**B1 Rev Pack 5 markscheme**

**M1.**(a)     (i)      64

**1**

(ii)     36

*allow e.c.f from (i) i.e. 100 − answer given in (a)(i)*

**1**

(iii)    any **one** from:

•        only considers 16-year-olds

*ignore lack of evidence*

*allow does not refer to all ages*

•        only about some / 5 countries

*allow does not refer to all countries.*

**1**

(b)     the more exercise done the healthier a person is

*allow the more exercise done the higher the health rating*

*allow the less exercise done the lower the health rating*

**1**

(c)     having a high cholesterol level

**1**

(d)     (i)      antibodies

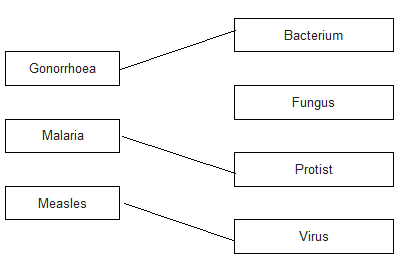
**1**

(ii)     antibiotics

**1**

**[7]**

**M2.**(a)



**3**

(b)     (trachea) has mucus

**1**

to trap pathogens

**1**

(trachea) has cilia

**1**

to move mucus out of trachea

**1**

(c)     **dependent variable:**

number of times mosquitoes landed on socks

**1**

**control variable:**

any **one** from:

•        number of mosquitoes in each container

•        length of time socks worn

•        dampness of socks

•        same type of socks

•        size of container

•        time

•        temperature

•        species of mosquito

•        age of mosquito

**1**

(d)     use worn socks

**or**

use chemical from worn socks

**1**

to attract / trap infected mosquitoes

**1**

*or accept:*

*wear clean socks / change socks regularly (1)*

*to reduce the chance of attracting mosquitoes (1)*

(e)     less chlorophyll present

**1**

(so) less light absorbed

**1**

(so) reduced photosynthesis

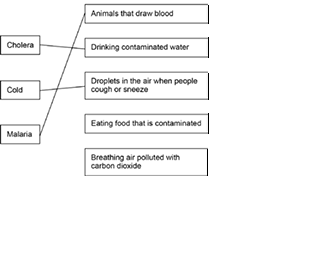
**or**

(so) less sugar / food made

**1**

**[14]**

**M3.**(a)     **Disease**       **Way the disease is spread**

****

*extra lines from left cancel the mark*

**3**

(b)     any **two** from:

•        skin acts as a barrier

•        blood clots (over cuts)

•        nose (hairs) catch particles (breathed in)

•        mucus (in trachea / bronchi) traps microorganisms

•        acid in stomach kills microorganisms

**2**

(c)     because measles is a virus

**1**

(d)     28 / twenty eight

*± 0.5 small square tolerance*

**1**

(e)     2.5

**1**

(f)     number will decrease

**1**

less likely to come into contact with someone with measles / the disease

**1**

**[10]**

**M4.**          (a)     (i)      12

*correct answer with* ***or*** *without working*

*if answer incorrect evidence of (number of deaths) × 6* ***or*** *2 seen gains* ***1*** *mark*

**2**

(ii)     (ward 2)

         more deaths / infections on ward 1

**or**

         less deaths / infections on ward 2

**1**

(b)     (i)      **both** bars correctly plotted

*ie plots in spaces between 2.8 and 3.2* ***and*** *0.8 and 1.2*

*ignore width and shading*

**1**

(ii)     less deaths / infections

**1**

(iii)     bacteria / germs / microbes / infection killed / washed off

*accept less infections passed on*

**1**

**[6]**

**M5.**          (a)     any **two** from:

*virus is neutral*

•        resistant to (most) antibiotics

•        contagious **or** easily passed on **or** reference to open wounds

•        patients ill therefore less able to combat disease

**2**

(b)     (i)      chloride of lime / hand washing killed bacteria (picked up from corpses)

*allow disease / germs / infection / disinfectants*

**1**

(ii)     people to wash hands after contact with patient

**1**

         so bacteria / pathogen / MRSA not transferred to other patient

**1**

**[5]**

**M6.**          (a)     18.06 / 18 / 18.1

*correct answer gains* ***2*** *marks*

*if answer incorrect evidence of*

*(4131 - 3499) ÷ 3499 × 100*

***or*** *632 ÷ 3499 × 100*

***or*** *((4131 ÷ 3499) × 100 ) - 100*

***or*** *0.18*

*gains* ***1*** *mark*

**2**

(b)     antibiotics kill non-resistant strain  
**or** resistant strain bacteria survive

*accept resistant strain the successful competitor*

*do* ***not*** *accept intentional adaptation*

*ignore strongest / fittest survive*

*ignore mutation*

*ignore people do not finish antibiotic course*

**1**

resistant strain bacteria reproduce  
**or** resistant strain bacteria pass on genes

**1**

population of resistant strain increases **or** proportion of resistant bacteria increases

*allow high numbers of resistant bacteria*

**or**people more likely to be infected by resistant strain (than non-resistant strain)

**1**

**[5]**

**M7.**          (a)     kills / destroys bacteria / MRSA

*do* ***not*** *allow germs*

**1**

prevents / reduces transfer

*allow stops MRSA entering ward*

**1**

(b)     mutation

*do* ***not*** *accept antibiotics causes mutation*

**1**

(causes) resistance

*allow not effective*

*ignore immunity*

**1**

to antibiotics

**1**

**[5]**

**M8.**          (a)     (bacteria) produce toxins / poisons

**1**

          (viruses) damage / kills cells **or** toxins released from cell

**1**

(b)     any **two** from:

•        viruses live inside cells

•        viruses inaccessible to drug

•        drug would damage body cells / tissue

**2**

(c)     any **four** from:

•        overuse of antibiotics

•        bacteria mutate

*do* ***not*** *allow antibiotic causes mutation*

•        antibiotics kill non-resistant strains **or** idea of selection

•        reduced competition

•        resistant bacteria reproduce

**4**

**[8]**