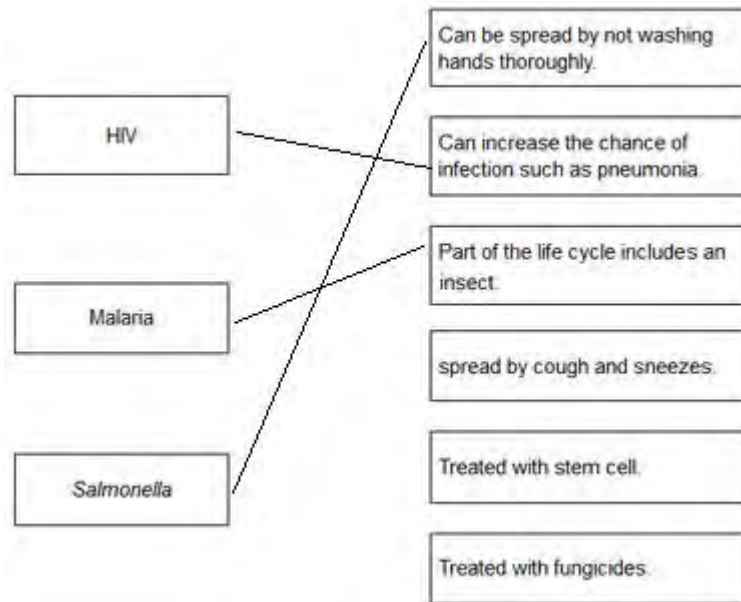


M1.

(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

1<sup>st</sup> 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]**

<b>M4.</b>	(a) antibodies	1
	antitoxins	1
	antibiotics	1
	(b) any <b>two</b> 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
		<b>[7]</b>

- 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

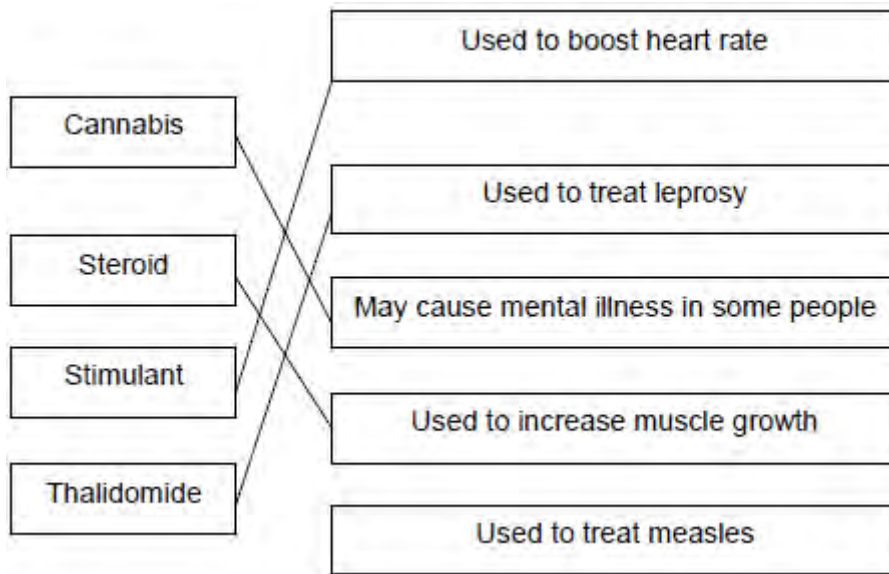
- (ii) addiction / dependency  
*allow withdrawal or examples of symptoms of withdrawal (if attempting to stop)*

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]