BISC276 W16 Exam 1 Practice

1) Because anatomy and physiology have different definitions, they are usually considered separately in studies of the body.
A) true
B) false

2) "Glucose is transported from blood into cells because cells require glucose to meet their energy needs." This type of explanation is
A) mechanistic.
B) theological.
C) teleological.
D) metalogical.
E) scatological.

3) Which of the following is a buffer zone between the outside world and most of the cells of the body?
A) blood
B) lumen
C) lymph
D) extracellular fluid
E) all of the above

4) When you are dehydrated, your kidneys alter their function to retain more water than they do when you are normally hydrated. This change in function is an example of a _____ mechanism.
A) compensatory
B) mandatory
C) pathophysiological
D) pathological
E) teleological

5) You are interested in learning more about Parkinson's disease, a neurological disorder that primarily affects motor function. What is the best source to begin your investigation?
A) Google
B) PubMed
C) public library
D) physiology textbook
E) a physician

6) You conduct an experiment on twenty 18-year-old male subjects to see how various intensities of exercise influence heart rate. Which of the following is/are considered a dependent variable?
A) age of subjects
B) sex of subjects
C) intensity of exercise
D) heart rate
E) more than one of these

7) Neurotransmitters and neurohormones both
A) are released by neurons.
B) affect only cells with a specific receptor.
C) travel in the blood to their target cell.
D) A and B
E) A, B, and C

8) Both insulin and glucagon are peptide hormones that target liver cells. The response of the target cells to each of these two hormones is opposite. This information implies that
A) the two hormones bind to different cell surface receptors.
B) one hormone binds to a receptor on the cell membrane and the other to an intracellular receptor.
C) each of the two hormones uses a different second messenger.
D) both hormones interact with receptors at the cell nucleus.
E) A and C

9) The binding of lipophilic messengers, such as steroid hormones, to their receptors triggers
A) adenylyl cyclase activation.
B) cyclic nucleotide formation.
C) G protein inhibition.
D) gene transcription.
E) protein kinase activation.

10) Negative feedback
A) stabilizes the variable being regulated.
B) can prevent the initial disturbance of homeostasis.
C) reinforces the stimulus.
D) none of the above

11) When adenylyl cyclase is activated,
A) calcium ions are released from intracellular stores.
B) cAMP is formed.
C) cAMP is broken down.
D) protein kinases are metabolized.
E) steroids are produced.

12) Second messenger molecules directly
A) change the regulation of ion channels.
B) increase intracellular calcium concentration.
C) change enzyme activity.
D) change regulation of gene expression.
E) A, B, and C

13) An ion widely important in intracellular signaling is
A) sodium.
B) potassium.
C) calcium.
D) chloride.
E) cobalt.

14) Which of the following terms is NOT used to define the structure that separates the contents of a human cell from its surrounding medium?
A) a cell wall
B) a cell membrane
C) plasma membrane
D) plasmalemma
E) all of the above

15) Each of the following is an example of a nonmembranous organelle except one. Identify the exception.
A) lysosome
B) cilia
C) centriole
D) ribosome
E) cytoskeleton

16) The thickest protein fibers from the following group are
A) microtubules.
B) neurofilaments.
C) microfilaments.
D) myosin molecules.
E) keratin filaments.

17) The components of ribosomes are formed by
A) the endoplasmic reticulum.
B) Golgi complexes.
C) lysosomes.