**Fungi Diversity Study Guide**

* To be filled out while you view the lectures and read your associated text.

1. List the three different lifestyles that fungi can exhibit and give an example of each.
2. List the four defining characteristics of fungi.
3. What is one of the only characteristics that fungi share with plants?
4. The \_\_\_\_\_\_\_\_\_\_\_\_\_ makes up the majority of the fungus body and consists of a complex mass of filaments.
5. Explain the difference between a hyphae and a mycelium.
6. \_\_\_\_\_\_\_\_\_\_\_\_\_is the main component of the fungus cell wall. What other types of structures in other organisms can this substance be found?
7. What is an exozyme (short for exo-enzyme)?
8. Describe the two different types of reproductive structures that are found in the fungi kingdom.

Which of these two structures is more common in the fungi kingdom?

1. Which is a more prominent structure in fungi, the reproductive structures or the mycelium? Think about this both in terms of size and longevity.
2. List several characteristics of fungal spores and how they contribute to the reproductive success of fungi.
3. List several examples of ways that humans benefit from fungi.
4. What is a fungi derived disease called?  An example might be athlete’s foot or a yeast infection.
5. Are fungi ever a threat to other life forms such as plants and animals?  Explain.
6. For each of the five major phyla of fungi, list some important features that are unique to that group.
   1. Chytridiomycota:
   2. Zygomycetes:
   3. Glomeromycetes:
   4. Basidiomycetes:
   5. Ascomycetes:
7. When we purchase a mushroom from the grocery store to put on a pizza or in an omelet, is the structure that we are buying a hyphae or mycelium?  Explain.
8. Two types of ecologically important relationships fungi contribute to are \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_.
9. What are the two different parts of a lichen?
10. The mycobiont is usually from the phylum \_\_\_\_\_\_\_\_\_\_\_\_, while the photobiont can be either a \_\_\_\_\_\_\_\_\_\_\_\_ or a \_\_\_\_\_\_\_\_\_\_\_\_.
11. Describe how a lichen reproduces.
12. Lichens are said to be “bio-indicators” of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ quality because many species only grow where there is a lack of \_\_\_\_\_\_\_\_\_\_\_\_.
13. Mycorrhizae is a mutualistic relationship between a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and a\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
14. What does each component contribute to the relationship?
15. After viewing the last slide of the lecture presentation, describe the differences between a tree that was planted with and without mycorrhizae.
16. Answer the following about the fungi phyla after completing the fungi learning table.
    1. What is the most primate group i.e. the outgroup? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
    2. Which two divisions are most closely related? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ & \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
    3. Which division has the greatest number of described species? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

**Terms to master from the text:**

(These may show up in associated activities or labs for this section)

mutualism

lichen

fungi

parasites

extracellular digestion

mycelium

hyphae

spores

Chytridiomycota

Glomeromycota

Ascomycota (sac fungi)

Basidiomycota (club fungi)

Zygotmycota (molds)

zygomycosis

mushrooms

gills

yeasts

decomposers

photobiont

mycobiont

mycorrhizae