fibre • Added vitamins – folic acid • Calcium • Protein • Iron • Energy/calories • Fat • Sugar General • Staple food • Cheap to buy / inexpensive • Adds variety to the diet / versatile food • Easily available • Satiety – Fills you up Credit any other valid response	2	2			2
	Total for question 1	12	8	4	0	12

SECTION B

Question	Answer	Mark	AO1	AO2	AO4	Total
2. (a)	Nutrients have many functions in the diet. Complete the following sentences using the nutrients below. Award 1 mark for each correct nutrient (i) Calcium (ii) Iron (iii) Vitamin A	3	3			3
(b)	State the recommended daily intake of salt for adults. Award 1 mark for the correct response. • 6g Award even if g not referred to.	1	1			1
(c)	Suggest three ways an adult can reduce their salt intake. Award 1 mark for each correct response: • Buy low salt foods • Check nutritional labels / labels on packaging • Limit salt added to cooking/ Limit adding salt at the table eg on chips • Buy tinned food without added salt • Use herbs instead of salt • Avoid buying processed foods/ fast food • Make meals from scratch (so can control amount of salt added) • Change salty snacks to healthier options eg. unsalted nuts / popcorn Credit any other acceptable response No need to qualify as “suggest” 1 mark.	3	3			3

Question	Answer	Mark	AO1	AO2	AO4	Total
(d)	Discuss the possible effects of a diet high in salt. Award 1 mark for a limited discussion that may contain errors, shows limited knowledge of the effects excess salt can have on the diet. Award 2 marks for a basic discussion that shows some knowledge of the effects excess salt can have on the diet. Response is mostly accurate. Award 3 marks for a good discussion that shows good knowledge of the effects excess salt can have on the diet. Award 4 marks for a very good discussion that shows excellent knowledge of the effects excess salt can have on the diet. Indicative content • High blood pressure • Risk of stroke • Cardio-vascular problems • Kidney problems/ damage • Increase the risk of dehydration Credit any other valid response	4		4		4
	Total marks for question 2	11	7	4	0	11

Question	Answer	Mark	AO1	AO2	AO4	Total
3. (a)	Identify the fruit with the largest amount of vitamin C per 100g. Award 1 mark for the correct fruit Fresh grapefruit	1	1			1
(b)	Other than loss of vitamins, describe the changes that occur when strawberries are preserved. Award up to 4 marks Award 1 mark for a limited description of the changes that occur when strawberries are preserved Award 2 marks for a basic description of the changes that occur when strawberries are preserved Award 3 marks for a good description of the changes that occur when strawberries are preserved. Award 4 marks for a very good description that shows excellent knowledge of the changes that occur when strawberries are preserved. Indicative content - Taste - Texture / soggy / structure loss / mushy - Shape / shrinkage - Colour e.g. paler / greyish / less colour / less bright - Nutrition changes e.g. Added sugar, preservation of nutrients 3 - Extends shelf life Credit any other acceptable response. These may be positive or negative.	4		4		4

Question	Answer	Mark	AO1	AO2	AO4	Total
(c)	Data shows that many families in Wales do not eat enough fruit and vegetables. Discuss how families can increase their intake of fruit and vegetables. Award up to 6 marks Indicative content • Consume 5-a-day • Fruit and vegetable can be eaten raw as snacks, in lunchboxes • Frozen fruits/vegetables in smoothies/ fresh juices • Dried fruit in baking • Tinned / dried fruit on breakfast cereals and puddings • Cooked fruit in puddings • Baked/ roasted vegetables • Pickled/ raw vegetables on salads • Swapping fruit/vegetables for unhealthy foods • Make soups • Grow their own • Buy “wonky fruits”, fruit boxes – too good to waste • Take advantage of free fruit for children when shopping • Buy ready prepared fruit and vegetables • Use more veg in dishes e.g. lasagne • Families eat together – so all eat the same meals Accept any credible response	6		6		6
Total marks for question 3		11	1	10	0	11

Band	AO2 Maximum 6 marks
3	Award 5-6 marks for an excellent response that clearly demonstrates knowledge and understanding of how families can increase their intake of fruit and vegetables At least 3 points in the indicative content have been identified and discussed in full.
2	Award 3-4 marks for a good response which shows some knowledge and understanding of how families can increase their intake of fruit and vegetables. At least 2 points in the indicative content has been identified, and been mostly discussed.
1	Award 1-2 marks for a basic response that includes little discussion of how families can increase their intake of fruit and vegetables. At least 1 point in the indicative content has been identified and may be partly discussed.
0	Award 0 marks Not credit worthy or not attempted.

Question	Answer	Mark	AO1	AO2	AO4	Total
4. (a)	Give three reasons why breakfast is important. Award 1 mark each for three correct reasons: - Increases metabolism/ increases sugar levels - Breaks the fast / first meal of the day - Provides energy after fasting/ Fuels the body / keeps you going - Prepares you for the day - Aids concentration / allows brain to function - can reduce risk of heart disease and cholesterol - Can provide valuable nutrients / NSP / (dietary fibre) - prevents snacking on foods in between meals - Prevents hunger/maintains the appetite - If they have cereals with milk ensures calcium supply	3	3			3
(b) (i)	Outline what is meant by fortification Award 1 mark limited outline of what is meant by Fortification. Award 2 marks for a clear outline of what is meant by Fortification – could have an example , Or give a correct nutrient/s and correct named products - When nutrients are added to a food product - Adding of vitamins and minerals – eg. Bread, margarine, alternative milks - Putting back / replacing nutrients that may have been lost in processing	2	2			2
(ii)	Give two reasons why foods are fortified. Award 1 mark for each correct response - Enables the population to achieve optimum nutrient intake / benefits the health of consumers - Reduces malnutrition in many groups - To prevent deficiency diseases - To make some food products equivalent in nutritional value to other foods e.g. White bread - Increases nutritional value - Replaces nutrients lost during processing - Some are fortified by law Credit any other suitable response	2	2			2

Question	Answer	Mark	AO1	AO2	AO4	Total
(c)	Explain two ways Morgan's breakfast could be adapted to meet current dietary guidelines. Award up to 2 marks per suggested ways Award 1 mark for a limited explanation – alternatives suggested Award 2 marks for a clear explanation – alternatives suggested and changes have been justified • Swap chocolate cereal for wholegrain cereals • Use Reduced fat milk – semi/skimmed • Include 1/2 portions of fruit / vegetables / add fruit / vegetables • Include a sugar free drink / fresh fruit juice / instead of fizzy / drink water • Include a smoothie instead of sugary drink • Change doughnut for fruit / avocado on toast Credit any changes that are sensible justified and qualified N.B. Credit can be given for a complete change – not just modification	2 x 2		4		4
	Total mark for question 4	11	7	4	0	11

Question	Answer	Mark	AO1	AO2	AO4	Total
5. (a)	Name two nutrients that provide energy. Award 1 mark each for correctly identifying a nutrient • Carbohydrate • Fat • Protein	2	2			2
(b)	Explain the term energy balance. Award up to 2 marks Award 1 mark basic explanation of what is meant by energy balance Award 2 marks clear explanation of what is meant by energy balance Indicative content • Correct amount of energy to account for the body's needs • Increase in energy consumption the body changes the excess to fat. • Decrease in energy consumption and use up energy by exercising the body can burn more energy • To maintain weight balance : energy taken in with energy output. Calorific value = energy so can award	2		2		2
(c)	State two factors which determine how much energy a person needs. Award 1 mark for correctly identifying two factors • Age • Gender • Physical activity • Body composition / Height / weight/ BMI • Medical conditions / illness • Lifestyle / job/hobbies • Pregnancy / breast feeding Credit reference to specific activities / jobs e.g. Sedentary worker vs builder, footballer training weekly	2		2		2
	Total mark for question 5	6	2	4	0	6

Question	Answer	Mark	AO1	AO2	AO4	Total
6. (a)	Outline, giving examples, the difference between chemical and physical contamination of food. Award 1 mark for a limited outline of the difference between chemical and physical contamination of food or one / or two correct examples. Award 2-3 marks for a clear outline of the difference between chemical and physical contamination of food – may lack balance Award 4 marks for a good outline of the difference between chemical and physical contamination of food with examples of each Chemical • is when any named products that are not necessarily visible has contaminated the food eg. cleaning products, pesticides, poison. • Consequences of consumption can be fatal Physical • when foreign objects or something has fallen into the food during food production • Sometimes this contamination is visible. • Examples – hair, nails, droppings, jewelry, fly	4		4		4
(b)	Identify two high risk foods. Award 1 mark for each correctly identified high-risk food • Dairy foods – milk, cheese, yogurt including foods such as quiche • Meat and meat products (pate`s, stews, pies, pasties • Poultry • Fish and seafood/ shellfish • Gravies, stocks and sauces • Cooked rice (and products) • Egg (and egg products e.g. Mayonnaise) Accept named commodities e.g. Chicken and pork	2	2			2

Question	Answer	Mark	AO1	AO2	AO4	Total
(c)	Discuss the food hygiene practices that must be followed when handling raw and cooked foods to ensure food safety. Award up to 6 marks Indicative content • Use different utensils and chopping boards • Wash utensils and equipment thoroughly in between tasks • Do not wash raw meat • Wash hands after handling raw foods • Store food correctly e.g raw meat at the bottom • Label/colour code food in kitchens • Separate storage and preparation areas • Temperatures – cooking, storage, hot holding, danger zone • Aprons / clothing • Use of food temperatures probes • Personal hygiene practices • Cross contamination • Check use by dates Credit any other valid response and any reference to named food poisoning bacteria.	6		2	4	6
	Total marks for question 6	12	2	6	4	12

Band	AO2 Maximum 2 marks	AO4 Maximum 4 marks
3		Award 4 marks A well-balanced excellent response which shows in depth knowledge and understanding of the importance of food safety with regard to preventing food poisoning. Response relates to at least 4 points within the indicative content, and points have been well justified. Temperatures and / or named bacteria may be referenced. Technical terms are used with ease and accuracy.
2	Award 2 marks A fairly well-balanced answer showing good knowledge and clear understanding of the correct food hygiene practices. Response demonstrates good application of knowledge related to at least 2 points included in the indicative content. Technical terms are used with some accuracy.	Award 2-3 marks A fairly well-balanced answer showing good knowledge and understanding of the importance of food safety with regard to preventing food poisoning. Response relates to at least 2-3 points within the indicative content. Points have been mostly justified. Technical terms are mostly used with ease and accuracy.
1	Award 1 mark Some analysis and demonstration of knowledge with reference to the prevention of food poisoning. Limited use of technical terms.	Award 1 mark Some discussion of food hygiene, response may refer to at least 1 point in the indicative content but may lack accuracy. Limited justification and use of technical terms.
0	Award 0 marks Not credit worthy or not attempted.	Award 0 marks Not credit worthy or not attempted.

Question	Answer	Mark	AO1	AO2	AO4	Total
7. (a)	Give three functions of food packaging. Award 1 mark for each correct function of packaging • Preserves/ increases shelf life/ keeps fresher for longer / may stop food deteriorating (<i>going off</i>)/ <i>hygiene requirements</i> • Marketing / Promotion of the product • Informs consumer / calories, nutritional content / ingredients / cost / Traceability • Easier to transport/stack/handle/carry • Barrier / protection- keeps food in shape / tamper proof	3	3			3
(b)	State one advantage and one disadvantage of each type of packaging material named below. Award up to 1 mark for each correct advantage and 1 mark for each correct disadvantage Responses may include (i) Cardboard Advantage • Recyclable (some types) / Environmentally friendly/Biodegradable • Cheap and easy to print on • Easy to stack and store • Lightweight • Can be printed on Disadvantage • Not water resistant / soggy / breaks when wet • Easily damaged • Causes deforestation (ii) Glass Advantage • Resuable • Recycleable • Refillable • Transparent • Airtight / oxygen unable to access foods • Can hold liquids / solids Disadvantage • Fragile / smash easily • Expensive • Heavy Credit any other valid response	4		2	2	4
	Total marks for question 7	7	3	2	2	7

Question	Answer	Mark	AO1	AO2	AO4	Total
8.	Analyse the impact of packaging on the environment and consider ways in which the food industry and the consumer can reduce the amount of packaging used. Award up to 10 marks Indicative content Impact on Environment • Food packaging accounts for huge percentage of rubbish in landfill • Recycling and reusing can reduce environmental impact • Plastic can take hundreds of years to decompose-some never • Some packaging can pollute oceans, rivers • Packaging can help to preserve food and therefore reduce food waste • Plastics entering the food chain e.g. Fish Ways of reducing packaging • Using brown paper bags / mesh bags for vegs • Reusable shopping bags • Refillable containers / sachets / cartons /glass jars • Less packaging eg. Cereals only in the bag not in bag and box • Un-necessary / double packaging of goods • Refillable supermarket food stations • Eco-friendly shops and packaging • Buying loose / fresh products not pre-packed • Buying from markets / farmers markets / milk dispensers – local farms • Discount schemes eg. Taking own coffee cups to coffee outlets • Use own water bottles and water fountains • Compostable bags for other products – reusable in food bins • Take care with over purchasing Credit any other valid response	10			10	10

Band	AO4
4	Award 7-10 marks A comprehensive account that provides a balanced analysis of the impact that packaging has on the environment and clearly analyses ways in which the food industry and consumer can limit use. Response also provides clear understanding of both factors. At least 4 points from the indicative content has been addressed. Technical terms are used with ease and accuracy.
3	Award 5-6 marks A good account that provides some analysis of the impact that packaging has on the environment and analyses ways in which the food industry and consumer can limit use. Response also provides understanding of both factors. At least 3 points from the indicative content has been addressed. Technical terms are generally used with ease and accuracy.
2	Award 3-4 marks A fairly good account that provides basic analysis of the impact that packaging has on the environment and analyses ways in which the food industry and consumer can limit use. Response also provides some understanding of both factors. At least 2 points from the indicative content has been addressed. Technical terms are used with some ease and accuracy.
1	Award 1-2 marks A limited account that provides limited descriptions of the impact packaging has on the environment. There may be a limited or no analysis of ways in which the food manufacturer or the consumer can reduce impact. At least 1 point from the indicative content has been addressed in relation to either the food industry or the consumer. Response lacks clarity and detail.
0	Award 0 marks Not credit worthy or not attempted.

Question	Mark	AO1	AO2	AO4	Total
1. (a) (b) (c) (d)	3 3 4 2	3 3 2	 4 		12
2. (a) (b) (c) (d)	3 1 3 4	3 1 3 	 4		11
3. (a) (b) (c)	1 4 6	1 	 4 6		11
4. (a) (b) (c)	3 4 4	3 4 		4	11
5. (a) (b) (c)	2 2 2	2 	2 2		6
6. (a) (b) (c)	4 2 6	 2 	4 2	4	12
7. (a) (b)	3 4	3 	2	2	7
8.	10			10	10
Total	80	30	30	20	80
% AO		15%	15%	10%	40%