

Mark schemes

Q1.

- (a) a group of the same / similar cells

*ignore a group of cells unqualified***or**

a group of cells with a (similar / specific) function

ignore examples of tissue functions

1

- (b) meristem (tissue)

1

- (c) willow

ignore named parts of willow

1

- (d) any
- one**
- from:

- (berries are) easy to access / pick

ignore berries are not underground

- easier to extract chemical

- taking berries will not harm the plant

*allow taking leaves / roots might**damage / kill the plant (so it cannot produce more chemical)**allow idea that the lower mass / amount (of chemical) will be less toxic / harmful**allow greater mass of berries than of leaves / roots*

1

- (e)
- $(0.6 \times 1.2 =) 0.72$

1

$$(0.72 \times 2 =) 1.44$$

1

$$1.44 \times 1000$$

allow conversion of a correct mass calculated for berries / roots

1

$$1440 \text{ (mg)}$$

allow a correct answer using an incorrect conversion factor of a multiple of 10

1

allow conversion to mg at any point in calculation

alternative route

$$(2 \times 1.2 =) 2.4 \text{ (1)}$$

$$(2.4 \times 0.6 =) 1.44 \text{ (1)}$$

$$1.44 \times 1000 \text{ (1)}$$

$$1440 \text{ (mg) (1)}$$

(f) any **one** from:

- lack of chlorophyll
allow lack of chloroplasts
- lack of magnesium (ions)
allow lack of mineral (ions) or named example such as iron / nitrate / potassium / zinc (ions)
ignore lack of nutrients / nitrogen
allow lack of water
allow incorrect pH of soil
allow acidic / alkaline soil
allow (named) infection
allow lack of light
allow other correct suggestions

1

(g) any **two** from:

- to check toxicity
allow to check it is safe
allow to check for side effects
allow to check it is not poisonous / dangerous / harmful
- to check dosage
allow to check how much is needed
- to check its efficacy
allow to check it works
allow to check it does not interact with other drugs

2

(h) (writers / companies may get) financial gain

or

(competitor may suffer) financial loss

*ignore because the report has not been
peer reviewed*

ignore have not used a double-blind trial
1 AO3

1

(i) have the claims peer reviewed

1

[13]