AQA GCSE Combined Science - Trilogy | 8464

SPECIFICATION POINT 4.4.2.3

Metabolism

Mark schemes and examiner comments

Tier	**Higher**
Question groups	**1**
Available paper years	**2020–2020**

Using this booklet

1. Booklet answer numbers match the question booklet.
2. Use the original question number within marking tables.
3. Examiner comments are included where available.

Name: _____ **Date:** _____

Where a precise marking extract is unavailable, the full source document is included in an appendix. Any missing mark scheme is explicitly identified.

4.4.2.3 Metabolism

Answer 01 · Mark scheme

November 2020 | 8464/B/1H | Original Q2

Question	Answers	Extra information	Mark	AO / Spec. Ref.
02.1	amylase	allow phonetic spelling allow carbohydrase do **not** accept amylose	1	AO1 4.2.2.1
02.2	small intestine		1	AO1 4.2.1 4.2.2.1
02.3	any **one** from: • greater magnification • higher resolving power	allow can see (smaller) sub-cellular structures / parts allow can see more detail (inside cells) allow reference to 3-D images	1	AO1 4.1.1.5
02.4	capillary		1	AO2 4.2.2.1 4.2.2.2
02.5	$20 = \frac{\text{image length}}{0.8}$ image length = 0.8 x 20 image length = 16 (mm)		1 1 1	AO2 4.1.1.5 RPA 1
02.6	diffusion		1	AO3 4.1.3.1
02.7	active transport	allow active uptake	1	AO3 4.1.3.3

4.4.2.3 Metabolism

Answer 01 · Mark scheme

Question	Answers	Extra information	Mark	AO / Spec. Ref.
02.8	any **one** from: • respiration • to form glycogen • to make amino acids / proteins	allow as an energy source do **not** accept to make / use / create / produce energy allow to make lipid / fat	1	AO1 4.4.2.1 4.4.2.3
02.9	**Level 2:** Relevant points (reasons/causes) are identified, given in detail and logically linked to form a clear account.		3–4	AO2 4.1.1.3 4.1.3.1 4.1.3.3 4.2.2.1
	Level 1: Points are identified and stated simply, but their relevance is not clear and there is no attempt at logical linking.		1–2	
	No relevant content		0	
	Indicative content • have (many) microvilli • (to) increase surface area • wall of villus only one cell thick **or** is thin • capillaries are close to surface • (so) short pathway • good blood supply • (to) transport food molecules away **or** to the body • (and) maintain a diffusion gradient • cells have many mitochondria • (where) respiration takes place • (where) energy is transferred • (as) active transport requires energy • energy is needed to absorb sugar / food / molecules For Level 2 must make links between structure and it's function			
Total			**14**	

4.4.2.3 Metabolism

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