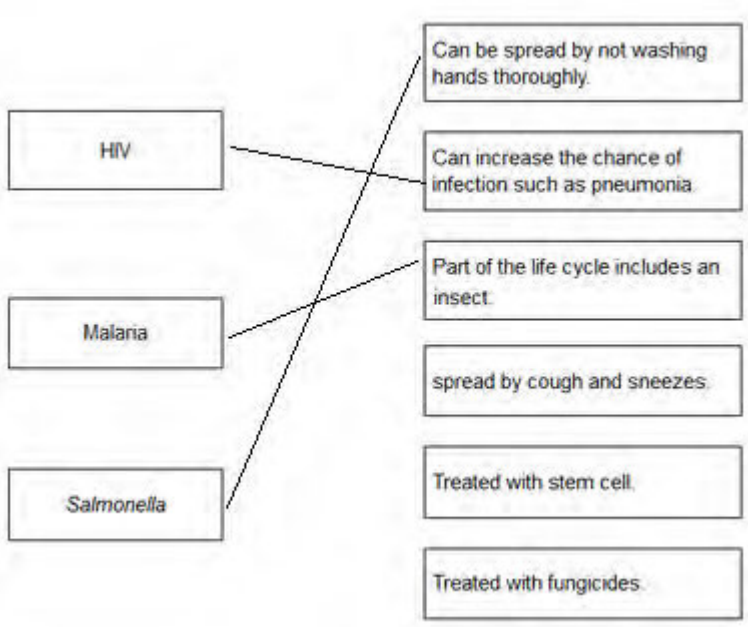
M1.

(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 <u>only</u> 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

[7]

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

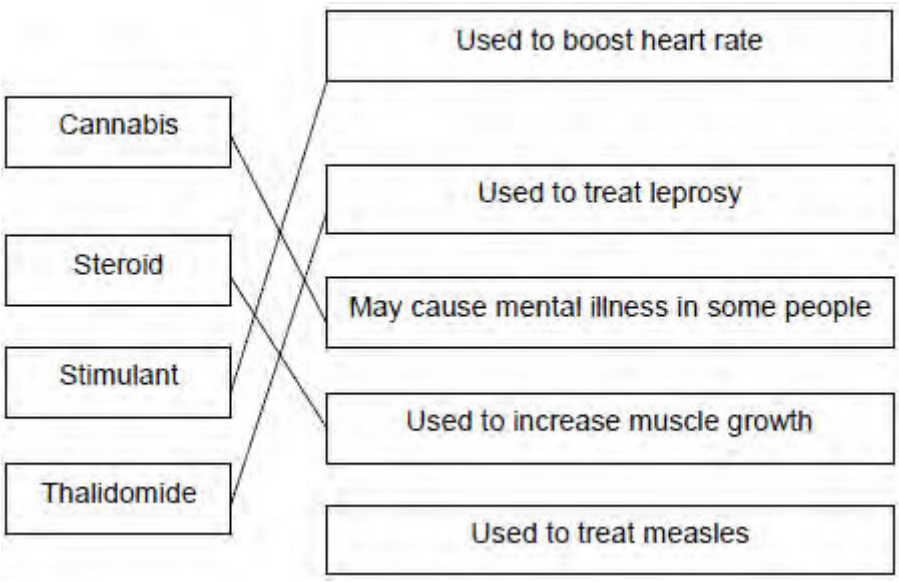
(ii) addiction / dependency

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]