

Multiple Choice Answers

Q21: B

Multiple Choice Answers

Q18: D

Q20: D

Multiple Choice Answers

Q22: A

5(a)(i)	transpiration / diffusion ;
5(a)(ii)	<i>any five from:</i> <i>comparison</i> 1 both lose mass ; 2 higher humidity, less water vapour is lost ; 3 ref. to steeper rate / greater water lost, initially (for both groups) ; 4 comparative data quote with units ; <i>explanation for high humidity</i> 5 (higher humidity) greater amount of water vapour in the atmosphere ; 6 reduced water potential, gradient ; 7 less water vapour lost, through stomata / between guard cells ;
5(a)(iii)	line drawn on the graph above the low humidity line ;
5(b)(i)	<i>any three from:</i> glands in the skin produce sweat ; sweat on (the surface of) the skin evaporates ; using / AW, heat / energy (from the body) ; (internal) body temperature, decreases / returns, to a set point ; ref. to homeostasis / negative feedback ;
5(b)(ii)	expiration / AW ;

5(a)(i)	$6\text{CO}_2 + 6\text{H}_2\text{O} \rightarrow \text{C}_6\text{H}_{12}\text{O}_6 + 6\text{O}_2$;;
5(a)(ii)	magnesium (ion) ;

5(a)(iii)	starch ;
5(b)(i)	(positive) phototropism ;
5(b)(ii)	<i>any four from:</i> 1 auxin ; 2 (auxin) is made in / released from, the (shoot) tip ; 3 (auxin) moves by <u>diffusion</u> from (the shoot tip) ; 4 (auxin) is concentrated on, shaded / left / AW, side of the, shoot / plant ; 5 (auxin) stimulates <u>cell elongation</u> ; 6 shaded / left / AW, side of shoot, elongates / bends / grows, more than, light / right, side ;
5(b)(iii)	1 better chance of light reaching the plant / AW ; <i>any one from:</i> 2 light provides energy ; 3 light is needed for photosynthesis ; 4 able to, produce more glucose / respire ;

3(a)(i)	outline clear and continuous, no shading ; size greater than half of space provided ; detail 1: tear-shaped white patch on the left with a border and tear-shaped white patch below the beak ; detail 2: two or more lines on the beak ;
3(a)(ii)	46±1 (mm) ; 109.5 (mm) ;;
3(b)	<i>any two from:</i> <i>Gentoo has:</i> less white area / white patch around eye is triangular-shaped vs semicircular-shaped ; rounder / bigger / wider eye ; slimmer / narrower / thinner / sharper, beak ; larger pale area on beak / no stripe vs black-footed has a stripe ; smoother beak ;

3(c)	1 independent variable at least two different thicknesses of insulation (used as an insulator) ; 2 dependent variable change in temperature / time taken for a stated fall in temperature ; 3 and 4 method ;; • method of insulating beaker with named material • measure the starting temperature and final temperature 5, 6 and 7 variables kept constant ;;; • volume of water • size • type of beaker • time left to cool / stated fall in temperature • starting temperature • type of insulator • same surroundings / environmental temperature 8 repeat investigation twice more / at least two replicates ; 9 relevant safety precaution ;
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