﻿**Question 1**

Regarding regional differences in gas exchange in the lung in the erect position:

Select one:

a. Perfusion is greater at the apex

b. Ventilation is greater at the apex compared with the base

c. Ventilation is less than perfusion at the apex

d. The V/Q ratio at the base approaches PVO2

Answer D. Ganong 23rd Edition pg 599 “the VQ ratio is low at the base”

**Question 2**

With respect to the amount of diffusion of gases across respiratory alveoli:

Select one:

a. Normally, oxygen is diffusion-limited

b. Nitrous oxide is diffusion-limited as PaN2O rapidly equals PAN2O2

c. Carbon monoxide is perfusion-limited as it depends on binding to Hb

d. Helium is diffusion-limited as it is virtually insoluble in blood

Answer D. Ganong 23rd Edition pg 601

**Question 3**

With regard to normal pulmonary and systemic vascular pressures in a supine person:

Select one:

a. The drop in pressure in the pulmonary vascular bed is similar to that in the systemic system

b. Pulmonary blood flow is 1/10th that of systemic blood flow

c. Mean pulmonary artery pressure is only about 15 mmHg

d. Right ventricular systolic pressure is half that of left ventricular, ie approximately 50 – 60 mmHg

Answer C. Ganong 23rd Edition pg 592 figure 35-4

**Question 4**

Which is responsible for the movement of oxygen from the alveoli into the blood?

Select one:

a. Facilitated diffusion

b. Filtration

c. Secondary active transport

d. Passive diffusion

Answer D. Ganong 23rd Edition pg 601 “gases diffuse from the alveoli to the blood”

**Question 5**

Substances cleared from the circulation by the lungs include all the following EXCEPT:

Select one:

a. Bradykinin

b. Prostaglandin

c. Serotonin

d. Angiotensin II

Answer D. Ganong 23rd Edition pg 606 table 35-5

**Question 6**

With regard to the distribution of blood flow in the lung:

Select one:

a. Blood flow increases linearly from the base to the apex in the upright position

b. Positive pressure ventilation may result in a region at the apex of the lung being non-perfused

c. Lung volumes do not influence regional lung blood flow

d. Distribution of lung blood flow is not affected by a change in posture

Answer B. West 5th Edition pg 39 – 42

**Question 7**

The transport of which of the following gases is diffusion limited?

Select one:

a. O2

b. CO2

c. N2O

d. CO

Answer D. Ganong 23rd Edition pg 601 “CO is diffusion limited”

**Question 8**

Which of the following is metabolized by the lungs?

Select one:

a. Glutamic acid

b. Angiotensin II

c. Norepinephrine

d. Dopamine

Answer C. Ganong 23rd Edition pg 606 table 35-5

**Question 9**

The calibre of extra-alveolar vessels is primarily determined by:

Select one:

a. The pressure in the pulmonary artery

b. The cardiac output

c. The lung volume

d. The difference between alveolar pressure and the pressure within them

Answer C.

**Question 10**

Regarding ventilation/perfusion relationships, which statement is WRONG?

Select one:

a. Exercise increases the V/Q ratio

b. V/Q ratio for the whole lung at rest is about 0.8

c. Ventilation decreases proportionately more than perfusion from base to apex

d. V/Q ratio is greatest at the lung apex

Answer C. 23rd Edition pg 599 “change in blood flow is greater than the change in ventilation”