5.1 – Classification of Organisms

Pages: 134 – 138

Learner Outcome: *To explain the fundamental principles of taxonomy and binomial nomenclature, using modes of nutrition at the kingdom level and morphological characteristics at the genus species.*

1. What are the 2 levels of biological diversity and describe each?
2. Define:

Taxonomy -

1. What was the system of classification developed by Carl Linnaeus based on?
2. Define:

Binomial nomenclature –

Genus –

Species –

1. Why is Latin or sometimes Greek used in the naming of organisms?
2. What is a scientific name often based on?
3. What are the rules for using the genus name and the species name when using binomial nomenclature?
4. What similarities are indicated using the two name system?
5. List the seven main levels or taxa in our present classification system.
6. What does the term prokaryotes mean?
7. What were the five kingdoms in the classification system proposed by Robert Whittaker in 1969?
8. What are some of the characteristics that distinguish a microorganism as an archaebacteria?
9. What are some of the characteristics that distinguish a microorganism as an eubacteria?
10. With the division of the Monera kingdom into two kingdoms, what is the six-kingdom system of classification proposed by Carl Woese and his colleagues?
12. Define:

Phylogeny –

Dichotomous key –

1. How is a dichotomous key intended to be used?

\*Answer Textbook questions pg. 139 #5 - 7