

Additional Applied Science A

General Certificate of Secondary Education **A324/02**

Unit 1: Life Care (Higher Tier)

Mark Scheme for June 2010

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Question		Expected Answer	Mark	Rationale/Additional Guidance
1	a	Colin has pulled a muscle in his back	<input checked="" type="checkbox"/>	[2] 3 correct = 2 marks 2 or 1 correct = 1 mark
		the water temperature is only 25°C	<input type="checkbox"/>	
		Colin had too much alcohol at a party	<input type="checkbox"/>	
		Colin is not winning any competitions	<input checked="" type="checkbox"/>	
		Colin has had a tattoo on his shoulder	<input type="checkbox"/>	
		Colin has just returned from a 2 week holiday	<input checked="" type="checkbox"/>	
	b	precise/exact/close to true value/ reference to a quantitative aspect of using stopwatch	[2]	allow: e.g. digital stopwatch recording to thousandths of a second
		how many times it is repeated/consistency/ conformity of results		ignore: 'trustworthy'
Total			[4]	

Question		Expected Answer	Mark	Rationale/Additional Guidance
2	a	any two from: urine/tissue/pus/saliva/vomit/semen	[2]	reject: faeces/blood/hair/sweat/DNA allow: sperm
	b	any two from: (quicker identification means) quicker to isolate/treat/cure(1) prevents (rapid) spread of infection/fewer cases (1) fewer deaths (1)	[2]	reject: the idea that it is a cleaner technique for Monisha to use allow: economic/efficiency argument (more patients tested in time) reject: easier/quicker to kill (the bacteria)
	c	i	[1]	look for explanation of 'why'
		ii	[2]	
		any two from: limited funds available(1) allocate resources where needed/prioritise resources (1) spending on administration/spending on practitioners/spending on building/other services (1)	[2]	
		Total	[7]	

Question		Expected Answer	Mark	Rationale/Additional Guidance
3	a	A (atrioventricular) valve B left atrium C right ventricle D left ventricle	[2]	all 4 correct = 2 marks 2 or 3 correct = 1 mark reject: incorrect valve name for A
	b	function one from: arteries carry blood at high pressure/away from the heart (1) structure one from: arteries have thicker walls/more elastic/narrower lumen/no valves (1)	[2]	allow: reverse argument reject: arteries/veins pumping blood ignore: arteries carry oxygenated blood/veins deoxygenated look for structure mark and function mark – don't need to be linked to each other. Do need comparison between artery and vein to get mark. Thicker wall (for artery) implies comparison. do not allow 2 structure or 2 function marks
		Total	[4]	

Question		Expected Answer	Mark	Rationale/Additional Guidance
4	a	it is a legal requirement (1) all treatments carry some risk (1) treatments often have side effects (1)	[3]	ignore: any reference to being sued
Total			[3]	

Question		Expected Answer	Mark	Rationale/Additional Guidance
5	a	axes (1) scale (1) plot (1)	[3]	axes labelled – allow x axis as injury and y axis as number of players/people scale not less than half the graph paper plot +/- half a square line graph doesn't gain plot mark
	b	50 (2)	[2]	allow 1 mark for correct substitution
	c	i	[1]	reject: X-ray ignore: Scan allow: ultrasound, CAT, PET
		ii	[3]	allow quadriceps for muscle
		iii	[2]	ignore: references to stretchiness
Total			[11]	

Question		Expected Answer	Mark	Rationale/Additional Guidance
6	a	need to ensure she is fit enough to undergo the course of treatment (1) need to ensure that the benefits outweigh the risk to the patient (1)	[2]	
	b	a named example of a situation involving drug therapy (1) brief description of the example chosen (1)	[2]	specification states briefly describe an example of drug therapy used to improve health and or fitness, so be prepared to accept any sensible suggestion such as the use of chemotherapy for the treatment of a malignant brain tumour/to kill cancer cells. allow: antibiotics to kill/destroy bacteria = 2 marks paracetamol to relieve pain = 2 marks painkiller to relieve pain = 1 mark steroids to help immune system or build muscle = 2 marks allow: kemotherapy/chemo/kemo If 'vitamins' must be correct named vitamin with correct associated deficiency
	c	any three from: treatment is expensive (1) not enough money for everyone to receive the treatment(1) have to prioritise (1) unproven medication (may not be fully tested) so not accepted by PCT (1)	[3]	looking for the idea that in a ideal world all medication would be available to everyone, but in reality it is necessary to juggle the needs of the multitude against the needs of an individual
		Total	[7]	
		Paper Total	[36]	

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