

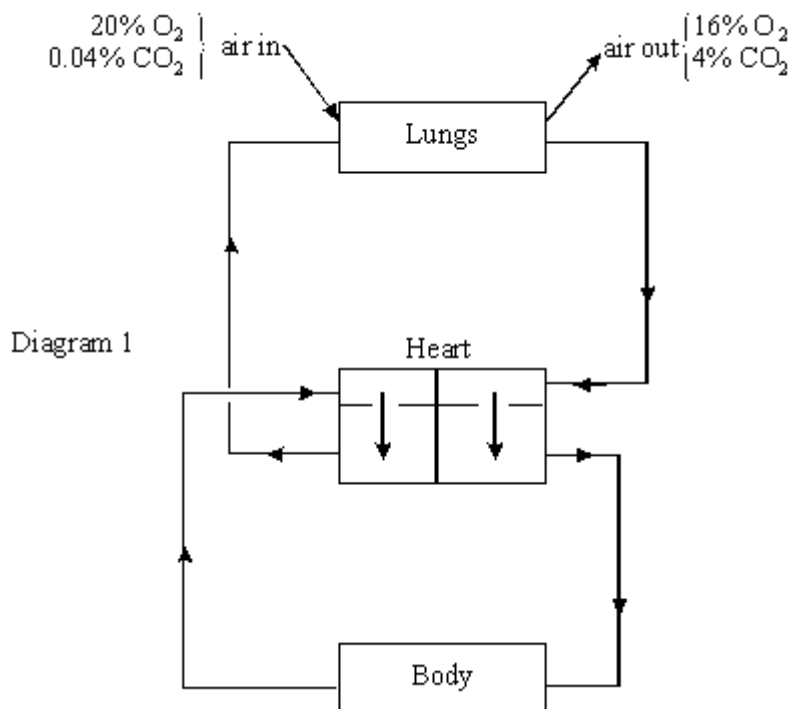
Name of the Student: _____

Max. Marks : 19 Marks

Time : 19 Minutes

Q1.

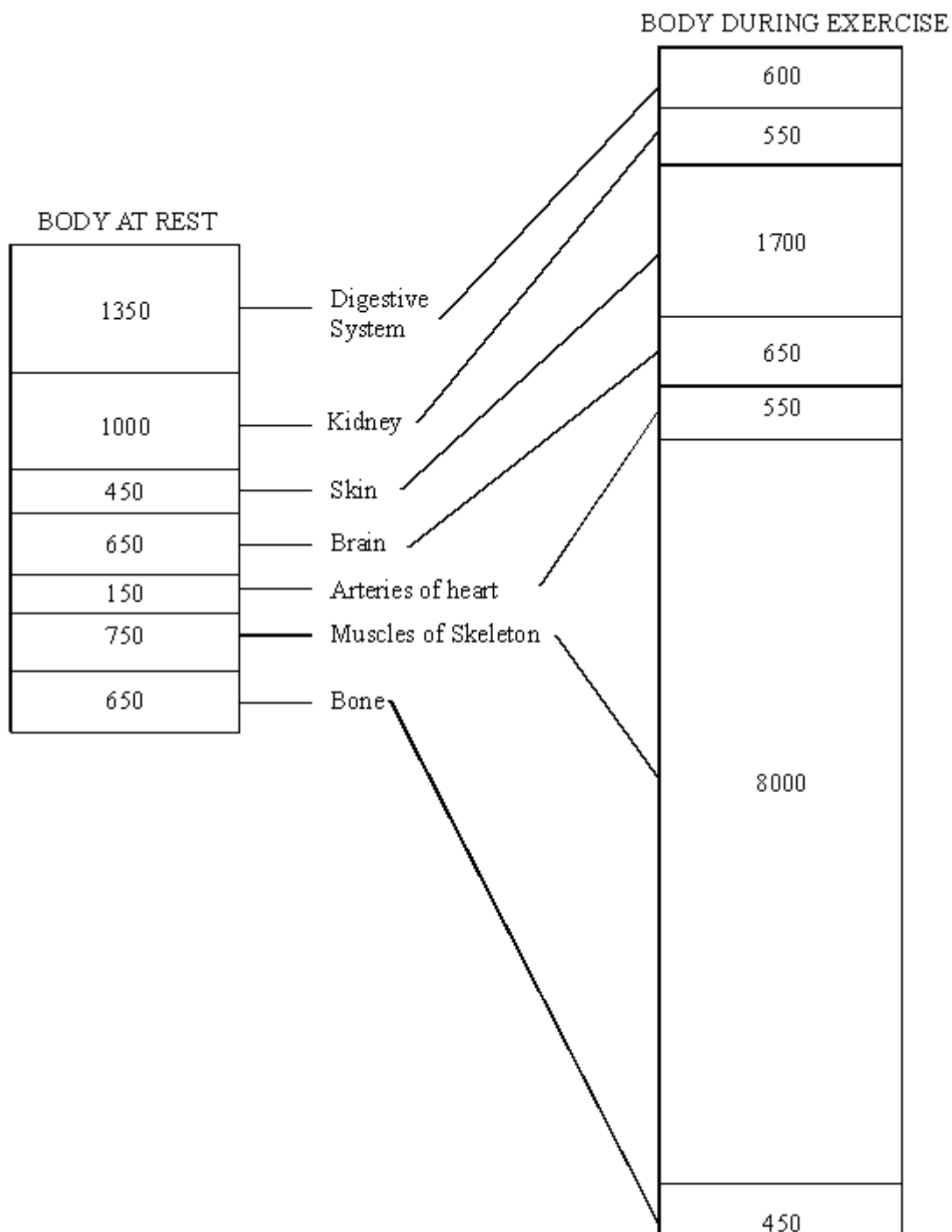
Diagram 1 shows the main features of human blood circulation.



(a) What changes in the composition of **blood** occur in the lungs?

(2)

Diagram 2 shows how the circulation of blood changes between rest and exercise.



Rate of supply of blood to parts of the body (cm^3/min) when at rest and during exercise.

- (b) (i) Use the information from Diagram 2 to complete the table below.

Parts of the body to be included:

Digestive System

Skin

Brain

Arteries of Heart

Muscles of Skeleton

Bone

HOW BLOOD SUPPLY CHANGES DURING EXERCISE		
reduced	unchanged	increased
Kidney		

(4)

(ii) What happens to the rate of supply of blood to the whole body with exercise?

(You should make full use of the information provided.)

(3)

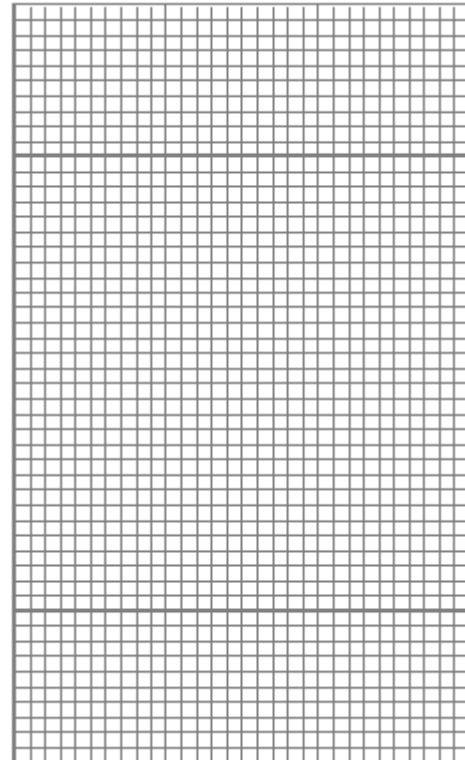
(Total 9 marks)

Q2.

- (a) The table shows an athlete's breathing rate after the end of a race.

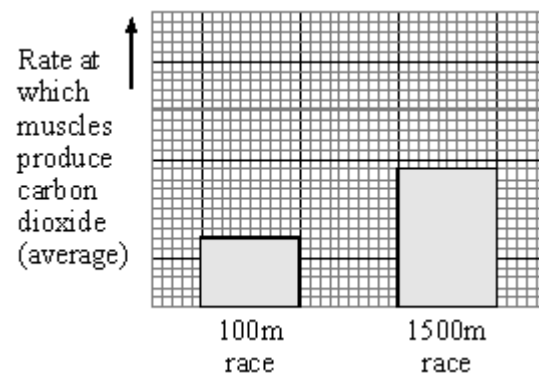
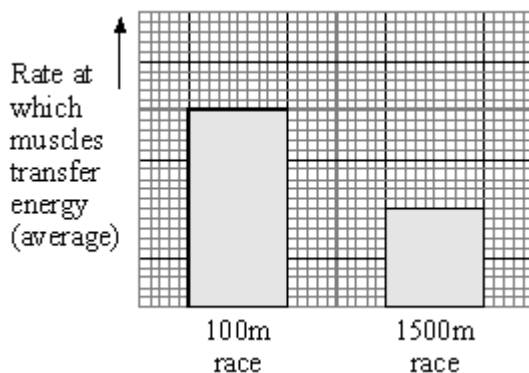
Use the information shown in the table to draw a line graph.

Time after end of race (minutes)	Breathing rate (litres per second)
0	4
1	2
2	1
3	1
4	1
5	1



(3)

- (b) The bar charts show what happens in an athlete's muscles when running in two races of different distances.



- (i) Compare what happens in the athlete's muscles when running in the two races.

(3)

- (ii) Use the information in the box to explain your answer to (i).

aerobic respiration	glucose + oxygen	→	carbon dioxide + water
anaerobic respiration	glucose	→	lactic acid

(2)

- (c) Explain why the athlete breathes at a faster rate than normal for two minutes after finishing a 100 metres race.

(2)

(Total 10 marks)