

Internal Regulation

1 The term _____ refers to temperature regulation and other biological processes that keep body variables within a fixed range.

- a. positive feedback
- **** b. homeothermic
- c. negative feedback
- d. thermostasis

correct: b

2 One advantage of being homeothermic is that it:

- a. reduces the fuel requirements of the body.
- ***** b. enables the individual to stay active when the environment is cool.
- c. prevents excessive reliance on a single sensory system.
- d. decreases the need for shivering and sweating.

correct: b

3 The POA/AH monitors body temperature partly by monitoring:

- a. the temperature of the thalamus.
- b. brain temperature.
- ***** c. its own temperature.
- d. heart temperature.

correct: c

4 Cells in the preoptic area of the hypothalamus monitor which temperatures?

- ***** a. Their own and the skin.
- b. Differences between internal organs and the skin.
- c. Differences between the arteries and veins.
- d. Internal organs.

correct: a

5 When bacteria, viruses, fungi, or other intruders invade the body, it mobilizes _____ to attack them.

- a. cholecystokinin
- b. cytokines
- c. leptin
- ***** d. leukocytes

correct: d

6 _____ occurs when solutes are more concentrated on one side of the membrane than on the other.

- ***** a. Osmotic pressure
- b. Hypovolemic thirst
- c. Hypovolemic pressure
- d. Osmotic thirst

correct: a

7 What is the first point in the digestive system where enzymes begin to break down food?

- a. stomach
- b. small intestine
- c. esophagus
- ***** d. mouth

correct: d

8 If an animal eats a new food and shortly thereafter becomes ill, it will probably avoid the food subsequently because the:

- a. aftereffects of the illness will block the salivary glands.
- b. taste buds have been damaged.
- **** c. animal acquires a conditioned taste aversion.
- d. stomach will be unable to digest the food.

correct: c

9 The vagus nerve is to _____ as the splanchnic nerves are to _____.

- **** a. stomach fullness; nutrient contents of the stomach
- b. the taste of food; the texture of food
- c. nutrient contents of the stomach; water contents of the stomach
- d. oral factors (such as chewing and taste); stomach fullness

correct: a

10 If the duodenum is partly distended and the stomach is not full, rats will:

- a. continue to eat.
- **** b. stop eating.
- c. drink more.
- d. eat larger meals.

correct: b

11 When food distends the duodenum, the duodenum releases which hormone?

- a. angiotensin II
- **** b. cholecystokinin
- c. aldosterone
- d. prolactin

correct: b

12 Which hormone controls the rate at which glucose leaves the blood and enters the cells?

- a. aldosterone
- b. glucagon
- **** c. insulin
- d. CCK

correct: c

13 What happens when insulin levels are high upon completing a meal?

- **** a. The individual feels hungry again soon after the meal.
- b. Fat supplies are converted to glucose which enters the blood.
- c. Blood glucose levels increase.
- d. Glucose entry into the cells decreases.

correct: a

14 For most obese individuals, giving them leptin would:

- **** a. likely have not much of an effect.
- b. decrease appetite.
- c. increase appetite.
- d. increase sensitivity to leptin.

correct: a

15 An increase in the size of meals is most likely to occur following damage to which area of the hypothalamus?

- a. ventromedial
- b. lateral
- **** c. paraventricular
- d. preoptic

correct: c

16 When neuropeptide Y inhibits the paraventricular nucleus, it:

- a. leads to extreme undereating.
- b. depletes fat stores.
- c. interferes with digestion.
- ***** d. produces extreme overeating.

correct: d

17 An animal has trouble digesting its food after damage to the:

- ***** a. lateral hypothalamus.
- b. pineal gland.
- c. medial part of the hypothalamus.
- d. occipital cortex.

correct: a

18 Animals with damage in or near the ventromedial hypothalamus gain weight:

- a. only if they eat a small number of very large meals per day.
- ***** b. even if they eat the same amount as a normal animal.
- c. only if they have access to unlimited water supplies.
- d. in spite of high activity levels.

correct: b

19 Obesity in Prader-Willi syndrome is linked to a problem with:

- a. leptin.
- b. NPY.
- c. melanocortin.
- **** d. ghrelin.

correct: d

20 A cycle of food-deprivation followed by overeating characterizes:

- ***** a. bulimia.
- b. bipolar disorder.
- c. anorexia.
- d. obesity.

correct: a