

Chapter 16

** _____ states that the amount of pressure exerted by a gas in a mixture is proportional to the percentage of the gas in the mixture. -----> Dalton's law

**A chest wound can introduce air into the intrapleural space, a condition known as _____ . -----> pneumothorax

**A deficiency of lung surfactant may result in _____ -----> respiratory distress syndrome

**A dry mixture of gases has a total pressure of 600 mmHg and the oxygen comprises 20% of the gas mixture. The partial pressure of oxygen (P_{O2}) is therefore equal to _____ -----> 120 mmHg

**A restrictive lung disorder is indicated by a below normal _____ -----> vital capacity

**According to _____, if it were not for pulmonary surfactants, we should expect the surface tension in a small alveolus to produce greater pressure than in a large one and air would flow from the smaller alveolus to into the larger one -----> LaPlace's law

**According to Henry's law, the amount of gas that will dissolve in blood plasma or any other liquid is determined by which of these factors? -----> solubility of the gas in the liquid

**Alveoli are microscopic air sacs branching off the _____ . -----> respiratory bronchioles

**Any lung disease that reduces the forced expiratory volume (FEV), but does not significantly affect the vital capacity is categorized purely as a(n) _____ -----> obstructive lung disorder

**Carbon dioxide is carried in the blood in all of the following ways except as _____.
-----> carboxyhemoglobin

**During normal, relaxed respiration, about 500 ml of air enters and leaves the lungs with each respiratory cycle. This is called the _____ -----> tidal volume

**External respiration refers to _____ -----> ventilation and gas exchange between the air and blood

**Forceful expiration requires the actions of the _____ -----> internal intercostals and abdominal muscles

**Hemoglobin S differs from hemoglobin A in that _____ -----> glutamic acid is replaced by valine in the beta chain

**Hemoglobin that has undergone oxidation of the iron is known as _____ -----> methemoglobin

**Hypoventilation tends to cause _____ -----> hypercapnia

**If a person's PCO₂ remains chronically high, as in emphysema, the peripheral chemoreceptors become insensitive to hypercapnia and pulmonary ventilation becomes stimulated by _____ rather than by increases in blood PCO₂. -----> hypoxic drive

**Lung surfactant is produced by _____ -----> type II alveolar cells

**Obstruction of circulation through the lungs can put a strain on the right ventricle, which must work to pump blood against this increased resistance and can lead to failure of that chamber. This syndrome is known as _____ -----> cor pulmonale

**One atmosphere is defined as _____ -----> 760 torr

**The _____ makes it virtually impossible to voluntarily over-inflate the lungs -----> Hering-Breuer reflex

**The amount of air that is inhaled or exhaled in one breath during unforced breathing is the _____ -----> tidal volume

**The bends are symptomatic of _____ -----> decompression sickness

**The Bohr effect describes the effect of _____ -----> decreased pH decreasing the affinity of hemoglobin for oxygen, enhancing unloading

**The central chemoreceptors will increase their firing rate in direct response to increases in the level of _____ in the CSF, resulting in _____ ventilation. -----> carbon dioxide; increased

**The conducting zone of the respiratory system does not _____ -----> exchange gases with the blood