

Question Number	Answer	Acceptable answers	Mark
1(a)	Genus; Species;	Must be in the correct order	(2)

Question Number	Answer	Acceptable answers	Mark
1(b)	A suggestion including the following points: <ul style="list-style-type: none"> rats with the mutation survive to reproduce (1) pass on the allele which makes the offspring resistant to warfarin (1) 	accept breed / produce offspring etc for reproduce accept gene / mutation for allele	(2)

Question Number	Answer	Acceptable answers	Mark									
1(c)	<table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td></td> <td>R</td> <td>r</td> </tr> <tr> <td>R</td> <td>RR</td> <td>Rr</td> </tr> <tr> <td>r</td> <td>Rr</td> <td>rr</td> </tr> </table> <p>Correct gametes (1) Correct offspring (1)</p>		R	r	R	RR	Rr	r	Rr	rr	If incorrect gametes are entered into the Punnett square but the offspring for those gametes are correct 1 mark can be awarded as an error carried forward	(2)
	R	r										
R	RR	Rr										
r	Rr	rr										

Question Number		Indicative Content	Mark
QWC	1(d)	<p>A explanation to include some of the following points</p> <ul style="list-style-type: none"> • MRSA is a bacterial infection • number of cases increased from 1995 to 2006 • MRSA is resistant to antibiotics • so MRSA infection not easy to treat • number of cases were similar between 2005 and 2007 • antiseptics killed the bacteria • less bacteria were transferred from person to person • number of cases decreased from 2007 • antiseptics kill bacteria on surfaces • causing less infections from MRSA 	(6)
Level		No rewardable content	
1	1 – 2	<ul style="list-style-type: none"> • a limited explanation of the graph including correct data reading or the use of antiseptics or antibiotics to kill bacteria/treat MRSA • the answer communicates ideas using simple language and uses limited scientific terminology • spelling, punctuation and grammar are used with limited accuracy 	
2	3 – 4	<ul style="list-style-type: none"> • a simple explanation of one trend of the graph including correct data reading and the effect of the use of antiseptics or antibiotics to kill bacteria/treat MRSA • the answer communicates ideas showing some evidence of clarity and organisation and uses scientific terminology appropriately • spelling, punctuation and grammar are used with some accuracy 	
3	5 – 6	<ul style="list-style-type: none"> • a detailed explanation of at least two trends of the graph linking it to antibiotic resistance and antiseptic programme • the answer communicates ideas clearly and coherently uses a range of scientific terminology accurately • spelling, punctuation and grammar are used with few errors 	

(Total for question 1 = 12 marks)