

**HOWARD UNIVERSITY
COLLEGE OF ARTS AND SCIENCES
COMPREHENSIVE SCIENCES
LIFE SCIENCES**

UNIT II: TAXONOMY STUDY QUESTIONS

1. Define taxonomy.
2. Define taxon.
3. Cite the contributions of Carlos Linnaeus to the allied science discipline, Taxonomy.
4. What does the system of binominal nomenclature mean?
5. Which of the levels of the scientific classification scheme constitute the scientific name of an organism?
6. Give the scientific name for:
 - a. a bacterium
 - b. a protozoan
 - c. a fungus
 - d. a plant
 - e. an animal
7. Give the complete taxonomic classification for a human.
8. Give the five taxonomic Kingdoms of living organisms.
9. Cite a distinctive general characteristic of:
 - a. bacteria
 - b. protozoa
 - c. fungi
 - d. plants
 - e. animals
10. Cite one difference between an anaerobic bacterium and an aerobic bacterium.
11. What are the three basic morphologies (shapes) of bacteria?
Sketch each of the three.
12. Cite one distinctive difference between a protozoan and a bacterium.
13. Distinguish between the following types of protozoans:
 - euglenid
 - flagellate
 - ameboid
 - ciliate
14. Sketch the protozoan, Euglena. Sketch the protozoan, Paramecium.

15. Describe the (a) mycelium and (b) hyphae structures of a fungus.
16. Distinguish between the following types of fungi:
 - a. sac fungus
 - b. club fungus
 - c. imperfect fungus
17. How does a lichen differ from a mycorrhiza?
18. Cite two, general, distinctive characteristics of a plant.
19. What is meant by (a) "non-vascular" (b) vascular?
20. Where are algae usually found? What significant structural features are exhibited by algae?
21. What is a bryophyte? How is it different from algae?
22. What reproductive cells (pollen, ova, or spores) are produced by non-vascular plants in order to facilitate asexual or sexual reproduction?
23. Cite two distinctive characteristics of vascular plants.
24. How does a gymnosperm differ from an angiosperm?
25. What types of plants are usually dicotyledons?
26. What types of plants are usually monocotyledons?
27. a. Cite a distinctive characteristic of an invertebrate animal.
b. Cite a distinctive characteristic of a vertebrate animal.
28. Cite two distinctive structural features of an animal.
29. Cite one distinctive structural feature difference between a sponge and a cnidarian.
30. Cite one feature to distinguish between flatworms, round worms, and segmented worms.
31. What organisms are in phylum arthropoda?
32. Cite a distinctive structural or physiological feature exhibited by:
 - a. fishes
 - b. amphibians
 - c. reptiles
 - d. birds
 - e. mammals

33. Give the scientific name for a life form for each of the following:
- coccus – shaped bacterium
 - ciliated protozoan
 - colonial protozoan
 - sac-fungus
 - algal
 - bryophyte
 - gymnosperm
 - angiosperm
 - dicotyledon
 - monocotyledon
 - mollusk
 - insect
 - crustacean
 - microscopic flatworm
 - mammal (other than human)
34. Give the complete, correct taxonomic classification for the most advanced plant, corn.
35. Select two invertebrate phyla and compare organisms found in them according to structural feature differences, physiological differences, habitat differences.
36. Select two vertebrate phyla and compare organism found in them according to structural feature differences, physiological differences, habitat differences.
37. Select two vertebrate taxonomic classes of organisms and compare with respect to structural features, physiological features, habitat/environment.