***Animal Diversity, 8e* (Hickman)**

**Chapter 20 Mammals**

1) All mammals share the following characteristic(s):

A) Hair

B) Mammary glands

C) A diaphragm

D) Middle ear bones

E) All of the choices are correct.

Answer: E

Section: 20.01

Topic: Origin and Evolution of Mammals

Learning Objective: 20.01 Describe the evolution of mammals from their amniote ancestors.

Bloom's: 2. Understand

Gradable: automatic

2) Mammals belong to the

A) anapsid lineage.

B) synapsid lineage.

C) diapsid lineage.

D) polydont lineage.

E) dinosaur lineage.

Answer: B

Section: 20.01

Topic: Origin and Evolution of Mammals

Learning Objective: 20.01 Describe the evolution of mammals from their amniote ancestors.

Bloom's: 1. Remember

Gradable: automatic

5) The teeth of mammals are

A) homodont.

B) placoid.

C) diphyodont.

D) polydont.

E) continuously replaced.

Answer: C

Section: 20.02

Topic: Structural and Functional Adaptations of Mammals

Learning Objective: 20.03 Contrast adaptations for the mammalian insectivores, carnivores, herbivores, and omnivores.

Bloom's: 1. Remember

Gradable: automatic

6) The earliest mammals

A) were endothermic, although probably not as warm as modern mammals.

B) had two sets of teeth, deciduous and permanent teeth.

C) were small mouse-sized animals.

D) arose in the late Triassic.

E) All of the choices are correct.

Answer: E

Section: 20.01

Topic: Origin and Evolution of Mammals

Learning Objective: 20.01 Describe the evolution of mammals from their amniote ancestors.

Bloom's: 2. Understand

Gradable: automatic

8) The adaptive diversification of early mammals was due to

A) their homeothermic advantage.

B) their metabolic efficiency that allowed lower food consumption per unit of body mass.

C) the independence of their young.

D) the extinction of many competing amniote groups at the end of the Cretaceous.

E) their larger size which made them better predators.

Answer: D

Section: 20.01

Topic: Origin and Evolution of Mammals

Learning Objective: 20.01 Describe the evolution of mammals from their amniote ancestors.

Bloom's: 1. Remember

Gradable: automatic

11) The specialized hairs on the nose that are tactile in function (used to "measure" width of passageways, etc.) are

A) guard hairs.

B) underfur.

C) vibrissae.

D) quills.

E) filamentous hairs.

Answer: C

Section: 20.02

Topic: Structural and Functional Adaptations of Mammals

Learning Objective: 20.02 Describe the skin of mammals, including adaptation for endothermy.

Bloom's: 1. Remember

Gradable: automatic

13) The growth of antlers causes an animal to

A) become aggressive.

B) become anemic.

C) increase intake of protein.

D) increase intake of calcium salts.

E) All of the choices are correct.

Answer: D

Section: 20.02

Topic: Structural and Functional Adaptations of Mammals

Learning Objective: 20.02 Describe the skin of mammals, including adaptation for endothermy.

Bloom's: 1. Remember

Gradable: automatic

18) A grazing animal, such as a cow, that mainly had to shear off grass and grind it would lack

A) molars.

B) incisors.

C) canines.

D) This animal would need all these teeth.

E) This animal would only need molars.

Answer: C

Section: 20.02

Topic: Structural and Functional Adaptations of Mammals

Learning Objective: 20.03 Contrast adaptations for the mammalian insectivores, carnivores, herbivores, and omnivores.

Bloom's: 1. Remember

Gradable: automatic

20) Hares, rabbits, and some rodents pass food through their digestive tract twice because

A) their food supply is scarce and limiting.

B) it saves on energy for chewing.

C) it decreases the impact on the environment by half.

D) it allows more time for the fermenting action of intestinal microorganisms.

E) they are just animals with disgusting habits.

Answer: D

Section: 20.02

Topic: Structural and Functional Adaptations of Mammals

Learning Objective: 20.03 Contrast adaptations for the mammalian insectivores, carnivores, herbivores, and omnivores.

Bloom's: 1. Remember

Gradable: automatic

23) A raccoon or bear that eats both plants and animals for food is

A) multivorous.

B) ambivorous.

C) carnivorous.

D) omnivorous.

E) facultatively herbo-carnivorous.

Answer: D

Section: 20.02

Topic: Structural and Functional Adaptations of Mammals

Learning Objective: 20.03 Contrast adaptations for the mammalian insectivores, carnivores, herbivores, and omnivores.

Bloom's: 1. Remember

Gradable: automatic

27) The calls of echolocating bats are "frequency modulated," meaning that

A) each pulse repeatedly rises and falls in frequency.

B) the rate of pulse production declines as the bat nears an object.

C) the frequency of the pulse is high at the beginning and drops toward the end.

D) the transmission-to-reception time increases as the bat nears an object.

E) None of the choices are correct.

Answer: C

Section: 20.02

Topic: Structural and Functional Adaptations of Mammals

Learning Objective: 20.03 Contrast adaptations for the mammalian insectivores, carnivores, herbivores, and omnivores.

Bloom's: 1. Remember

Gradable: automatic

28) In mammals, estrus is the time when the animals are

A) mating.

B) pregnant.

C) menstruating.

D) giving birth to young.

E) None of the choices are correct.

Answer: A

Section: 20.02

Topic: Structural and Functional Adaptations of Mammals

Learning Objective: 20.04 Compare and contrast the reproductive biology of monotremes, marsupials, and placentals.

Bloom's: 1. Remember

Gradable: automatic

30) A duck-billed platypus is an exception to many mammals because it

A) doesn't give live birth but lays eggs.

B) is "cold-blooded," or not homeothermic/endothermic.

C) lacks hair.

D) doesn't secrete milk.

E) All of the choices are correct.

Answer: A

Section: 20.02

Topic: Structural and Functional Adaptations of Mammals

Learning Objective: 20.04 Compare and contrast the reproductive biology of monotremes, marsupials, and placentals.

Bloom's: 1. Remember

Gradable: automatic

32) The red blood cells of mammals typically lack a \_\_\_\_\_\_\_\_.

Answer: nucleus

Section: 20.02

Topic: Structural and Functional Adaptations of Mammals

Learning Objective: 20.03 Contrast adaptations for the mammalian insectivores, carnivores, herbivores, and omnivores.

Bloom's: 1. Remember

Gradable: automatic

35) The so-called mammal-like reptiles of the early Mesozoic from which the modern mammals descended were the \_\_\_\_\_\_\_\_.

Answer: therapsids

Section: 20.02

Topic: Structural and Functional Adaptations of Mammals

Learning Objective: 20.01 Describe the evolution of mammals from their amniote ancestors.

Bloom's: 1. Remember

Gradable: automatic

37) Animals such as mammals that maintain a high body temperature by an internal heat source are called \_\_\_\_\_\_\_\_.

Answer: endotherms

endothermic

Section: 20.02

Topic: Structural and Functional Adaptations of Mammals

Learning Objective: 20.02 Describe the skin of mammals, including adaptation for endothermy.

Bloom's: 1. Remember

Gradable: automatic

40) The four kinds of teeth that are generally recognized in mammals are molars, premolars, canines, and \_\_\_\_\_\_\_\_.

Answer: incisors

Section: 20.02

Topic: Structural and Functional Adaptations of Mammals

Learning Objective: 20.03 Contrast adaptations for the mammalian insectivores, carnivores, herbivores, and omnivores.

Bloom's: 1. Remember

Gradable: automatic

41) Of the two kinds of mammalian sweat glands, the one that produces a watery sweat is called the \_\_\_\_\_\_\_\_ gland.

Answer: eccrine

Section: 20.02

Topic: Structural and Functional Adaptations of Mammals

Learning Objective: 20.02 Describe the skin of mammals, including adaptation for endothermy.

Bloom's: 1. Remember

Gradable: automatic

45) The multi-chambered stomach of some grazing animals is called the \_\_\_\_\_\_\_\_.

Answer: rumen

Section: 20.02

Topic: Structural and Functional Adaptations of Mammals

Learning Objective: 20.03 Contrast adaptations for the mammalian insectivores, carnivores, herbivores, and omnivores.

Bloom's: 1. Remember

Gradable: automatic

47) A species of North American mammal that makes mass migrations of several hundred miles between the boreal forests and the tundra is the \_\_\_\_\_\_\_\_.

Answer: caribou

barren-ground caribou

Section: 20.02

Topic: Structural and Functional Adaptations of Mammals

Learning Objective: 20.03 Contrast adaptations for the mammalian insectivores, carnivores, herbivores, and omnivores.

Bloom's: 1. Remember

Gradable: automatic

48) The only mammals having true flight are the \_\_\_\_\_\_\_\_, or Chiroptera.

Answer: bats

Section: 20.02

Topic: Structural and Functional Adaptations of Mammals

Learning Objective: 20.03 Contrast adaptations for the mammalian insectivores, carnivores, herbivores, and omnivores.

Bloom's: 1. Remember

Gradable: automatic

49) Egg-laying mammals, such as the duck-billed platypus, are collectively called \_\_\_\_\_\_\_\_.

Answer: monotremes

Section: 20.02

Topic: Origin and Evolution of Mammals; Structural and Functional Adaptations of Mammals

Learning Objective: 20.04 Compare and contrast the reproductive biology of monotremes, marsupials, and placentals.

Bloom's: 1. Remember

Gradable: automatic

52) Discuss a possible scenario of early mammal evolution that would have favored the evolution of hair and endothermy.

Answer: Answers will vary.

Section: 20.01

Topic: Origin and Evolution of Mammals

Learning Objective: 20.01 Describe the evolution of mammals from their amniote ancestors.; 20.02 Describe the skin of mammals, including adaptation for endothermy.

Bloom's: 6. Create

Gradable: manual

53) Discuss the significance of the evolution of a true placenta. Why would this have been an evolutionary milestone?

Answer: Answers will vary.

Section: 20.02

Topic: Structural and Functional Adaptations of Mammals

Learning Objective: 20.04 Compare and contrast the reproductive biology of monotremes, marsupials, and placentals.

Bloom's: 3. Apply

Gradable: manual

60) Discuss the significance of the evolution of echolocation in bats. Could that partially explain why bats are the most diverse group of mammals today?

Answer: Answers will vary.

Section: 20.02

Topic: Structural and Functional Adaptations of Mammals

Learning Objective: 20.03 Contrast adaptations for the mammalian insectivores, carnivores, herbivores, and omnivores.

Bloom's: 3. Apply

Gradable: manual