**Question 1**

Exposure to altitude:

Select one:

a. Shifts the oxygen-Hb dissociation curve to the right due to alkalosis

b. Is associated with an increase in RBC 2,3 DPG

c. Is associated with a decrease in P50

d. Is associated with respiratory acidosis

Answer B. Ganong 23rd Edition pg 618 “increase in red cell 2,3 DPG”

**Question 2**

Hypoxemia:

Select one:

a. Will respond completely to 100 % oxygen if secondary to shunting

b. Causes a rise in PaCO2 in chronic obstructive airways disease

c. Causes decreased levels of 2,3-DPG

d. Stimulates the peripheral and not the central chemoreceptors

Answer D. Ganong 23rd Edition pg 630 “carotid and aortic chemoreceptors”

**Question 3**

Regarding exercise, which statement is correct?

Select one:

a. P50 decreases

b. Total carbon dioxide production increases by up to 40 fold

c. Total oxygen consumption decreases

d. Total pulmonary ventilation increases by up to 50 fold

Answer B. Ganong 23rd Edition pg 635 “CO2 excretion increases from 200ml/min to as much as 8000ml/min”

**Question 4**

Regarding regulation of respiration:

Select one:

a. It is not affected by changes in blood pressure

b. The respiratory centre receives inputs from the pharynx, trachea and bronchi

c. The respiratory centre lies within the pons

d. All chemoreceptors respond to changes in PCO2, H+ and PO2

Answer B. Ganong 23rd Edition pg 632 “bronchial subgroups” “receptors in the trachea”

**Question 5**

Ventilatory response to CO2:

Select one:

a. Is increased if the work of breathing is increased

b. Decreases with increasing age

c. Is more sensitive in divers and athletes

d. Is more sensitive during sleep

Answer B. “Ventilatory responses were lower in the older group”

**Question 6**

Which is correct regarding the neural control of breathing?

Select one:

a. During quiet respiration, expiration is an active event

b. Inspiratory medullary neurons supply both phrenic nerves

c. Ventral medullary neurons are expiratory and do not discharge spontaneously

d. Medullary centres merge with the central chemoreceptors

Answer C. Ganong 23rd Edition pg 626 “they project to the pacemaker neurons”

**Question 7**

Which leads to an increase in carotid body chemoreceptor firing?

Select one:

a. Cyanide poisoning

b. Anaemia

c. Carbon monoxide poisoning

d. Hypocapnia

Answer A. Ganong 23rd Edition pg 628 “released upon exposure to hypoxia and cyanide”

**Question 8**

Which of the following is NOT involved in the control of ventilation?

Select one:

a. Lung stretch receptors

b. The basal ganglia

c. The pons

d. Peripheral chemoreceptors

Answer B. Ganong 23rd Edition pg 627 table 37-1

**Question 9**

Which statement regarding hyperbaric oxygen therapy is INCORRECT?

Select one:

a. It produces marked increases in the dissolved oxygen in the blood

b. Males eliminate carboxyhaemoglobin faster than females

c. Oxygen is administered at up to 3 atmospheres of pressure

d. Toxicity includes optic neuritis

Answer B. Ganong 23rd Edition pg 622

**Question 10**

Central chemoreceptors modulate ventilation in response to:

Select one:

a. Impulses primarily from peripheral chemoreceptors (carotid body)

b. Arterial PO2

c. Arterial pH

d. Arterial pCO2

Answer D. Ganong 23rd Edition pg 629 “increases in arterial PCO2”