

# Antibiotic Resistant Bacteria MS

## QUESTION 1

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)i)	E + F	either order	1
a)ii)	D		1
b)i)	any 2 from: <ul style="list-style-type: none"> <li>• rises or a description</li> <li>• falls / levels off + or a description</li> <li>• further details</li> </ul>		2
b)ii)	maximum yield		1
Total marks			5

## QUESTION 2

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)	kills / destroys bacteria / MRSA	do not allow germs	1
	prevents / reduces transfer	allow stops MRSA entering ward	1
b)	mutation	do not accept antibiotics causes mutation	1
	(causes) resistance	allow not effective	1
	to antibiotics	ignore immunity	1
Total marks			5

## QUESTION 3

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)	18.06 / 18 / 18.1	correct answer gains 2 marks if answer incorrect evidence of $(4131 - 3499) \div 3499 \times 100$ or $632 \div 3499 \times 100$ or $((4131 \div 3499) \times 100) - 100$ or 0.18 gains 1 mark	2
b)	antibiotics kill non -resistant strain or resistant strain bacteria survive	accept resistant strain the successful competitor do not accept intentional	1

	resistant strain bacteria reproduce or resistant strain bacteria pass on genes	adaptation ignore strongest / fittest survive ignore mutation ignore people do not finish antibiotic course	1
	population of resistant strain increases or proportion of resistant bacteria increases  or people more likely to be infected by resistant strain (than non- resistant strain)	allow high numbers of resistant bacteria	1
Total marks			5

#### QUESTION 4

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)i)	25 °C		1
a)ii)	pathogens		1
b)	D more / most bacteria killed	accept biggest area / ring where no bacteria are growing	1 1
c)	viruses live inside cells		1
Total marks			5