# Copy of Exam 3 - Results

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## Attempt 1 of 3

Written Feb 28, 2024 10:17 AM - Feb 28, 2024 10:17 AM

Attempt Score **0 / 18 - 0 %**

### Question 1

**0 / 1 point**

the percentage of the total pressure of air due to a specific gas is

- the tension of the gas
- the osmotic potential of the gas
- the solubility of the gas
- the partial pressure of the gas
- the kinetic energy of the gas

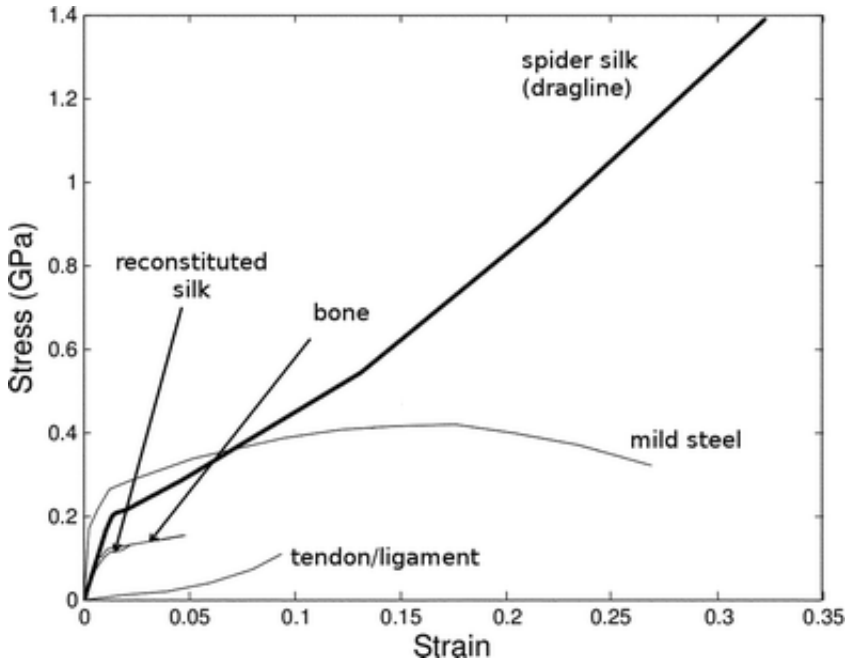
### Question 2

**0 / 1 point**

Blood flowing through an artery loads the arterial walls in

- toughness
- compression
- stiffness
- tension
- shear

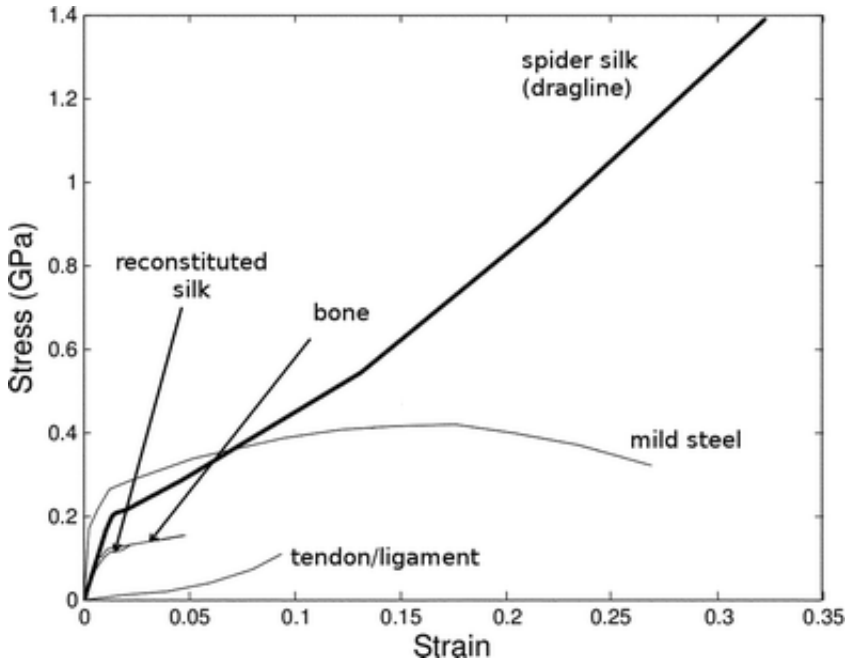
## Question 3 0 / 1 point




The stress-strain curves above are all to the breaking point. From this, we can see that

- dragline spider silk is more elastic than bone
- bone is stronger than dragline spider silk
- dragline spider silk is stiffer than bone
- dragline spider silk is tougher than bone
- tendon is stiffer than bone

**Question 4** **0 / 1 point**




The stress strain curve shows that bone is relatively stiff and tough, at least compared to tendon/ligament. What makes bone stiff?

- mineral in the ECM
- a dense cytoskeleton in the cytoplasm
- collagen in the ECM
- ground substance in the ECM
- water in the cytoplasm

**Question 5** **0 / 1 point**

The skeleton of vertebrates is composed of

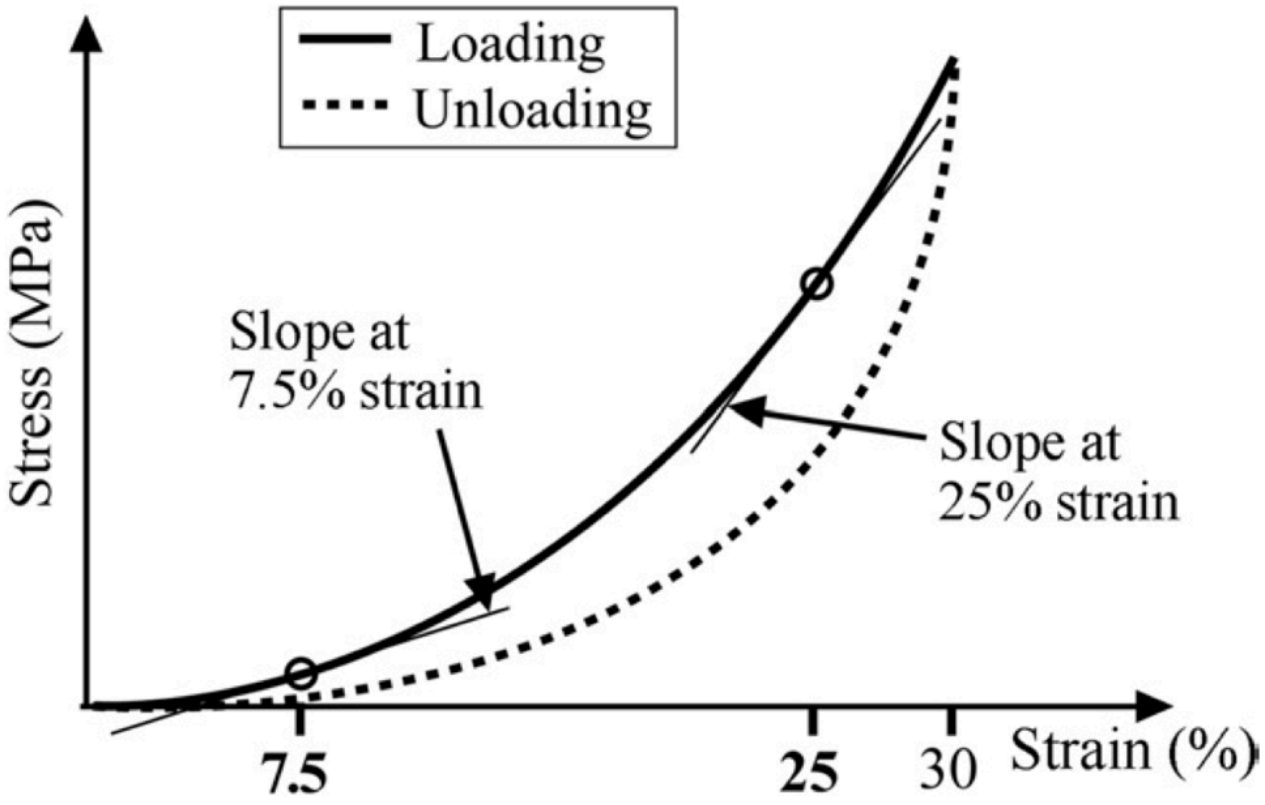
- all of the bone, cartilage, tendon, ligament, organ dense connective tissues, and fluid-filled sacs
- all connective tissues and muscle
- the bones and cartilage only
- the bones, cartilages, and muscles only
- the bones only

**Question 6** **0 / 1 point**

Air flows in and out of lungs due to pressure differences along the respiratory tract. What is the source of this pressure difference in *inspiration*?

- the alveolar volume expands, decreasing alveolar pressure relative to outside air pressure
- the alveolar volume contracts, decreasing alveolar pressure relative to outside air pressure
- the nasal cavity volume expands, decreasing nasal cavity pressure relative to alveolar air pressure
- the nasal cavity volume contracts, increasing nasal cavity pressure relative to alveolar air pressure
- the alveolar volume contracts, increasing alveolar pressure relative to outside air pressure

**Question 7** **0 / 1 point**




A stress strain curve of the aorta wall is shown above. At any strain, the

area under the unloading curve is the

- the toughness of the aorta at that strain
- total elastic strain energy density stored in the aorta wall at that strain
- the stiffness of the aorta at that strain
- the strength of the aorta at that strain
- elastic strain energy density that can be used to do work (like push the blood) at that strain

**Question 8** **0 / 1 point**

Dermal bone is ossified

- dense connective tissue of the skin
- dense connective tissue in the body wall deep to the skin
- cartilage in tendon and ligament
- dense connective tissue in tendon and ligament
- cartilage of the skin

**Question 9** **0 / 1 point**

hemoglobin is a protein found in

- the cytoplasm of RBCs
- arteries but not veins
- interstitial fluid
- special O2 filled vessicles in RBCs
- blood plasma

**Question 10** **0 / 1 point**

Plants and animals move fluids over large distances using

- hydrostatic pressure differences
- secondary active transport using ion gradients
- diffusion
- active transport using ATP hydrolysis
- osmosis

**Question 11** **0 / 1 point**

The cells that remove bone tissue during bone remodeling are

- osteoblasts
- chondrocytes
- fibroblasts
- osteoclasts
- osteocytes

**Question 12** **0 / 1 point**

the major cell type in cartilage tissue is

- fibroblast
- osteoblast
- chondrocyte
- myocyte
- osteocyte

**Question 13** **0 / 1 point**

As blood flows through a systemic capillary

- O2 saturation increases because a right shift in the oxyhemoglobin dissociation curve
- O2 saturation decreases because PO2 decreases
- O2 saturation increases because PO2 increases
- O2 saturation increases because PO2 decreases
- O2 saturation decreases because PO2 increases

**Question 14** **0 / 1 point**

The thin fluid lining the surface of the alveolar cells is pulling the alveolar walls inward, which has the tendency to collapse the alveolus. What is source of this force?

- surfactants in the water are stretched and are pulling together
- stretched collagen in the fluid which is resisting this stretch
- the stretched water is resisting the stretch due to attraction between water molecules
- motor proteins in the fluid pulling on the cell membranes
- attraction between the water molecules in the thin film and water vaper in the alveolar air

**Question 15** **0 / 1 point**

Which is TRUE concerning arteries?

- arteries have muscular valves to maintain high arterial pressure
- arteries are thin walled compared to veins
- an artery is a blood vessel containing oxygenated blood
- all gas exchange occurs in arteries
- an artery is a blood vessel that transports blood from the heart to a capillary system within an organ

**Question 16** **0 / 1 point**

Which is TRUE concerning the heart?

- the left side of heart sends deoxygenated blood to the lungs
- the left side of heart receives deoxygenated blood from the lungs
- the left side of heart receives deoxygenated blood from the body
- the left side of heart sends deoxygenated blood to the body
- the left side of heart sends oxygenated blood to the body

**Question 17** **0 / 1 point**

blood exiting systemic capillaries is deoxygenated. What does deoxygenated mean?

- there is no O2
- there is no O2 bound to hemoglobin but there is still dissolved O2
- there is no dissolved O2 but there is still O2 bound to hemoglobin
- all the O2 has transformed to CO2
- there has been a drop in O2 levels in the blood

**Question 18** **0 / 1 point**

collagen is

- a cytoskeletal protein in the cytoplasm of connective tissue cells
- a membrane bound protein that binds connective tissue cells together
- a glycosaminoglycan that forms particles in the cytoplasm of connective tissue cells
- a skeletal protein in the extracellular matrix of connective tissue
- a glycosaminoglycan in the extracellular matrix of connective tissue

Done