

Additional Applied Science A

General Certificate of Secondary Education

Unit **A324/02**: Life Care (Higher Tier)

Mark Scheme for June 2012

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This mark scheme is published as an aid to teachers and students, to indicate the requirements of the examination. It shows the basis on which marks were awarded by examiners. It does not indicate the details of the discussions which took place at an examiners' meeting before marking commenced.

All examiners are instructed that alternative correct answers and unexpected approaches in candidates' scripts must be given marks that fairly reflect the relevant knowledge and skills demonstrated.

Mark schemes should be read in conjunction with the published question papers and the report on the examination.

OCR will not enter into any discussion or correspondence in connection with this mark scheme.

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Annotations

Used in the detailed Mark Scheme:

Annotation	Meaning
/	alternative and acceptable answers for the same marking point
(1)	separates marking points
not/reject	answers which are not worthy of credit
ignore	statements which are irrelevant - applies to neutral answers
allow/accept	answers that can be accepted
(words)	words which are not essential to gain credit
words	underlined words must be present in answer to score a mark
ecf	error carried forward
AW/owtte	alternative wording
ORA	or reverse argument

Available in scoris to annotate scripts

Annotation	Meaning
	indicate uncertainty or ambiguity
	benefit of doubt
	contradiction
	incorrect response
	error carried forward
	draw attention to particular part of candidate's response
	draw attention to particular part of candidate's response
	draw attention to particular part of candidate's response

	no benefit of doubt
	reject
	correct response
	draw attention to particular part of candidate's response
	information omitted

Subject-specific Marking Instructions

- If a candidate alters his/her response, examiners should accept the alteration.
- Crossed out answers should be considered only if no other response has been made. When marking crossed out responses, accept correct answers which are clear and unambiguous.

E.g.

For a one mark question, where ticks in boxes 3 and 4 are required for the mark:

Put ticks (✓) in the two correct boxes.

<input type="checkbox"/>
<input type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input type="checkbox"/>

This would be worth 1 mark.

Put ticks (✓) in the two correct boxes.

<input type="checkbox"/>
<input type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input type="checkbox"/>

This would be worth 0 marks.

Put ticks (✓) in the two correct boxes.

<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input checked="" type="checkbox"/>
<input type="checkbox"/>

This would be worth 1 mark.

c. The list principle:

If a list of responses greater than the number requested is given, work through the list from the beginning. Award one mark for each correct response, ignore any neutral response, and deduct one mark for any incorrect response, e.g. one which has an error of science. If the number of incorrect responses is equal to or greater than the number of correct responses, no marks are awarded. A neutral response is correct but irrelevant to the question.

d. Marking method for tick boxes:

Always check the additional guidance.

If there is a set of boxes, some of which should be ticked and others left empty, then judge the entire set of boxes.

If there is at least one tick, ignore crosses. If there are no ticks, accept clear, unambiguous indications, e.g. shading or crosses.

Credit should be given for each box correctly ticked. If more boxes are ticked than there are correct answers, then deduct one mark for each additional tick. Candidates cannot score less than zero marks.

E.g. If a question requires candidates to identify a city in England, then in the boxes

Edinburgh	
Manchester	
Paris	
Southampton	

the second and fourth boxes should have ticks (or other clear indication of choice) and the first and third should be blank (or have indication of choice crossed out).

Edinburgh			✓			✓	✓	✓	✓	
Manchester	✓	x	✓	✓	✓				✓	
Paris				✓	✓		✓	✓	✓	
Southampton	✓	x		✓		✓	✓		✓	
Score:	2	2	1	1	1	1	0	0	0	NR

Question		Answer	Mark	Guidance
1	(a)	1. trachea/ windpipe (1) 2. intercostal muscle/ rib/ rib cage (1) 3. diaphragm 4. alveoli/ air sac (1)	4	
	(b)	(i) any two of: large surface area (1) thin walls (1) moist walls (1) good blood supply (1) lots of them (1)	2	ignore stretchy
		(ii) any two of: reduces gas exchange/ uptake of oxygen; reduces surface area (for exchange of gases); increases diffusion distance; difficult to breathe/ quickly out of breath; blocks the alveoli; coughing; quickly out of breath; leads to lung infections	2	allow cannot do their job
	(c)	asthma (1)	1	allow any suggestion they are likely to have come across such as diabetes or any type of genetic disorder such as red/green colour blindness allow <u>named</u> cancer

Question		Answer	Mark	Guidance
2	(a)	some form of (leg) exercise (1) idea of repeating it/ gradually increasing the intensity (1)	2	looking for an example students will be familiar with from their case studies
	(b)	any two of: measure fitness / step test / bleep test / other example; (1) repeat measurement (after a period of time); (1) record / compare the performance; (1) (by) physiotherapist / fitness trainer / fitness instructor / coach / personal trainer etc (1)	2	
	(c)	any two of: progress may not be rapid enough / too hard (1) progress may be faster than expected / too easy (1) illness and injury may have happened (1)	2	

Question		Answer	Mark	Guidance
3	(a)	<p>advantage: quick/ easy to carry out /cheap(1) disadvantage: not quantitative / may be confusion over colour (1)</p>	2	<p>ignore reference to reliability allow not as accurate for disadvantage</p>
	(b)	pregnancy (1)	1	
	(c)	<p>any three of: raises awareness (1) people try to reduce risk (1) fewer people developing illness at such an early age (1) reduces cost of treatment (1) avoids so many of NHS resources tied up dealing with long term chronic disorder/money can be spent in other NHS areas(1)</p>	3	
4	(a)	<p>hypothermia (1) a panic attack / infection(1) shock (1)</p>	3	
	(b)	<p>assess injuries/ triage (1) treat most serious first (1)</p>	2	
5	(a)	<p>ovary (1) oviduct/fallopian tube (1) uterus/womb (1)</p>	3	
	(b)	(i) <p>any two from: builds up trust between mother and midwife/ staff (1) allows the mothers health/well being to be monitored (1) allows the developing baby to be monitored (1) allows information to be delivered so that the mother can prepare for the birth of her child (1)</p>	2	

Question		Answer	Mark	Guidance
	(ii)	a (named) suitable example (1) examples of how the campaign is carried out/how the health/fitness can be improved/a description of the resulting health benefit (1)	2	allow any sensible public health campaign together with a description of how it intends to improve health or fitness for example the '30 minute active' TV commercial intended to get people to exercise for 30 mins a day (to improve their fitness and circulation) allow reverse argument of not following campaign advice
6	(a)	(Josh) $1050 \times 2 = 2100(1)$ (Ramon) $1400 \times 1.25 = 1750(1)$	2	
	(b)	Josh because he has used more energy	1	allow ecf there must be some indication of a calculation there is no mark for a guess allow used more KJs
		Paper Total	36	

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