

Chapter 33: p848-869

1. a) Which groups of chordates are ectotherms?

Fishes, amphibians and reptiles

b) How do they warm up? Give one example.

By basking in the sun

c) How do they cool down? Give one example.

By seeking shelter in underground burrows

d) Which groups of chordates are endotherms?

Birds and mammals

e) How do they warm up? Give three examples.

Through insulating feathers, with fat, with hair

f) How do they cool down? Give two examples.

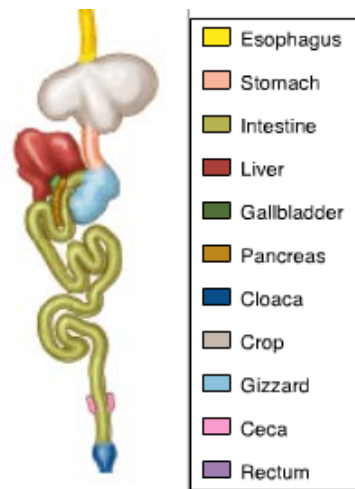
By panting, by sweating

2. Give one difference between carnivore and herbivore digestive system.

Carnivores typically have short digestive tracts. They have meat-digesting enzymes. Herbivores often have long intestines. Some herbivores have a rumen and harbor colonies of bacteria.

3. This digestive tract belongs to which group of chordate? How do you recognize it?

Birds, because they are the only chordates with a crop and a gizzard.



4. What group of chordates use gills as a larva and lungs as an adult?

Amphibians

5. What group of chordates have their lungs filled of alveoli?

Mammals

6. What group of chordates have no specialized heart?

Lancelet (Tunicates have tubelike hearts)

7. Which groups of chordates have a:

2 chambered heart: **fishes (and larval amphibians)**

3 chambered heart: **amphibians, some reptiles**

4 chambered heart: **some reptiles (crocodilians), birds, mammals**

8. Is urea or ammonia more toxic? **ammonia**

9. Complete the sentence about excretion: The **kidneys** filter wastes, help maintain homeostasis by regulating the amounts of water, salt, and other substances dissolved in body fluids.

10. True or false? a) Tunicates and lancelets have a cerebrum. **false**

b) The optic lobes are involved in the sense of smell. **false**

11. Many amphibians and reptiles have limbs sticking out sideways from the body, while most mammals stand with their legs straight under them. Which position support best the body weight? **mammals'**

12. a) What groups of chordates can get eggs fertilized externally?

Nonvertebrate chordates, fishes, amphibians

b) What groups of chordates get exclusively fertilized internally (egg or no egg)?

Reptiles, birds and mammals

13. Associate with a line the statement to the respective manner of reproduction.

Producing many offspring, give them little or no care — Promote dispersion and rapid grow

Produce few young, give good care — Help young survive in competitive environments