

Question 1

- 01.1 organ
- 01.2 (Lines drawn correctly)
- 01.3 transpiration
- 01.4 lignin
- 01.5 So light can pass through to the palisade layer for photosynthesis.
- 01.6 stomata, guard cells
- 01.7 permanent vacuole
- 01.8 active transport
- 01.9 mitochondria

Question 2

- 02.1 It forms a physical barrier to stop pathogens getting in.
- 02.2 $63/210 = 3/10$
- 02.3 At pH1, $210-23=187$ killed. At pH5, $216-185=31$ killed. The difference is 156.
- 02.4 He calculated the mean of the result for pH1 and pH3. $(23+63)/2=43$.

Question 3

- 03.1 (Lines drawn correctly)
- 03.2 1968
- 03.3 It rose from 1945, then it plateaued from about 1956-1968, then it decreased sharply.
- 03.4 The percentage decreased.
- 03.5 (Parents were worried their children would get condition X - box ticked)
- 03.6 (Have the research peer reviewed - box ticked)
- 03.7 The research wasn't peer reviewed.

Question 4

- 04.1 To test for starch you add iodine solution. A positive test is blue-black. A negative test is it stays orange-brown. To test for sugar you add Benedict's solution and heat it. A positive test is green, yellow or brick-red. A negative test is it stays blue.
- 04.2 amylase, sugar
- 04.3 (The type of bread - box ticked)
- 04.4 White bread is broken down the fastest. Wholemeal bread is the slowest.
- 04.5 Repeated the experiment three times for each bread type, and calculated a mean.
- 04.6 58
- 04.7 To make the results more reliable as everyone's taste is different.

Question 5

- 05.1 (Ionising radiation, Viruses - boxes ticked)
- 05.2 (Mitosis - box ticked)
- 05.3 grow, replicate
- 05.4 (40% - box ticked)
- 05.5 (Chromosomes are pulled to each end of the cell - box ticked)
- 05.6 cell membrane

05.7 62.5 um
05.8 cells, people
05.9 placebo

Question 6

06.1 Same size of potato, same concentration of salt solution.
06.2 Wash it.
06.3 A beaker.
06.4 (1.0 g - box ticked)
06.5 (D - box ticked)
06.6 18%
06.7 (Pie chart - box ticked)
06.8 sugar, diffusion, cell wall
06.9 0.5 mol/dm³

Question 7

07.1 (Veins - box ticked)
07.2 It restarts the heart.
07.3 To help them breathe.
07.4 aspirin
07.5 It unblocks the artery.
07.6 Smoking makes you get disease E. Smoking makes you get disease H.
07.7 (graph is blank)
07.8 not exercising

Question 8

08.1 In the cytoplasm.
08.2 (A, E and F - box ticked)
08.3 They can't breathe properly so they cant eat.
08.4 They are in the lungs. They are small. They fill with air.
08.5 Your blood would not be red.