

# **Additional Applied Science A**

General Certificate of Secondary Education

Unit **A324/01**: Life Care

## **Mark Scheme for January 2011**

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Mark schemes should be read in conjunction with the published question papers and the Report on the Examination.

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Question		Expected Answers	Marks	Additional Guidance
1	(a)	clinical thermometer; (1) pulse monitor; (1) Sphygmomanometer; (1) ECG; (1) blood/urine either order; (1)	[5]	words must be in correct order  both blood and urine needed for last mark
<b>Total</b>			<b>[5]</b>	
2	(a)	<b>A</b> humerus; (1) <b>B</b> radius; (1) <b>C</b> ulna; (1)	[3]	
	(b)	X-ray; (1)	[1]	
	(c)	protection; (1) support/framework; (1)  attachment of muscles/movement; (1)	[3]	<b>allow</b> stores Calcium <b>allow</b> gives body shape/holds body up/helps us to stand (1) <b>ignore</b> keep in shape / provides structure <b>allow</b> the idea that a skeleton enables movement even if there is no direct link to attachment of muscles <b>allow</b> production of (red/white) blood <u>cells</u>
<b>Total</b>			<b>[7]</b>	

Question		Expected Answers	Marks	Additional Guidance
3	(a)	bars correctly plotted; (2)	[2]	
	(b)	<b>any two from:</b> to reduce chance of getting these diseases (Measles, Mumps & Rubella); (1) stops diseases spreading; (1) side effects are not bad owtte; (1) not many get side effects owtte; (1)	[2]	<b>allow</b> benefits outweigh risks (2) <b>eg</b> getting the disease is more dangerous than the side effects (of the vaccination) (2) <b>allow</b> fewer people in London have the vaccination (1) so there is a greater risk to Josh owtte (1)
	(c)	A, C, D	[2]	all three correct = 2 marks two correct = 1 mark if more than 3 answers deduct 1 mark per extra response
	(d)	suitable name; (1) appropriate role; (1) suitable name; (1) appropriate role; (1)	[4]	<b>not</b> nurse but any suitable health care worker and a description of their role such as GP diagnose illness
<b>Total</b>			[10]	

Question		Expected Answers	Marks	Additional Guidance
4	(a)	medicine does not kill the virus / it takes time for the body to kill the virus;	[1]	<b>reject</b> you cannot kill a virus
	(b) (i)	<b>any two from:</b> bacterial infection; (1) pregnancy; (1) diabetes; (1) kidney <u>infection / failure</u> ; (1)	[2]	<b>allow</b> drug addiction/abuse, prostate cancer, STIs or any relevant diagnosis from urine <b>allow</b> urine infection <b>ignore</b> cancer/drugs/alcohol/infection on their own <b>ignore</b> glucose/sugar/protein etc
	(ii)	advantage: quick / easy / simple (to use) / reliable; (1) disadvantage: not quantitative/accurate/precise/colours do not always match; (1)	[2]	<b>ignore</b> references to cost
<b>Total</b>			[5]	

Question		Expected Answers	Marks	Additional Guidance
5	(a)	$\frac{45}{2.25}$ or $\frac{45}{(1.5)^2}$ correct substitution; (1) 20; (1)	[2]	correct answer scores two marks <b>allow</b> 1 mark for correct working, ignore mathematical error
	(b)	(i) overweight; (1)	[1]	
		(ii) <b>any two from:</b> Ronan is overweight & John is underweight; (1) Ronan should lose weight, & John should build his body up; (1) different needs; (1) may be starting with different levels of fitness; (1) one might be a smoker; (1) asthmatic; (1) be injured; (1)	[2]	looking for an appreciation that no two people will have exactly the same exercise requirements because an individual programme is determined by the physical, mental and health status of the individual concerned
	(c)	measure a parameter (pulse rate / BMI / breathing rate / blood pressure / weight); (1) before & after / at intervals; (1)	[2]	<b>allow</b> making / keeping records (1) <b>allow</b> step / bleep test; (1) repeated (1) progress may be monitored within one session or over several sessions
	(d)	<b>any two from:</b> injury; (1) illness; (1) progress/improvement more than expected (therefore it needs to be more challenging); (1) no progress / improvement less than expected (so has to be toned down); (1) too easy / too hard; (1)	[2]	<b>allow</b> answers in terms of expected weight gain/loss
		<b>Total</b>	[9]	
		<b>Paper total</b>	[36]	

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