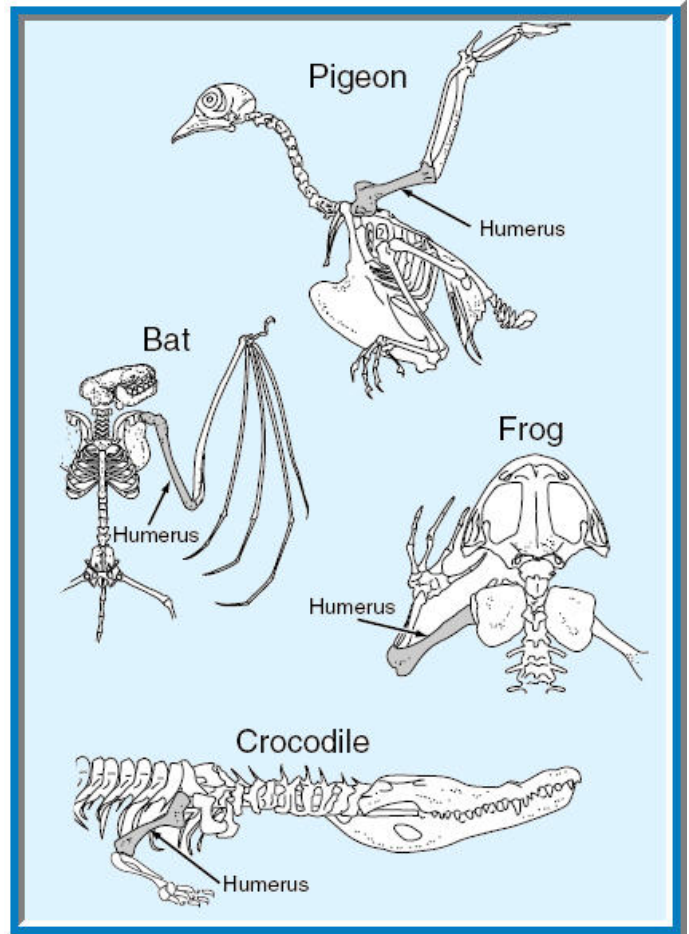


## ANSWER SHEET

### BIO SOL Review 14 - Adaptations (20)

Heart Chambers in Different Animals					
	Fish	Bird	Turtle	Frog	Dog
Number of atria	1	2	2	2	2
Number of ventricles	1	2	2	1	2
Separation of ventricles	—	Total	Partial	—	Total

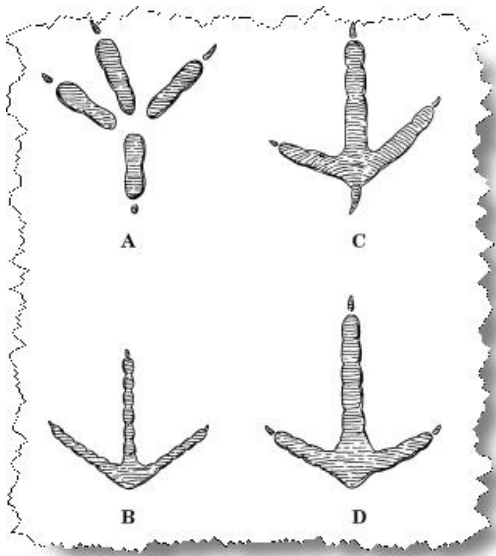
1. (2006-14) Which type of animal is most closely related to a mammal, based on heart structure?
- Bird**
  - Fish
  - Frog
  - Turtle



3. (2001-34) All the organisms shown above belong to the Phylum Chordata. The structural similarity in the organisms suggests that —
- the humerus is the same size in all chordates
  - only animals that walk on 4 legs need the humerus
  - the humerus is attached to the skeleton by immovable joints
  - chordates have common ancestors**
4. (2001-31) The nonpoisonous eastern scarlet snake has colored bands that closely resemble the poisonous coral snake. This selective adaptation provides the eastern scarlet snake with —
- increased breeding opportunities
  - increased feeding opportunities
  - a method of avoiding predation**
  - the ability to attract prey



2. (2002-45) Which characteristic supports the hypothesis that this bird spends a great deal of time in the trees and shrubs?
- The shape of its feet**
  - The color of its wings
  - The thickness of its bill
  - The crest of feathers on its head



5. (2001-21) These feet belong to different birds. Three of the birds spend most of their time on the ground, while one bird rarely walks on the ground. Which foot belongs to the bird that is best adapted for grasping branches?

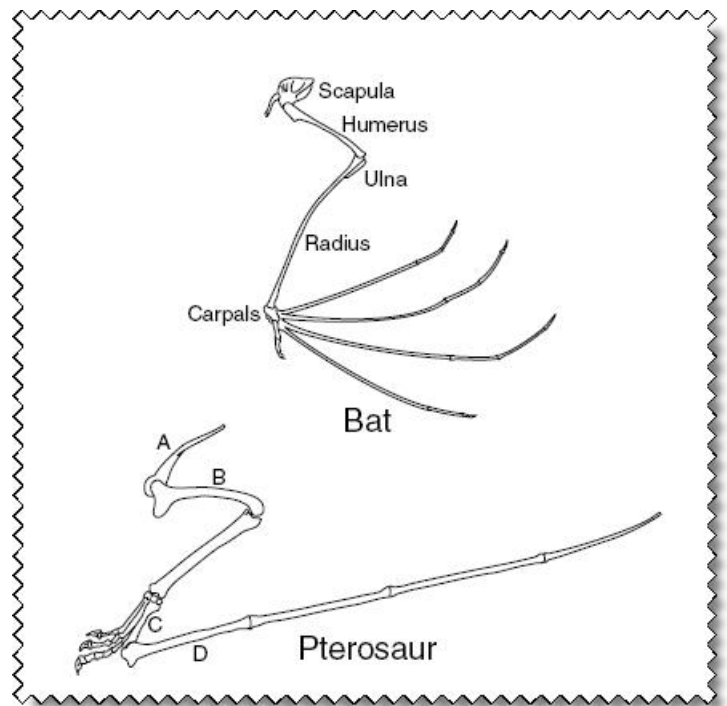
- a. **A**
- b. B
- c. C
- d. D

6. (2001-14) Two plant species found in a dry region of the western United States exhibit vastly different abilities to survive. Species A has very slow stem growth and few leaves but is very abundant. Species B has rapid stem growth and many leaves but is very rare. Which hypothesis is most likely supported by this information?

- a. Flower size and color may give species B an advantage over species A.
- b. Reduced root growth may give species A an advantage over species B.
- c. Leaf shape may give species B an advantage over species A.
- d. **Reduced stem growth may give species A an advantage over species B.**

7. (2003-36) Which of these types of reproduction provides the most protection to developing offspring of land-dwelling animals?

- a. An egg in an eggshell
- b. An egg in a mass of jelly
- c. **An egg carried internally**
- d. An egg with a leathery shell



8. (2002-35) The picture above shows part of the pectoral girdle and limb of two flying vertebrates known as the bat and the prehistoric pterosaur. Which bone of the pterosaur corresponds to the humerus of the bat?

- a. A
- b. **B**
- c. C
- d. D

9. (2002-1) Himalayan rabbits are white with black fur on their ears and the tips of their feet. If an icepack is placed on a rabbit's back, the fur will grow in black. In this case, hair color is determined by —

- a. length of fur
- b. **environmental conditions**
- c. predation pressure
- d. competition

10. (2003-18) Like the camel, many animals that live in soft sandy areas have large wide feet compared to their body size. The large feet are an advantage in these environments because they —

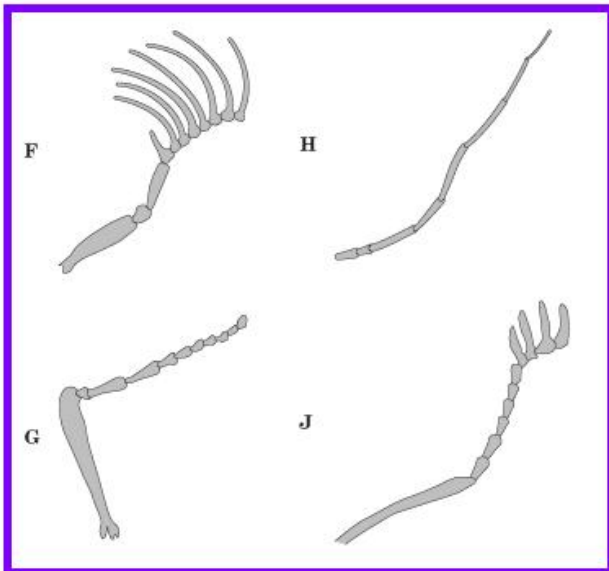
- a. are rapidly toughened by sharp sand grains
- b. allow rapid digging in the sand
- c. reduce the vibrations caused by walking
- d. **distribute body weight over a large area**

11. (2004-49) One theory of the extinction of dinosaur species is that a large meteorite impact on Earth caused a major atmospheric change marked by colder temperatures. If this theory is correct, what adaptation of mammals probably allowed them to survive even though dinosaurs became extinct?

- a. Ability to bear live young
- b. Superior low-light vision
- c. Endothermic body metabolism**
- d. Consumption of an omnivorous diet

12. (2004-47) Which characteristic supports the hypothesis that this animal spends a great deal of time burrowing through the soil?

- a. The shape of its body
- b. The length of its tail
- c. The size of its claws**
- d. The position of its nose

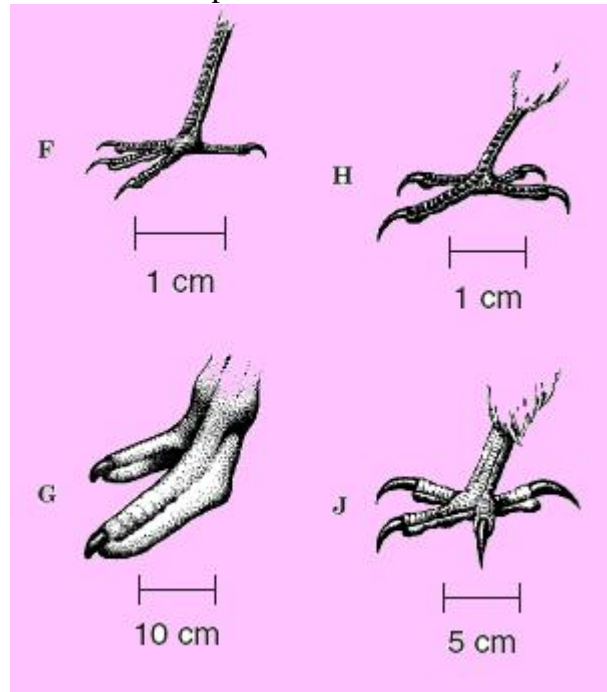


13. (2004-40) Increased surface area increases the number of molecules that can be collected from the air. According to this information, which beetle antenna is best adapted for chemically sensing the air?

- a. F**
- b. G
- c. H
- d. J

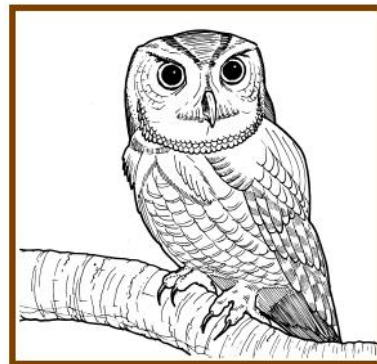
14. (2004-17) Which of these is a common adaptation for mammals in an aquatic environment?

- a. Streamlined body**
- b. Keen eyesight
- c. Long fur
- d. Sharp teeth



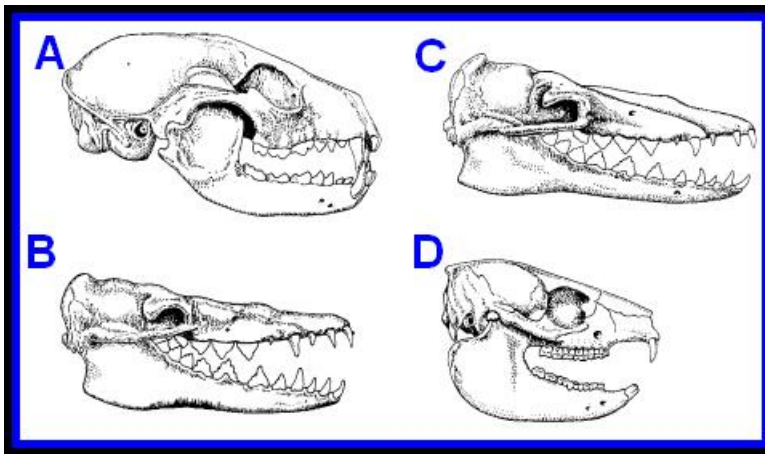
15. (2004-12) Which bird's foot is best adapted to flying into a region and picking up prey?

- a. F
- b. G
- c. H
- d. J**



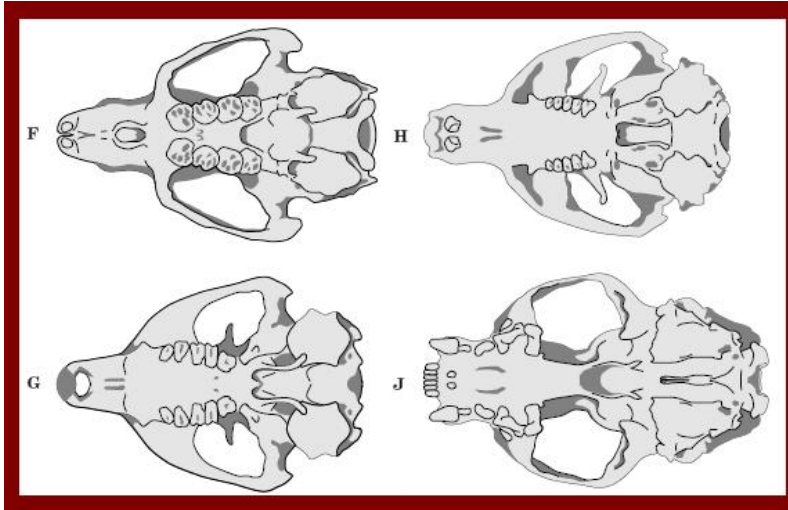
16. (2005-45) Which of the following is the best evidence that this bird is nocturnal?

- a. The shape of its beak
- b. The size of its eyes**
- c. The length of its talons
- d. The thickness of its feathers



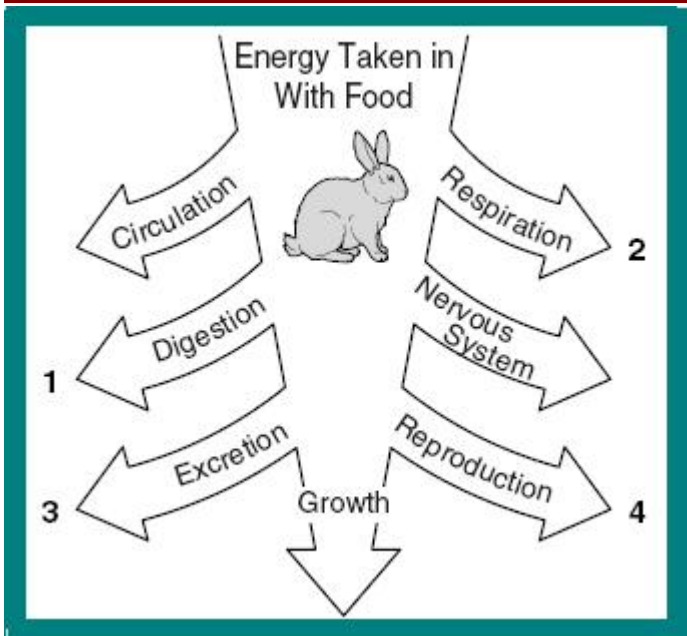
17. (2004-9) Which skull belongs to a herbivore?

- a. A
- b. B
- c. C
- d. D**



18. (2004-48) The skulls below belong to different animals. Which skull belongs to the animal that is probably unrelated to the other three?

- a. F
- b. G
- c. H
- d. J**



19. (2005-14) Rabbits have developed behavioral and physiological strategies to sustain them through periods of environmental stress. Which of the numbered life processes above could be sacrificed without affecting an individual rabbit's survival in periods of extremely poor environmental conditions?

- a. 1
- b. 2
- c. 3
- d. 4**

20. (2005-3) Scientists believe that a dinosaur known as a hadrosaurus was a plant eater. Which of the following pieces of evidence supports this conclusion?

- a. Hadrosaurus fossils are found with fossils of other dinosaurs that were herbivores.
- b. The fossilized teeth of the hadrosaurus are flat like the teeth of modern herbivores.**
- c. Fossilized plant remains are found with the fossils of the hadrosaurus
- d. The regions where hadrosaurus fossils are found were heavily forested.