

Multiple Choice Answers

Q15: C

Multiple Choice Answers

Q15: D

Q16: D

2(a)(i)	letter on Fig. 6.1	name of the blood vessel	carries oxygenated blood
	A	pulmonary artery	no
	B	aorta	yes
	C	hepatic portal vein	no
	D	renal vein	no
,,,,			
2(a)(ii)	<i>name:</i> valve ; <i>function:</i> prevents back flow of blood / AW ;		
2(b)(i)	<i>any two from:</i> (only) two chambers ; no, septum / left and right sides / AW ; fewer valves ; heart (chamber) walls of similar thickness (to each other) ; fewer blood vessels (going to and from the heart) ;		

2(b)(ii)	<i>any four from:</i> 1 blood is pumped to the lungs then to the body / blood goes through the heart twice in one complete journey / double circulation ; 2 oxygenated and deoxygenated blood, are kept separate / do not mix / separated by septum ; 3 efficient, supply of blood / glucose / oxygen / nutrients (to, the body / AW) ; 4 efficient, removal / carbon dioxide / urea / lactic acid (from, body / AW); 5 provides high(er) pressure (in body) ; 6 which allow a high, metabolic <u>rate</u> / <u>rate</u> of respiration ; 7 which allows filtration in kidneys (for excretion) ; 8 low(er) pressure in, pulmonary, artery / circuit / AW ; 9 to prevent damage to (capillaries in the) lungs ; 10 allow more time for, gas exchange / absorption of oxygen ; 11 AVP ;
2(c)(i)	red blood cell ;
2(c)(ii)	actual size = image size ÷ magnification ;
2(c)(iii)	31.5 (µm) ;

4(a)(i)	J ; F ;																		
4(a)(ii)	<i>any two from:</i> 1 (left ventricle / H) contains more muscle ; ora 2 (muscle) contracts / pumps, with more force ; ora 3 (contraction) creates a high(er) pressure ; ora 4 blood (leaving the ventricle) is required to move further / out of the heart / to aorta / to the (whole) body / left atrium is only pushing blood to the ventricle ;																		
4(a)(iii)	<table border="1"> <thead> <tr> <th>description</th><th>sequence</th></tr> </thead> <tbody> <tr> <td>blood enters C</td><td>4</td></tr> <tr> <td>blood enters E and then E contracts</td><td>6</td></tr> <tr> <td>blood enters M and then M contracts</td><td>1</td></tr> <tr> <td>blood travels to lungs</td><td>5</td></tr> <tr> <td>blood moves into G</td><td>7</td></tr> <tr> <td>blood moves into B</td><td>8</td></tr> <tr> <td>N opens</td><td>3</td></tr> <tr> <td>blood moves into K</td><td>2</td></tr> </tbody> </table>	description	sequence	blood enters C	4	blood enters E and then E contracts	6	blood enters M and then M contracts	1	blood travels to lungs	5	blood moves into G	7	blood moves into B	8	N opens	3	blood moves into K	2
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4(b)(i)	<i>any five from:</i> 1 (exercise can lead to release of) adrenaline that increases heart rate ; 2 (exercise results in) increased (rate of) blood (flow) to <u>muscle</u> (cells) ; 3 needed for (delivery of), oxygen / glucose OR removal of carbon dioxide ; 4 respiration releases energy ; 5 energy required for (muscle) <u>contraction</u> ; 6 (exercise can lead to) anaerobic respiration / production of, lactic acid / lactate ; 7 correct ref. to oxygen debt ; 8 (heart rate remains high after exercise) to remove, lactic acid / lactate (quickly) from muscles / to liver OR to continue supplying oxygen (to repay the oxygen debt) ; 9 lactic acid / lactate, broken down / (aerobically) respired / converted to glucose / carbon dioxide and water / oxidised, in <u>liver</u> ; 10 AVP ;
4(b)(ii)	<i>any three from:</i> 1 <u>diet</u> OR a diet high in, salt / saturated fats / cholesterol ; 2 (uncontrolled) stress ; 3 smoking (tobacco) ; 4 genetic (predisposition) ; 5 (old) age ; 6 sex ; 7 and 8 AVP ;;

Multiple Choice Answers

Q14: A