

Name of the Student: _____

Max. Marks : 21 Marks

Time : 21 Minutes

Mark Schemes

Q1.

Quality of written communication

*for ideas given in a sensible order;
 comparison made for geranium and cactus for each feature
 (ie not just list for geranium followed by list for cactus)
 + linking of feature & explanation*

1

any **four** features + explanations from:

cactus has:

accept converse points for geranium plant

Feature	Explanation
thicker cuticle	waterproof / keeps water in
smaller surface area	less water loss / less heat absorbed
fewer stomata	less water loss
stomata open at night / closed in day	(closed when warmest) – so less water loss
more widespread roots	quickly absorbs water (after rain) / access to bigger area for absorbing water / absorb more water
more water <u>storage tissue</u>	little water available in environment / can survive drought / avoids dehydration

4

[5]

Q2.

an atrium

1

an artery

1

a semi-lunar valve

1

[3]

Q3.

- (i) oxygen into the blood stream
*arrow **must** start inside alveolus and finish outside the capillary*
1
- (ii) carbon dioxide out of the blood stream
*arrow **must** start inside the capillary and finish inside the alveolus*
1
- (iii) carries/takes up/releases oxygen or carbon dioxide
accept forms oxyhaemoglobin
1

[3]

Q4.

- (a) capillaries

1

- (b) (oxygen) in red blood cells **or**
haemoglobin

*the candidate **must** make clear which substance is which for 2 marks*

1

(carbon dioxide dissolved in) the plasma

accept in haemoglobin in regions of high carbon dioxide concentration

*accept for 1 mark oxygen + CO₂ is transported by red blood cells **or** haemoglobin*

*do **not** credit red + white blood cells **or** combinations of right + wrong answers*

1

- (c) **one** mark for each up to a maximum of **three**

red blood cells

award 1 mark for blood cells if no red or white

white blood cells (or named white blood cell up to 2)

platelets

urea

accept nitrogenous waste

*do **not** credit waste substances **or** products*

minerals (**or** one named mineral)

*accept ions **or** salts*

vitamins

water

hormones (named hormone up to 3)

protein (named blood proteins up to 2)

glucose

accept other named soluble sugar

*do **not** credit sugar(s) **or** blood sugar **or** sucrose*

fatty acids **or** glycerol

amino acids

digested food **or** nutrients (if individual foods not credited)

*do **not** credit starch **or** carbohydrates*

*do **not** credit nutrition **or** food*

*do **not** credit oxygen*

*do **not** credit haemoglobin*

carbon dioxide

accept nitrogen

antibodies

antitoxins

drugs **or** toxins (named up to 2)

bacteria **or** viruses

cholesterol

3

[6]

Q5.

one;

1

diffuse;

1

narrow;

1

lowered;

1

[4]