

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

1.44×1000

allow conversion of a correct mass calculated for berries / roots

1

1440 (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 (1)

($2.4 \times 0.6 =$) 1.44 (1)

1.44×1000 (1)

1440 (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*ignore because the report has not been
peer reviewed*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]