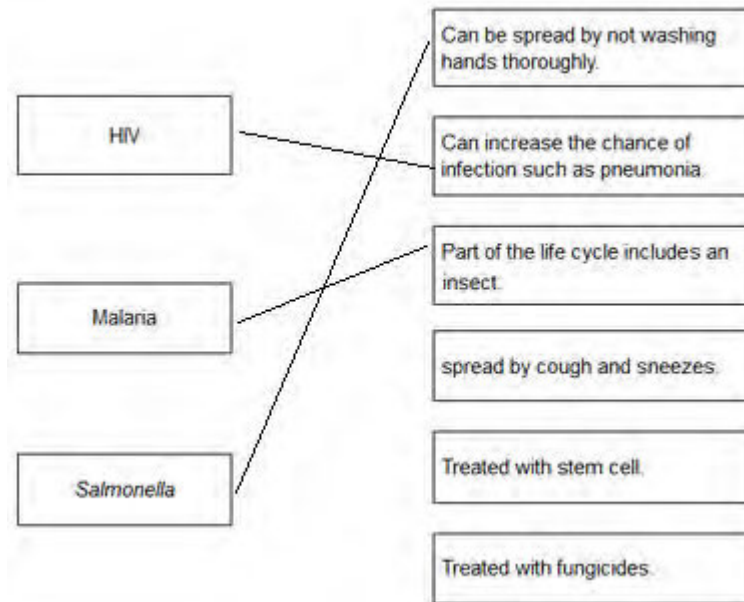


M1.

(a)



each extra line negates a mark

4

1

1

(b) pain when urinating

1

yellow discharge

1

(c) three correct plots

allow 1 mark for two correct plots

2

correctly drawn line

1

(d) any **three** from:

- (fairly) level / steady up to 2009
allow numbers of males fall (slightly) and females rise (slightly) up to 2009
- (there is a) rise after 2009
- males are (always) higher than females
- males rising faster than females
allow overall increase (from 2005 to 2013)

3

(e) HIV is a virus

1

(and) antibiotics are only effective against bacteria

or

antibiotics do not kill viruses

allow viruses live inside cells

1

[13]

M2. (a) (i) 25°C 1

(ii) pathogens 1

(b) **D** 1

more / most bacteria killed
accept biggest area / ring where no bacteria are growing 1

(c) viruses live inside cells 1

[5]

M3. (a) 40 – 60 hours 1

(b) (i) decrease 1

1st slowly then faster / appropriate detail from the graph – e.g. from 7.8 to 0 / faster after 4 – 10h 1

(ii) oxygen after glucose
extra box ticked cancels 1 mark 1

oxygen less than glucose 1

(iii) respiration 1

[6]

M4.	(a) antibodies	1
	antitoxins	1
	antibiotics	1
	(b) any two from:	
	• measles	
	• mumps	
	• rubella / German measles	2
	(c) less / low / no chance of getting named or all condition(s) if vaccinated	1
	quantitative figure(s) eg 5 times less likely to get convulsions	1
		[7]

- M5.** (a) pathogens 1
- (b) (i) A disease affecting people in many countries 1
- (ii) birds fly / migrate
accept converse
- OR
- human contact with birds more likely
birds not contained / difficult to control movement
- OR
- there are more birds (than pigs) 1
- (c) (i) antibiotics (only) kill bacteria
ignore flu is caused by a virus unqualified
- OR
- antibiotics don't kill viruses
ignore virus resistant / immune 1
- (ii) painkillers
accept any correct named painkiller, eg aspirin or paracetamol
allow antivirals / Tamiflu
ignore medicine / tablets 1
- (iii) resistant 1
- bacteria 1
- in this order*

- M6.** (a) leprosy
allow bone / blood cancer
ignore cancer 1
- (b) (i) 6 / six 1
- (ii) from 1120 to 5600
allow from 5600 to 1120
allow 4480 (alone) 1
- (c) any **one** from:
ignore side effects, eg allergies
ignore safety / harm unqualified
- (test for) toxicity
allow poisonous
 - (test for) dosage
allow idea of amount
 - (test for) efficacy.
allow to see if it works
allow to check for interaction with other drugs 1
- (d) (i) any **two** from:
ignore reference to cost / addiction
- more people take / use legal / non-prescribed drugs
 - legal / non-prescribed drugs are (more) readily available
 - alcohol causes liver / brain damage
- or**
tobacco causes cancer.
allow harmful effects of other named legal non-prescribed drugs

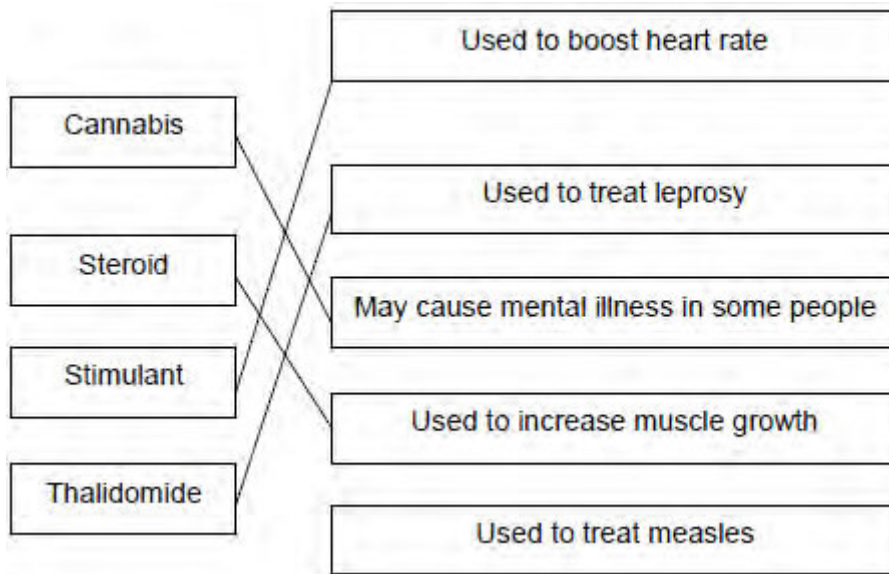
2

- (ii) addiction / dependency
allow withdrawal or examples of symptoms of withdrawal (if attempting to stop)

1

[7]

M7.(a)



extra line from any drug cancels that mark

4

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

- (live) animals
accept named examples, eg mice
ignore people / volunteers
- cells
- tissues
*do **not** allow plants*

1

(ii) to check that the drug works

1

to find the best dose to use

1

(iii) only scientists at the drug company

1

(c) (i) 420

1

(ii) statin(s)

1

(iii) any **one** from:

- side effects
allow cost
- other medication
allow patient choice
- other (medical) conditions
allow family history or age

1

[11]