Supplemental Test Items to accompany OpenStax College *Concepts of Biology*. Note that not all chapters of OpenStax College *Concepts of Biology* have accompanying test items. Building on the community-oriented nature of OpenStax College resources, we invite you to submit items to be considered for future inclusion.

**Chapter 16: The Body’s Systems**

1. Both birds and mammals are endotherms. That is, both groups regulate their body temperatures from within. If both are “warm-blooded,” then why are birds not considered mammals? (Outcome #6b) (DOK 2)
   1. Birds have wings, but mammals do not have wings.
   2. Birds do not possess mammary glands, a defining characteristic of mammals.\*
   3. Mammals procreate through sexual reproduction, but birds lay eggs.
2. What is the limiting factor in how large land animals can become? (Outcome #6b) (DOK 2)
   1. Gravity prevents land animals from growing larger than they do today.
   2. Diffusion increases as the volume to surface area increases.
   3. Diffusion decreases as the surface area to volume ratio decreases.\*
3. Which of the following best explains how some animals survive even in times of extended food shortage? (Outcome #6b) (DOK 2)
   1. Some animals use torpor, a process of achieving minimal activity and body temperature maintenance, to minimize caloric consumption.\*
   2. Some animals use estivation, which is the process of overeating when food is abundant so that they go into lean month’s fat.
   3. Some animals elevate their basal metabolic rates to keep them warm in colder months, thereby limiting their need for consuming food.
4. Which of the following statements about epithelial cell types is false? (Outcome #6b) (DOK 3)
   1. Squamous cells appear in the respiratory system, including the mouth, and they make up both simple and stratified epithelia.
   2. The urinary bladder is the site of cuboidal cells that comprise simple epithelia that appear stratified.\*
   3. Columnar cells appear as simple epithelia in the digestive tract and pseudostratified epithelia in the respiratory tract.
5. A researcher is testing a new drug in mice and notices that after treatment with the drug, the mice have elevated blood calcium levels. What is a possible side effect of this drug? (Outcome #6b) (DOK 3)
   1. The drug may stimulate the pancreas to secrete more of the hormone insulin, which triggers an increase in calcium reabsorption in the kidneys.
   2. The drug may disrupt the positive feedback loop between parathyroid hormone and blood calcium.
   3. The drug may stimulate the parathyroid gland to release parathyroid hormone, which triggers calcium absorption in the intestines and kidneys.\*
6. An animal that regulates its daytime body temperature through behavior modification can best be described as a \_\_\_\_\_\_\_\_. (Outcome #6b) (DOK 3)
   1. homeothermic ectotherm\*
   2. homeothermic endotherm
   3. poikilothermic ectotherm
7. Animals eliminate nitrogenous waste to by: (Outcome #7) (DOK 1) (Paired Item 1)
   1. urination\*
   2. breathing
   3. sweating
8. Animals eliminate extra carbon dioxide by: (Outcome7) (DOK1) (Paired Item 2)
   1. urination
   2. breathing\*
   3. sweating
9. What organ is responsible for secreting the hormone epinephrine? (Outcome #7) (DOK 1)
   1. liver
   2. spleen
   3. adrenal gland\*
10. Which organ is responsible for detoxification of substances such as alcohol? (Outcome #7) (DOK 1)
    1. liver\*
    2. spleen
    3. adrenal gland
11. Which of the following tissues is responsible for protecting body surfaces from invasion by microorganisms? (Outcome #7) (DOK 1)
    1. epithelial tissue\*
    2. connective tissue
    3. nervous tissue