Chapter 01
The Study of Body Function

Multiple Choice Questions

1. Physiology
A. emphasizes cause-and-effect mechanisms.
B. includes the fields of chemistry and psychology.
C. ignores the scientific method.
D. ultimately strives to understand the structures of individual cells.

Blooms Level: 1. Remember
Learning Outcome: 01.01
Section: 01.01
Topic: General

2. The study of how disease or injury alters physiological processes is termed
A. comparative physiology.
B. the scientific method.
C. pathophysiology.
D. anatomy.

Blooms Level: 1. Remember
Learning Outcome: 01.01
Section: 01.01
Topic: General

True / False Questions

3. The study of disease processes aids in the understanding of normal functions.
TRUE

Blooms Level: 2. Understand
Learning Outcome: 01.01
Section: 01.01
Topic: General

4. The study of comparative physiology has aided in the development of pharmaceutical drugs for humans.
TRUE

Blooms Level: 1. Remember
Learning Outcome: 01.01
Section: 01.01
Topic: General

5. The scientific method is only concerned with experimentation.
FALSE

Blooms Level: 1. Remember
Learning Outcome: 01.02
Section: 01.01
Topic: General

6. Scientific theories are based on a single hypothesis.
FALSE

Blooms Level: 1. Remember
Learning Outcome: 01.02
Section: 01.01
Topic: General

Multiple Choice Questions

7. The first step in the scientific method involves the formation of a(n)
A. theory.
B. law.
C. experiment.
D. hypothesis.

Blooms Level: 1. Remember
Learning Outcome: 01.02
Section: 01.01
Topic: General

True / False Questions

8. Phase IV clinical drug trials involve testing a drug only on the specific human population who have the condition that the drug is intended to treat.
FALSE

Blooms Level: 1. Remember
Learning Outcome: 01.02
Section: 01.01
Topic: General

Multiple Choice Questions

9. _____ trials maximize the number of test participants and include human participants of both sexes, different ethnic groups, and those who have health problems besides the one that the drug is designed to treat.
A. Phase I clinical
B. Phase II clinical
C. Phase III clinical
D. Phase IV clinical

Blooms Level: 1. Remember
Learning Outcome: 01.02
Section: 01.01
Topic: General

10. Which of the following is NOT part of a phase I clinical trial?
A. testing on the target human population
B. testing how the drug is metabolized
C. testing how rapidly the drug is removed from the body
D. testing the most effective administration of the drug

Blooms Level: 2. Understand
Learning Outcome: 01.02
Section: 01.01
Topic: General

11. When a scientist performs measurements in an experiment and does not know if the subject is part of the experimental or the control group, it is known as a _____ measurement.
A. blind
B. qualitative
C. null
D. statistical

Blooms Level: 1. Remember
Learning Outcome: 01.02
Section: 01.01
Topic: General

12. It is NOT possible to determine whether the data collected in an experiment are different between the control and experimental groups unless the scientist employs the use of the mathematical tools of
A. algebra.
B. trigonometry.
C. statistics.
D. graphing.

Blooms Level: 1. Remember
Learning Outcome: 01.02
Section: 01.01
Topic: General

13. A hypothesis is scientific if it
A. supports other hypotheses.
B. can be tested.
C. refutes other hypotheses.
D. uses observational analyses.

Blooms Level: 1. Remember
Learning Outcome: 01.02
Section: 01.01
Topic: General

14. For a theory to be scientific and accepted, it must be based on
A. reproducible data.
B. blind faith.
C. a single hypothesis.
D. the word of a professional scientist.

Blooms Level: 1. Remember
Learning Outcome: 01.02
Section: 01.01
Topic: General

True / False Questions

15. Aristotle is considered the father of physiology because he attempted to apply physical laws to the study of human function.
FALSE

Blooms Level: 1. Remember
Learning Outcome: 01.01
Section: 01.02
Topic: General

Multiple Choice Questions

16. Whose work brought physiology to be accepted as a true experimental science?
A. Sir Henry Dale
B. Walter Cannon
C. William Harvey
D. John Macleod

Blooms Level: 1. Remember
Learning Outcome: 01.01
Section: 01.02
Topic: General

True / False Questions

17. The term homeostasis was coined by Walter Cannon to describe the constancy of the *milieu interieur*.
TRUE

Blooms Level: 1. Remember
Learning Outcome: 01.01
Section: 01.02
Topic: General

Multiple Choice Questions

18. The Nobel Prize was awarded to _____, _____, and _____ for determining the structure of DNA.
A. Watson, Krebs, Buck
B. Crick, Wilkins, Watson
C. Buck, Axel, Pavlov
D. Krebs, Sperry, Huxley

Blooms Level: 1. Remember
Learning Outcome: 01.01
Section: 01.02
Topic: General

True / False Questions

19. Negative feedback results in a response that opposes that of the original deviation from normal.
TRUE

Blooms Level: 1. Remember
Learning Outcome: 01.03
Section: 01.02
Topic: General

20. Blood clotting is an example of positive feedback since the action of the effector amplifies that of the stimulus.
TRUE

Blooms Level: 1. Remember
Learning Outcome: 01.04
Section: 01.02
Topic: General

21. An integrating center of a negative feedback loop has the function of analyzing information from many different sensors about deviations from a set point and then altering the activity of particular effectors to compensate for the deviation.
TRUE

Blooms Level: 2. Understand
Learning Outcome: 01.05
Section: 01.02
Topic: General

22. Endocrine gland secretion is often controlled by the nervous system.
TRUE

Blooms Level: 1. Remember
Learning Outcome: 01.05
Section: 01.02
Topic: General

23. The secretion of many hormones is regulated through negative feedback inhibition.
TRUE

Blooms Level: 1. Remember
Learning Outcome: 01.05
Section: 01.02
Topic: General

24. Homeostasis is best described as a static, unchanging state of the internal environment.
FALSE

Blooms Level: 1. Remember
Learning Outcome: 01.03
Section: 01.02
Topic: General

Multiple Choice Questions

25. _____ mg/100 ml is the approximate normal range of blood glucose concentration after fasting.
A. 0 to 80
B. 50 to 150
C. 75 to 110
D. 90 to 120

Blooms Level: 1. Remember
Learning Outcome: 01.05
Section: 01.02
Topic: General

26. The normal range of arterial blood pH is
A. 6.50-7.50.
B. 7.35-7.45.
C. 6.95-7.05.
D. 7.15-7.25.

Blooms Level: 1. Remember
Learning Outcome: 01.03
Section: 01.02
Topic: General

27. An integrating center sends information to a(n)
A. sensor.
B. effector.
C. brain region.
D. thermostat.

Blooms Level: 1. Remember
Learning Outcome: 01.03
Section: 01.02
Topic: General

28. The endocrine regulation of blood glucose concentration is an example of a(n)
A. antagonistic effector.
B. positive feedback loop.
C. negative feedback loop.
D. Both antagonistic effector and negative feedback loop are correct.

Blooms Level: 2. Understand
Learning Outcome: 01.04
Section: 01.02
Topic: General

29. _____ and _____ are often regulators of effectors in most feedback loops.
A. Enzymes, neurotransmitters
B. Hormones, neurotransmitters
C. Nerves, enzymes
D. Hormones, nerves
E. Enzymes, hormones

Blooms Level: 1. Remember
Learning Outcome: 01.05
Section: 01.02
Topic: General