BISC276 W16 Exam 2 Practice
Name_____

MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.
1) Which of the following is NOT a method of hormone action? 1) _____
A) control of gene expression and protein synthesis
B) control of electrical signaling pathways
C) control of enzymatic reaction rates
D) control of ion or molecule transport across cell membranes
E) All are methods of hormone action.

2) When a catecholamine or peptide hormone binds to receptors on the surface of a cell, 2) _____
A) the cell becomes inactive.
B) the cell membrane becomes less permeable.
C) a second messenger appears in the cytoplasm.
D) the hormone is transported to the nucleus where it alters the activity of DNA.
E) None of the answers are correct.

3) When adenylyl cyclase is activated, 3) _____
A) cAMP is formed.
B) steroids are produced.
C) protein kinases are metabolized.
D) calcium ions are released from intracellular stores.
E) cAMP is broken down.

4) Steroid hormones are synthesized in the _____ of the cell. 4) _____
A) mitochondria
B) nucleus
C) smooth endoplasmic reticulum
D) Golgi apparatus
E) rough endoplasmic reticulum

5) Each of the following statements concerning peptide hormones is true except one. Identify the exception. 5) _____

A) Peptide hormones interact with receptors on the surface of their target cells.
B) Peptide hormones remain in circulation for relatively short periods of time.
C) Peptide hormones in the bloodstream are always bound to carrier proteins.
D) Prohormones can be activated before their release via post-translational modification.
E) Peptide hormones are first synthesized as prohormones.

6) The majority of hormones in the body are 6) _____
A) amino acid-derived hormones.
B) steroid hormones.
C) peptide hormones.
D) neurohormones.
E) All of the hormones are present in equal amounts in the body.

7) The pituitary hormone that controls the release of glucocorticoids from the adrenal cortex is 7) _____
A) LH. B) STH.C) TSH. D) ACTH. E) FSH.

8) The pituitary hormone that stimulates milk production by the mammary glands is 8) _____
A) TSH.
B) FSH.
C) growth hormone.
D) prolactin.
E) ACTH.

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.
Match each term with the appropriate description.

A. peptide hormone
B. steroid hormone
C. amino acid-derived hormone
D. anterior pituitary
E. hypothalamus
F. posterior pituitary

9) site of vasopressin synthesis

9) _____E____
Match each hormone with its primary source.

A. prolactin
B. insulin
C. aldosterone
D. melatonin
E. calcitonin
F. epinephrine

10) adrenal cortex
10) _____C_____
MULTIPLE CHOICE. Choose the one alternative that best completes the statement or answers the question.
11) When stimulated by a particular hormone, there is a marked increase in the activity of G proteins in the membrane. The hormone is probably 11) _____

A) a peptide.
B) testosterone.
C) aldosterone.
D) estrogen.
E) a steroid.

12) Synergism occurs when 12) _____
A) hormones working together produce a larger effect than predicted.
B) hormones working together produce a smaller effect than predicted.
C) one hormone inhibits the release of a second hormone.
D) one hormone triggers the secretion of a second hormone.
E) a hormone can exert its full effects only in the presence of another hormone.

13) Hormones acting through signal transduction pathways elicit a _____ response compared to hormones that produce genomic effects. 13) _____

A) faster B) equal C) slower

14) Simple reflexes in a worm are integrated within a segment rather than in the brain, because 14) _____
A) worms have a ganglion at each segment.
B) worms do not have a nervous system.
C) worms do not have brains.
D) worms have a neural network within each segment.

15) Which of these have the most advanced nervous system? 15) _____
A) sea anemones B) segmented worms
C) jellyfish D) flatworms

16) The peripheral nervous system develops from the 16) _____
A) neural tube. B) neural crest. C) neural plate.

17) Which of these does NOT contribute significantly to the protection of the brain? 17) _____
A) cerebral space
B) dura mater
C) cerebrospinal fluid (CSF)
D) cranium
E) subarachnoid space

18) The brain has a _____ (high or low?) demand for oxygen, and receives about _____% of the total blood volume in circulation. 18) _____

A) low; 15 B) high; 35 C) high; 15 D) high; 50 E) low; 35

19) Cell bodies of sensory neurons are located in 19) _____
A) dorsal root ganglia.
B) ventral root ganglia.
C) dorsal horns.
D) propriospinal tracts.
E) ventral horns.

20) Which is NOT housed in the medulla oblongata? 20) _____
A) centers for control of breathing
B) the pyramids, where tracts cross to the opposite side of the body

C) centers for control of vomiting
D) centers for blood pressure control
E) centers for control of eye movement

21) Which of these roles is NOT related to the reticular formation? 21) _____
A) arousal and sleep
B) regulation of the menstrual cycle
C) blood pressure regulation
D) muscle tone and stretch reflexes
E) pain modulation

22) The structure that connects the two cerebral hemispheres is the 22) _____
A) suprachiasmatic nucleus.
B) gray "H."
C) hippocampus.
D) corpus callosum.
E) basal nuclei.

23) The brain area(s) that has/have a cortex is/are the 23) _____
A) cerebrum and cerebellum.
B) cerebrum only.
C) cerebrum and medulla oblongata.
D) cerebellum only.
E) medulla oblongata only.

24) The brain's interpretation of sensory stimuli is called 24) _____
A) perception.
B) lateralization.
C) proprioception.
D) emotion.
E) cognition.

25) Substances that have been isolated from the blood and have been shown to induce sleep have also been linked to the _____ system. 25) _____

A) urinary
B) immune
C) reproductive
D) integumentary
E) respiratory

26) The brain area acknowledged as the center for emotions is the 26) _____
A) hypothalamus.
B) suprachiasmatic nucleus.
C) pons.
D) amygdala.
E) cerebellum.

27) Reflexive memories are stored in areas of the 27) _____
A) cerebellum.
B) temporal lobe.
C) parietal lobe.
D) occipital lobe.
E) frontal lobe.

SHORT ANSWER. Write the word or phrase that best completes each statement or answers the question.
Match these terms with their descriptions.

A. gray matter
B. white matter
C. ascending tracts
D. descending tracts
E. propriospinal tracts

28) projections of white matter that remain in the spinal cord
28) _____
Match these terms with their descriptions.

A. dorsal horns
B. columns