﻿**Question 1**

Which has the greatest effect on the ability of the blood to transport oxygen?

Select one:

a. The CO2 content of the red blood cells

b. The pH of the plasma

c. The amount of haemoglobin in the blood

d. The capacity of the blood to dissolve oxygen

Answer C. Ganong 23rd Edition pg 609 “O2 in the blood is determined by…the amount of haemoglobin in the blood”

**Question 2**

Which is most likely to be correct with regard to the Hb-oxygen dissociation curve?

Select one:

a. When arterial pO2 = 30 mmHg, Hb saturation is about 40 %

b. Acidosis shifts the curve to the left

c. When arterial pO2 = 60 mmHg, Hb saturation is about 80 %

d. When arterial pO2 = 40 mmHg, Hb saturation is about 75 %

Answer D. Ganong 23rd Edition pg 610 figure 36-2

**Question 3**

The Haldane effect describes:

Select one:

a. The action of carbonic anhydrase on carbonic acid

b. The shift to the right of the O2 dissociation curve caused by increased pCO2

c. The enhanced loading of CO2 in the presence of deoxygenated Hb

d. The shift of Cl- ions into red blood cells to balance HCO3 shift from those cells

Answer C. Ganong 23rd Edition pg 612 “binding of O2 to haemoglobin reduces its affinity for CO2”

**Question 4**

With an Hb of 140g/L, how many mls of O2 is carried in 1L of 100% saturated blood?

Select one:

a. 200 ml

b. 5 ml

c. 500 ml

d. 100 ml

Answer A. Ganong 23rd Edition pg 610 “1 dL of blood contains 20.1ml O2”

**Queston 5**

Regarding the haemoglobin-oxygen dissociation curve:

Select one:

a. It is not affected by a change in temperature

b. Ascent to high altitude causes a shift to the left

c. The p50 is increased during exercise

d. Increased pH causes a shift to the right

Answer C. Ganong 23rd Edition pg 611 “the p50 is also increased during exercise”

**Question 6**

With regard to CO2 carriage in the blood:

Select one:

a. HCO3 production is fast in plasma

b. The CO2 concentration in blood is independent of the saturation of haemoglobin with oxygen

c. In the red cell, H+ is primarily buffered by haemoglobin

d. The majority of CO2 is carried in the blood in the forms of dissolved CO2 and carbamino-compounds

Answer C. Ganong 23rd Edition pg 613 figure 36-6

**Question 7**

Which of the following does NOT increase synthesis of 2,3–DPG?

Select one:

a. Phosphate deficiency

b. Thyroid hormone

c. Growth hormone

d. Androgens

Answer A. Ganong 23rd Edition pg 611

**Question 8**

Which of the following shifts the oxygen dissociation curve to the right?

Select one:

a. Increased pH

b. Increased carboxyhaemoglobin

c. Increased altitude

d. Decreased DPG

Answer C. Ganong 23rd Edition pg 618 “net effect is a small increase in P50”

**Question 9**

Regarding carbon dioxide transport in blood, which statement is INCORRECT?

Select one:

a. Deoxygenation of blood increases its ability to carry carbon dioxide

b. Arterial blood transports about 20% in dissolved form

c. Oxygen is about 20 times less soluble in blood

d. Carbamino compounds are formed by reaction with both plasma proteins and Hb

Answer B. Ganong 23rd Edition pg 611 table 36-1

**Question 10**

With regard to oxygen transport:

Select one:

a. A rise in 2,3 DPG causes the oxygen dissociation curve to move to the left

b. The Rohn effect is the increase in O2 affinity of haemoglobin when the pH of blood falls

c. Banked blood has decreased levels of 2,3 DPG

d. 2,3 DPG concentration in red cells is increased by low pH

Answer C.