

APOLLO

Carbohydrates and lipids

SL

Biology

First assessment 2025

10 questions | mark schemes

Mark-scheme answers

Biology SL | Paper 1A | May 2025 TZ1 | Q2 | 1 marks

2. A

Biology SL | Paper 1A | May 2025 TZ1 | Q3 | 1 marks

3. D

Biology SL | Paper 1A | May 2025 TZ2 | Q2 | 1 marks

2. A

Biology SL | Paper 1A | May 2025 TZ3 | Q3 | 1 marks

3. A

2.	a		condensation;		1
2.	b		glycerol;		1
2.	c		(cis/mono) unsaturated;		1
2.	d		a. stable/not so readily metabolised so energy not (easily) lost/released; b. insoluble/do not mix with water so no osmotic effect/does not affect water potential/water does not enter cells; c. insoluble/large/nonpolar molecule so transport is difficult/hard; d. large molecule/long chains/many C-H bonds so can store lots of energy OR twice as much energy can be stored/released (per g) compared to carbohydrate;		2 max

Question	Answers	Notes	Total
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Mark-scheme answers

Biology SL | Paper 1A | Nov 2025 TZ1 | Q2 | 1 marks

2. B

Biology SL | Paper 1A | Specimen 2025 | Q1 | 1 marks

1. C

Biology SL | Paper 1A | Specimen 2025 | Q3 | 1 marks

3. B

1.	a	i	Breakfast cereals		1
1.	a	ii	12%	Allow 11 – 13	1
1.	b		<i>Similarity</i> e.g. a. both groups get most of their fibre from bread OR both get least from other sources OR both have similar % from vegetables. <i>Do not accept "amounts"</i> OR both have similar sources / show a similar pattern; <i>Difference</i> e.g. b. high gets bigger % from fruit etc.;	<i>For differences allow any answer where the % are different so long as the candidates state which is bigger/smaller.</i>	2
1.	c		a. the data shows % of their daily intake, not quantities they take in; b. although the graph shows the low group takes in a higher percentage of grains, it may be a higher percentage of a small amount / OWTTE;		2
1.	d		a. bread/fruit; b. it makes up a higher percentage of high-fibre diets than low-fibre diets;		2
1.	e		increasing fibre intake increases total energy intake and lowers the percentage of energy from fat		1

(continued...)

(Question 1 continued)

Question			Answers	Notes	Total
1.	f		the foods containing fibre must have energy rich molecules/carbohydrates in it		1
1.	g		<i>The study does support the hypothesis:</i> a. the data shows those with high fibre have more energy (required for growth and development/meeting daily needs); b. children with high fibre diets eat less fat (and less chance of heart disease/obesity);		1

Question	Answers	Notes	Total
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4.	a		(beta-) glucose		1
4.	b		a. stable (covalent) bonds between monomers ensure that the molecule is strong/rigid/inelastic; b. absence of branching allows fibres to pack closely/form hydrogen bonds; c. cross linkages/hydrogen bonds provide strength/stability/resists digestion; d. chain molecules allow for structure / strength; e. (beta-) glucose molecules provide energy (to organisms that can digest cellulose);		3