

Name of the Student: _____

Max. Marks : 28 Marks

Time : 28 Minutes

Mark Schemes

- Q1.
- (a) (i) diffusion 1
- (ii) carbon dioxide
accept CO_2 / CO_2
*do **not** accept CO^2* 1
- (iii) red blood cells 1
- (b) 70
if no / incorrect answer then
70 000 000
or
 *280×0.25 gains **1** mark*
ignore doubling the answer 2
- (c) allows more gas / oxygen / CO_2
(exchange)
*do **not** accept air* 1
- [6]**

Q2.

- | | | | |
|-----|------|---|---|
| (a) | (i) | xylem | 1 |
| | (ii) | water | 1 |
| | | minerals / ions / named example(s)
<i>ignore nutrients</i> | 1 |
| (b) | (i) | movement of (dissolved) sugar
<i>allow additional substances, eg amino acids / correct named sugar
(allow sucrose / glucose)
allow nutrients / substances / food molecules if sufficiently qualified
ignore food alone</i> | 1 |
| | (ii) | sugars are made in the leaves | 1 |
| | | so they need to be moved to other parts of the plant for respiration / growth / storage | 1 |
| (c) | (i) | mitochondria | 1 |
| | (ii) | for movement of minerals / ions
<i>Do not accept 'water'</i> | 1 |
| | | against their concentration gradient | 1 |

[9]

Q3.

(a) any **two** from:

- only one 'chromosome'
allow one strand of DNA
- circular
allow loop
- may have plasmids
- not in a nucleus / no nucleus

2

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

- London is much higher
or converse
- more variable / wider range
allow 'on average it is 5 / 6 times greater'

1

(ii) increases

Included figures must be correct

1

(iii) overall slight increase

accept 'doesn't change much'

1

variable / goes up and down

1

(c) (i) both axes correctly labelled

x = Year

y = Number of cases

1

correct points

all correct = 2 marks

1-2 errors = 1 mark

> 2 errors = 0 marks

2

suitable line of best fit

accept straight line or smooth curve

1

(ii) doesn't fit the pattern / line of best fit

1

(d) provides immunity / protection (to TB)

ignore 'stops people catching it'

ignore 'resistance'

1

prevents TB spreading

accept ref to herd immunity

1

[13]