

Name of the Student: _____

Max. Marks : 23 Marks

Time : 23 Minutes

Mark Schemes

Q1.	
(a) (i) viruses live inside cells	1
viruses inaccessible to antibiotic <i>allow drug / antibiotic (if used)</i> <i>would (have to) kill cell</i>	1
(ii) any two from eg	
• non-resistant strains killed (by antibiotics)	
• so less competition	
• overuse of antibiotics / antibiotics prescribed for mild infections <i>if no marks gained allow one mark for 'people do not finish course of antibiotics'</i>	2
(b) (stimulate) antibody production <i>ignore antitoxin</i>	1
(by) white cells	1
<u>rapidly</u> produce antibody on re-infection <i>ignore antibodies remain in blood</i>	1
[7]	

Q2.

(a) (i) any **one** from:

- cells
- tissues
- (live) animals / named
allow mammals

1

(ii) any **three** from:

(to test for)

- toxicity / check not poisonous / not harmful
allow side-effect
allow converse
- interaction with other drugs
- efficacy **or** to see if they work **or** check if they treat the disease
allow converse
- dosage **or** how much is needed

3

(b) **argued evaluation**

*comparison can be written anywhere in evaluation allow use of 'only'
for implied comparison for each point eg **only** statins damage muscles
/ kidneys / organs*

any **six** from:

- statin can damage / muscles / kidneys / organs but cholesterol blockers don't
ignore liver
*if neither of the first 2 points are given accept for **1** mark*
- statins can cause death but cholesterol blockers don't
*statins are more dangerous than cholesterol blockers **or** statins have
more side effects*
- cholesterol blockers can interfere with action of other drugs but statins don't
- statins are for a life time but cholesterol blockers are not
- statins (might) reduce cholesterol to zero but cholesterol blockers only
reduce it **or** statins reduce cholesterol more
*allow statins (might) stop membrane / hormone production but
cholesterol blockers don't*
- statins better for people with inherited high cholesterol
- cholesterol blockers better for people with dietary cholesterol problems
- taking/using statins/cholesterol blockers is better than dying from heart
attack or build up of fat in blood vessels or reduced blood flow

6

[10]

Q3.

- (a) (i) kills / gets rid of / reduces methane bacteria
allow kills / gets rid of / reduces bad bacteria
ignore acts like antibiotic
1
- (ii) less food converted to methane
allow can keep more cattle without further environmental damage
ignore energy
1
- more growth / meat / muscle / milk produced / more profit / fatter animals
ignore references to bacteria and disease
1
- (b) absorbs energy / heat radiated by Earth
allow absorbs / traps energy / heat / from Earth
*do **not** allow absorbs energy / heat from Sun*
1
- some energy / heat reradiated
ignore reflected
*do **not** allow reradiates energy / heat from Sun*
1
- leading to global warming / enhanced greenhouse effect
accept effects of global warming eg melting ice caps
accept methane is a greenhouse gas
ignore references to ozone
1

[6]