

**BL1HP****Question 2**

<b>question</b>	<b>answers</b>	<b>extra information</b>	<b>mark</b>
<b>2(a)</b>	both lead to reduction / fall (in measles cases)	can be implied	1
	measles vaccine caused a big drop <b>or</b> correct use of figures		1
	MMR wipes out measles <b>or</b> drops to (almost) zero <b>or</b> doesn't fall as much as measles vaccine <b>or</b> correct use of figures.		1
<b>2(b)</b>	mump(s)	either order	1
	rubella / german measles	allow phonetic spelling	1
<b>2(c)</b>	white blood cells	allow lymphocytes / leucocytes ignore memory cells	1
	(wbc) produce antibodies	ignore antitoxins / antigens / antibiotics / engulfing	1
	in future / if re-infected antibody production rapid / fast(er) / quick(er)	allow ecf from antitoxins / antigens / antibiotics ignore engulfing ignore reference to specificity	1
<b>Total</b>			<b>8</b>



Question	Answers	Extra information	Mark	AO / Spec. Ref.
4(a)	microorganism / bacteria / virus / fungus that causes (infectious) disease		1	AO1 1.1.2a
4(b)	reduce / stop use of (current) antibiotics  (reduce / stop use) for non-serious / mild / viral infections	allow ensure course is completed  allow use of variety of antibiotics	1  1	AO1 1.1.2j/k/ 1.8.1f
4(c)(i)	40 °C		1	AO2 1.1.2o
4(c)(ii)	any <b>one</b> from: <ul style="list-style-type: none"> <li>microorganisms grow / reproduce / work / act faster</li> <li>results / product acquired sooner</li> </ul>		1	AO1 1.1.2o
<b>Total</b>			<b>5</b>	

Question	Answers	Extra information	Mark	AO / Spec Ref
<b>10(a)</b>	dead / inactive / weakened	allow protein / antigen ignore ref to other components ignore small amount do <b>not</b> allow large amount	1	AO1 1.1.2e/l
	pathogen / bacterium / virus / microorganism / microbe	ignore germs / disease	1	
<b>10(b)(i)</b>	Mumps and rubella		1	AO1 1.1.2d/l
<b>10(b)(ii)</b>	white blood cells produce / release antibodies	penalise misuse of antigen / antibiotic, rather than antibody, the first time only  allow lymphocytes / leucocytes / memory cells produce antibodies do <b>not</b> allow phagocytes	1	AO1 1.1.2l
	antibodies produced quickly (on infection)		1	
	(these) antibodies destroy the (live) pathogen / virus	allow kill ignore action of antibodies produced as a result of the vaccination do <b>not</b> allow antibodies engulf pathogens	1	
<b>10(c)(i)</b>	(live) bacteria still in the body would reproduce	ignore numbers	1	AO2/AO3 1.1.2h
		ignore mutation / growth	1	

<b>10(c)(ii)</b>	any <b>two</b> from, <ul style="list-style-type: none"> <li>• (bacteria / pathogens) mutate</li> <li>• to form antibiotic-resistant strains</li> <li>• idea of consequence of current antibiotics no longer killing bacteria</li> </ul>		2	AO1/AO2 1.1.2h/i/j/k
<b>Total</b>			<b>10</b>	

**Question 3**

Question	Answers	Extra information	Mark	AO / Spec. Ref.
<b>03.1</b>	<p>any <b>two</b> from:</p> <ul style="list-style-type: none"> <li>acid in stomach kills pathogens in food</li> <li>skin forms a barrier / produces antimicrobial secretions</li> <li>hairs in the nose trap (particles which may contain) pathogens</li> <li>trachea / bronchi has mucus which traps pathogens</li> </ul> <p><b>or</b></p> <p>bronchi have cilia which waft mucus to throat to be swallowed</p>		2	AO1/1 4.3.1.6

**Question 3 continued**

Question	Answers	Extra information	Mark	AO / Spec. Ref.
<b>03.2</b>	<b>Level 3:</b> A clear, logical and coherent answer, with no significant redundancy. The student understands the process and links this to reasons for clinical trials.		5–6	AO1/2 4.3.1.9
	<b>Level 2:</b> A partial answer with errors and ineffective reasoning or linkage.		3–4	
	<b>Level 1:</b> One or two relevant points but little linkage of points or logical reasoning.		1–2	
	No relevant content		0	
	<b>Indicative content</b> <ul style="list-style-type: none"> <li>• pre-clinical trials of the new drug on cells / tissues / live animals to test toxicity, dosage and efficacy</li> <li>• clinical trials / test on healthy volunteers and patients at very low doses</li> <li>• so that you can monitor for safety / side effects</li> <li>• and only then do trials to find the optimum dosage and test for efficacy</li> <li>• double blind trial / use of placebo</li> <li>• which does not contain the new drug</li> <li>• random allocation of patients to groups</li> <li>• so no one knows who has placebo / the new drug</li> <li>• peer review of data</li> <li>• to help prevent false claims</li> </ul>			
<b>Total</b>			<b>8</b>	

**Question 8**

Question	Answers	Extra information	Mark	AO / Spec. Ref.
<b>08.1</b>	vector		1	AO2/1 4.3.1.1 4.3.1.5
<b>08.2</b>	any <b>three</b> from: <ul style="list-style-type: none"> <li>destroy the snails</li> <li>isolate infected dogs</li> <li>treat infected dogs</li> <li>educate owners about picking up dog faeces</li> </ul>	allow vaccination	3	AO2/1 4.3.1.1
<b>08.3</b>	stop mosquitoes breeding	allow correct description	1	AO1/1 4.3.1.5
	use mosquito nets	allow use of insect repellent	1	AO1/1 4.3.1.5
<b>Total</b>			<b>6</b>	