



Question number	Answer	Notes	Marks
1 (a)	leaf;		1
(b)	made from <u>tissue(s)</u> + perform a specific function / eq;		1
(c)	The following named and labelled correctly: cell wall; 5 to 6 correct = 3 cell membrane; nucleus; 3 to 4 correct = 2 chloroplast; cytoplasm; vacuole; 1 to 2 correct = 1	ignore mitochondria and ribosomes	3



Question number	Answer	Notes	Marks
2(a)(i)	tissue(s) that carry out (same) function / <u>different</u> cell types that carry out (same) function / eq;		1
(ii)	heart;		1
(iii)	1. nervous / CNS; 2. breathing / respiratory / ventilation; 3. digestive; 4. excretory / urinary; 5. skeletal; 6. endocrine / hormonal;		3 max
(iv)	reproductive / immune / lymphatic;		1



(b)			
	Process	Name of organ	
	ultrafiltration	kidney;	
	ventilation	lung;	
	secretion of insulin	pancreas;	
	secretion of hydrochloric acid	stomach;	
	bile production	liver;	
			5

Total 11 marks



Question number	Answer	Notes	Marks																												
3 (a)	<table border="1"><thead><tr><th></th><th colspan="3">Level</th></tr></thead><tbody><tr><td>Example</td><td>organelle</td><td>organ</td><td>system</td></tr><tr><td>nucleus</td><td>(✓)</td><td></td><td></td></tr><tr><td>circulation</td><td></td><td></td><td>✓;</td></tr><tr><td>chloroplast</td><td>✓;</td><td></td><td></td></tr><tr><td>leaf</td><td></td><td>✓;</td><td></td></tr><tr><td>bulb</td><td></td><td>✓;</td><td></td></tr></tbody></table>		Level			Example	organelle	organ	system	nucleus	(✓)			circulation			✓;	chloroplast	✓;			leaf		✓;		bulb		✓;			4
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Question number	Answer	Notes	Marks											
3 (b)	<table border="1"><thead><tr><th>Order</th><th>Structure</th></tr></thead><tbody><tr><td>smallest</td><td>red blood cell</td></tr><tr><td rowspan="4" style="text-align: center;">↓</td><td>white blood cell</td></tr><tr><td>eye</td></tr><tr><td>kidney</td></tr><tr><td>liver; ;</td></tr><tr><td>largest</td><td></td></tr></tbody></table>	Order	Structure	smallest	red blood cell	↓	white blood cell	eye	kidney	liver; ;	largest		5 = 2 marks 3 = 1 mark	2
Order	Structure													
smallest	red blood cell													
↓	white blood cell													
	eye													
	kidney													
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(Total for Question = 6 marks)



EXAM PAPERS PRACTICE

Question number	Answer	Notes	Marks														
4 (a)	<table border="1"><thead><tr><th>Illness</th><th>Organ needed to cure illness</th></tr></thead><tbody><tr><td>uremia</td><td>(kidney)</td></tr><tr><td>emphysema</td><td>lung(s)</td></tr><tr><td>coronary failure</td><td>heart;</td></tr><tr><td>diabetes</td><td>s;</td></tr><tr><td>hepatitis</td><td>liver;</td></tr><tr><td>poor vision</td><td>cornea(s);</td></tr></tbody></table>	Illness	Organ needed to cure illness	uremia	(kidney)	emphysema	lung(s)	coronary failure	heart;	diabetes	s;	hepatitis	liver;	poor vision	cornea(s);		5
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	coronary failure	heart;															
	diabetes	s;															
	hepatitis	liver;															
poor vision	cornea(s);																
(b)	ble; emulsifies / large drops to small drops / eq; neutralise / optimum pH / alkaline;	2															
(c) (i)	genetically / gene / allele / DNA; identical / same / eq;	ignore similar	2														
	(ii) lots / no shortage / no delay / better supply / always available / eq; no rejection / match / accepted by body / eq; no problems with relatives / eq;			2													

TOTAL 11 MARKS



Question number	Answer	Notes	Marks
5(a)(i)	1. <u>up</u> r epidermis; 2. tr <u>ans</u> parent / lets light through / no chloroplasts;	waxy cuticle is transparent = 1	2
(ii)	1. p <u>er</u> isade; 2. d <u>ensely</u> packed / aligned vertically / eq; 3. i <u>n</u> a of <u>many</u> / <u>lots</u> of chloroplasts; 4. <u>tr</u> ansorb / take in / trap light;	ignore lots of chlorophyll	3 max
(iii)	1. <u>tr</u> ansongy; 2. <u>l</u> arge <u>spaces</u> ; 3. <u>diff</u> usion / movement of gases / gas exchange / eq; 4. xylem <u>in</u> vascular bundle; 5. <u>tr</u> ansport water;	Ignore phloem	3 max
(iv)	1. <u>guard</u> cell; 2. <u>open</u> / close; 3. let in carbon dioxide / water loss / transpire / evaporate / eq;	Ignore stomata Ignore gas exchange	2 max
(b)	1. <u>lower</u> surface in water / upper surface exposed to air; 2. allows carbo <u>dioxide</u> in; 3. allows transpiration / evaporatio <u>n</u> / water loss / eq;	Ignore gas exchange Allow converse for Mps 2 and 3	2 max
(c)(i)	20;		1
(ii)	fewer/no stomata / holes / pores / guard cells;		1

Total 14 marks