Biology Keystone (PA Core) Quiz

Homeostasis and Transport - (BIO.A.4.2.1) Homeostasis

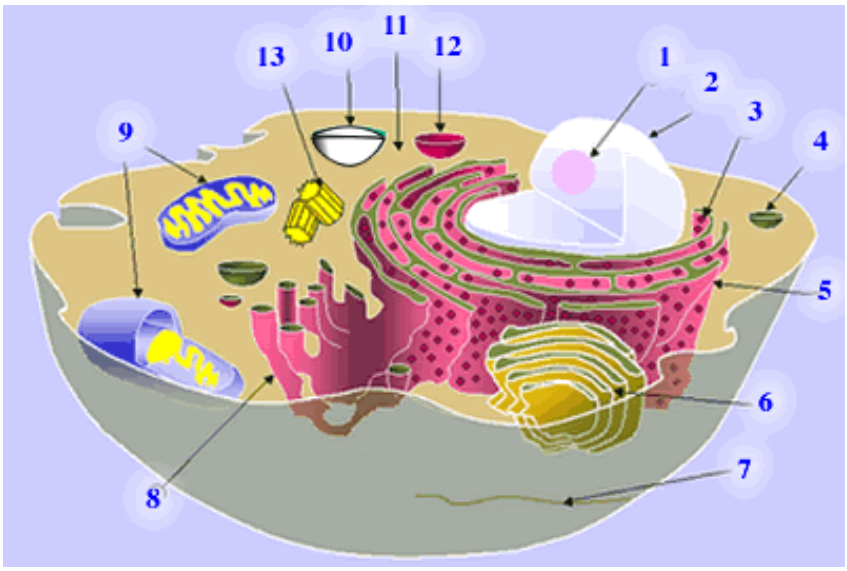
Student Name: _____ Date: _____

Teacher Name: Jared George Score: _____

1) Homeostasis will be MOST affected by the removal of the

A) vacuole.
C) chloroplast.
B) cell wall.
D) cell membrane.

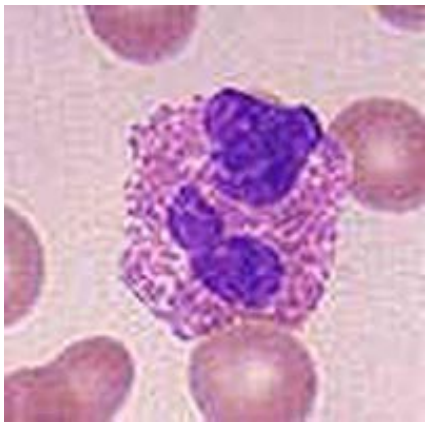
2)



The organelle identified in the picture as #10 helps the cell maintain homeostasis in what way? This organelle is the *smaller* white circularly shaped organelle found in the top middle of the image.

A) aids the cell in movement
C) houses the cell's DNA for reproduction
B) produces energy for cellular processes
D) storage of needed components or cellular waste

3)



White blood cells, part of the _____ system, work closely with the _____ system to protect us from infection and disease.

A) circulatory; immune
C) circulatory; excretory

B) endocrine; lympathic

D) circulatory; respiratory

4) The kidneys are organs in the human body that have multiple functions. One critical function is to maintain the pH of the blood at a precise level. What biological process involves the maintenance of a constant internal environment?

A) homeostasis
B) lysis
C) metabolism
D) osmosis

5)

> The human body organ known as the pancreas secretes the hormones insulin and glucagon. These hormones regulate the level of glucose in the bloodstream. If the level of glucose is too low, the pancreas secretes glucagon which causes the glucose level to increase; if the glucose level is too high, the hormone insulin will lower the glucose level.

What name is given to this type of regulatory system?

A) endocytosis
B) homeostasis
C) meiosis
D) symbiosis

6) The chemical processes that occur within a cell are affected by many factors. Optimum cell function occurs within a narrow range of conditions.

Which combination of factors would curtail cell function?

I. pH
II. density
III. salinity
IV. temperature

A) I and II
B) I and IV
C) I, II and III
D) I, III and IV

7) The cells that make up a human body need oxygen at all times. During periods of exercise and activity, the amount of oxygen needed increases. To meet this increased need, the number of breaths per minute during exercse can be sharply higher than the number of breaths per minute while at rest. Which term BEST describes the process by which cells work together to maintain the needed level of oxygen?

A) homeostasis
B) metabolism
C) osmosis
D) respiration

8) Asthma narrows airways to the lungs and in the lungs by contraction of muscles around the air passages, swelling of the airway lining, and build-up of excessive mucus. Because of this, asthma makes both the _____ and _____ systems work harder to deliver oxygen to the cells throughout the body.

A) respiratory; nervous
B) respiratory; muscular
C) respiratory; digestive
D) respiratory; circulatory

9) The pancreas helps to maintain homeostasis in the body. If the pancreas were to suddenly stop working, then what would most likely be the result?

A) a decrease in respiration
B) a decrease in protein levels
C) an increase in stomach function
D) an increase in blood sugar levels

10)

You've probably noticed that on a hot day, especially when you're active, you perspire. This is your body's way of cooling itself. Although perspiration happens automatically, it is a pretty complex process.

What three organ systems work together to keep your body cool by perspiring?

A) nervous, lymphatic, muscular

B) nervous, endocrine, circulatory

C) lymphatic, circulatory, muscular

D) nervous, circulatory, respiratory