

Vaccines and Drugs 3 MS

QUESTION 1

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)	<p>White blood cells produce this substance</p> <p>Antibiotic</p> <p>This substance is used to kill bacteria</p> <p>Antitoxin</p> <p>This substance lowers blood cholesterol levels</p> <p>Painkiller</p> <p>This substance relieves only the symptoms of a disease</p>	<p>1 mark for each correct line mark each line from left hand box</p> <p>two lines from left hand box cancels mark for that box</p>	3
b)	<p>inactive</p> <p>rubella</p>	<p>allow weak / dead / un-living / safe</p> <p>apply list principle, but ignore measles and mumps</p>	<p>1</p> <p>1</p>
Total marks			5

QUESTION 2

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)	<p>don't kill pathogens / bacteria / viruses / microbes / microorganisms</p>	<p>allow don't contain antibiotics</p> <p>ignore antibodies / attack / fight</p> <p>allow only treat symptoms / pain</p> <p>ignore kill disease / germs</p>	1
b)	<p>any two from:</p> <p>age</p> <p>gender</p> <p>extent / severity of pain</p> <p>or how long had pain before trial</p> <p>type of pain / illness / site of pain (body) mass / weight / height</p> <p>other medical issues / drugs taken / health / fitness</p> <p>ethnicity</p>	<p>accept 'the pain' for 1 mark, if neither extent or type given</p> <p>ignore pain threshold</p> <p>allow body size / physique</p>	2
c)i)	75	ignore calculations / %	1
c)ii)	faster pain relief / decrease	<p>allow pain relief sooner</p> <p>or it works quicker</p> <p>or more pain relief at start / in first 1 / 1 3/4 hours</p>	1

c)iii)	decrease of pain higher / more	ignore more effective unless qualified by time >1 3/4 hours	1
	decrease of pain is longer lasting	allow effect lasts longer	1
d)	any three from: (Yes because) rapid pain relief (from A) long lasting pain relief (from B) and it costs less the sum of the pain relief (from A + B) is greater (than X) (No because) drug X gives more pain relief (A + B / they) might interact with each other could result in overdose could be more / new side effects	ignore yes or no if neither points gained allow (more) dangerous	3
Total marks			10

QUESTION 2

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)	dead / inactive / weakened	allow antigen / protein	1
	pathogen / bacterium / virus / microorganism	ignore ref to other components ignore small amount ignore germs / disease	1
a)ii)	white blood cells produce / release antibodies	antigen / antibiotic instead of antibody = max 2	1
	antibodies produced quickly	accept lymphocytes / leucocytes / memory cells produce antibodies	1
	(these) antibodies destroy the pathogen	do not accept phagocytes allow kill do not accept antibodies engulf pathogens	1
b)i)	(live) bacteria still in body would reproduce	ignore numbers ignore mutation / growth	1 1
b)ii)	antibiotics / treatment ineffective or resistant pathogens survive these reproduce	accept resistant out compete non-resistant	1
	population of resistant pathogens increase	allow (resistant pathogens reproduce) rapidly	1 1
Total marks			10

QUESTION 4

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)	microorganism / bacteria / virus / fungus that causes (infectious) disease		1
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
c)i)	40 °C		1
c)ii)	any one from: <ul style="list-style-type: none">• microorganisms grow / reproduce / work / act faster• results / product acquired sooner		1
Total marks			5