

# **Comprehension Questions - Module 9: Flexible Week**

## **Review and Integration**

1. How do the processes of photosynthesis and cellular respiration work together in the biosphere?
2. Explain how energy flows through biological systems while matter cycles.
3. Compare and contrast the structure and function of plant and animal cells.

## **Critical Thinking**

1. How would life on Earth be different if photosynthesis had never evolved?
2. Explain how the properties of water make it essential for life as we know it.
3. Describe how the structure of biological molecules enables their diverse functions.

## **Application**

1. How do cells maintain homeostasis despite constant changes in their environment?
2. Explain how understanding cellular processes helps us understand organismal function.
3. Describe how metabolic pathways are interconnected and regulated.

## **Synthesis**

1. How do the concepts from Modules 1-8 relate to each other in understanding life?
2. What are the key principles that unify all biological systems?
3. How does studying biology at the cellular and molecular level help us understand larger biological systems?