Circulatory System MS

QUESTION1

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)i)	A or C	allow lower case	1
a)ii)	B or D	allow lower case	1
b)i)	60		1
b)ii)	4		1
c)	red blood cells		1
Total marks			5

QUESTION 2

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)i)	artery		1
a)ii)	capillary		1
b)i)	alveoli red blood cells nucleus		3
Total marks			5

QUESTION 3

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)i)	B or D		1
a)ii)	A or B		1
b)	any four from: • increased blood (flow) • (more) oxygen supplied or aerobic respiration • (more) glucose / sugar / food supplied • (higher rate of) respiration • (more) energy needed / released • (more) carbon dioxide removed • (muscles) doing (more) work or muscles contracting • remove heat / cooling		4

	• remove lactic acid or less lactic acid formed		
Total marks			6

QUESTION 4

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)i)	18		1
a)ii)	Z		1
b)i)	red blood cells		1
b)ii)	haemoglobin		1
Total marks			4

QUESTION 5

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)i)	A high(er) pressure in A pulse / described in A	no mark – can be specified in reason part if B given = no marks throughout if unspecified plus two good reasons = 1 mark allow opposite for B do not accept 'zero pressure' for B accept fluctuates / 'changes' allow reference to beats / beating ignore reference to artery pumping	 1 1
b)i)	17		1
b)ii)	68	accept correct answer from candidate's (b)(i) x 4	1
c)i)	oxygen / oxygenated blood glucose / sugar	allow adrenaline ignore air extra wrong answer cancels eg sucrose / starch / glycogen / glucagon / water allow fructose as an alternative to glucose ignore energy ignore food	1 1
c)ii)	carbon dioxide / CO2 / lactic acid	allow CO2 / CO2 ignore water	1
Total marks			7

QUESTION 6

QUESTION	ANSWER	EXTRA INFORMATION	MARKS
a)	blood has red (blood) cells / haemoglobin haemoglobin combines with / carries oxygen	ignore 'mix' NB Blood can form oxyhaemoglobin = 2 marks	1 1
b)	blood gains oxygen / becomes (in the lungs) oxygenated blood loses oxygen to the muscles / cells because muscles are respiring (aerobically) to provide energy (for exercise)	idea of acquiring oxygen must be unambiguous	1 1 1 1
Total marks			4