Symbiosis MCAS Questions

1. Which of the following relationships is an example of mutualism?

   A. A lion eats a gazelle.
   B. A virus uses both a bird and a horse as hosts.
   C. A bacterium breaks down dead plant materials.
   D. A bird eats food particles from a crocodile’s teeth.

2. Ticks carry bacteria that cause Lyme disease. Ticks do not get Lyme disease, but they can transfer the bacteria to humans, who can get the disease. Which of the following statements best describes the relationships among the bacteria, the ticks, and the humans?

   A. The relationship between the bacteria and the ticks is competition, and the relationship between the ticks and the humans is predation.
   B. The relationship between the bacteria and the ticks is competition, and the relationship between the ticks and the humans is parasitism.
   C. The relationship between the bacteria and the ticks is commensalism, and the relationship between the ticks and the humans is parasitism.
   D. The relationship between the bacteria and the ticks is commensalism, and the relationship between the ticks and the humans is predation.

3. Many lichens are composed of fungi and algae. The fungi get sugars from the algae, and the algae get water, minerals, and proteins from the fungi. Which of the following terms best describes the relationship between the organisms in the lichens?

   A. commensalism
   B. competition
   C. mutualism
   D. parasitism

4. The ecological relationship between a hawk and a rabbit is the same type of relationship as that between

   A. a tick and a deer.
   B. a frog and an insect.
   C. a mouse and a chipmunk.
   D. a bee and a flowering plant.
5. The illustration below shows a cross section of the edge of a pond in the northeastern United States. Many species of organisms are part of this ecosystem. Some of the organisms live on the land surrounding the pond, some spend time on the surface of the water, and some live below the pond's surface.

The organisms in this ecosystem are related to each other through the food web shown below.

Which of the following relationships exists between the frog and the mayfly?

A. commensalism  
B. competition  
C. mutualism  
D. predation