CHAPTER 20

Section 1: Characteristics of Fungi

In your textbook, read about the characteristics of fungi.

Match the definition in Column A with the term in Column B.

<table>
<thead>
<tr>
<th>Column A</th>
<th>Column B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. netlike body of a fungus</td>
<td>A. fruiting body</td>
</tr>
<tr>
<td>2. cross-walls between fungal cells</td>
<td>B. hyphae</td>
</tr>
<tr>
<td>3. filaments in a multicellular fungus</td>
<td>C. mycelium</td>
</tr>
<tr>
<td>4. unicellular fungus</td>
<td>D. septa</td>
</tr>
<tr>
<td>5. fungal reproductive structure</td>
<td>E. yeast</td>
</tr>
</tbody>
</table>

In your textbook, read about nutrition in fungi.

Complete the table by checking the correct column(s) for each characteristic.

<table>
<thead>
<tr>
<th>Fungi Characteristic</th>
<th>Saprophytic Fungi</th>
<th>Parasitic Fungi</th>
<th>Mutualistic Fungi</th>
</tr>
</thead>
<tbody>
<tr>
<td>6. Harmful to host</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Helpful to host</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Heterotrophs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Organic litter reducers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Symbiosis</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In your textbook, read about reproduction in fungi.

Write the term that best completes each statement. Use these choices:

- asexually
- meiosis
- sporangia
- survival
- wind

11. Fungi reproduce ________________________ by fragmentation, budding, or producing spores.
12. Producing a large number of spores increases a species’ chances of ________________________ .
13. Fungal spores can be dispersed by animals, water, and ________________________ .
14. ________________________ protect spores and keep them from drying out until they are released.
15. Fungi might produce spores by ________________________ or mitosis.
In your textbook, read about the diversity of fungi.

Match the definition in Column A with the term in Column B.

<table>
<thead>
<tr>
<th>Column A</th>
<th>Column B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. includes bread molds and other molds</td>
<td>A. Ascomycota</td>
</tr>
<tr>
<td>2. appears to lack a sexual stage in life cycle</td>
<td>B. Basidiomycota</td>
</tr>
<tr>
<td>3. produces flagellated spores</td>
<td>C. Chytridiomycota</td>
</tr>
<tr>
<td>4. most common fungi phylum; includes yeast</td>
<td>D. Deuteromycota</td>
</tr>
<tr>
<td>5. includes mushrooms</td>
<td>E. Zygomycota</td>
</tr>
</tbody>
</table>

In your textbook, read about reproduction in common molds.

Label the diagram of a common mold. Use these choices:

- mating strains
- rhizoids
- sporangia
- spores
- stolons

Use each of the terms above only once to complete the passage.

Hyphae called (11) _______________ penetrate the food, anchor the mycelium, and absorb nutrients. Asexual (12) _______________ germinate on a food source, and hyphae begin to grow. Hyphae called (13) _______________ grow across the surface of the food source and form a mycelium. Special hyphae grow upward to form (14) _______________ that are filled with asexual spores. In sexual reproduction, parts of two haploid (15) _______________ fuse to form a diploid structure.
In your textbook, read about sac fungi, club fungi, and other fungi.

In the space at the left, write the letter of the term or phrase that best completes each statement.

16. Most members of the phylum Ascomycota are ______
   A. aquatic.        C. multicellular.
   B. molds.         D. unicellular.

17. Sac fungi produce spore-bearing hyphae called ______
   A. ascospores.     C. gametangia.
   B. conidiophores.  D. zygomycetes.

18. The ascus of a sac fungi ______
   A. develops into a haploid mycelium.
   B. is a saclike structure where spores develop.
   C. is where the hyphae develop.
   D. produces four haploid nuclei.

19. The fruiting body of a club fungi is called a ______
   A. basidiocarp.
   B. gametangium.
   C. sac.
   D. stolon.

20. The rapid growth of basidiocarps is due to ______
   A. cell division.
   B. cell enlargement.
   C. meiotic division.
   D. water intake.

21. Saprophytic basidiocarps produce enzymes that ______
   A. are beneficial for plants.
   B. decompose wood.
   C. make bread dough rise.
   D. suggest they are related to protists.

22. Another name for the deuteromycetes is ______
   A. club fungi.
   B. common molds.
   C. imperfect fungi.
   D. sac fungi.

In your textbook, read about club fungi and the life cycle of a mushroom.

Label the diagram of the mushroom and parts of its life cycle. Use these choices:

basidium       caps       spores

23. _____________________________

24. _____________________________

25. _____________________________
In your textbook, read about fungi and photosynthesizers.

Complete the Venn diagram by writing the number of each phrase in the appropriate place. These phrases may be used more than once.

1. associated with plant roots
2. important for soil formation
3. important for agricultural crops
4. associated with a green alga or cyanobacterium
5. obtain nutrients from photosynthesizing partner
6. mutualistic relationship between fungi and other organism
7. fungus that absorbs and concentrates minerals and increases root surface area for plant
8. fungus that provides a dense web of hyphae in which algae or cyanobacterium can grow

In your textbook, read about fungi and humans.

If the statement is true, write true. If the statement is false, replace the italicized word or phrase to make it true.

9. Penicillin is a drug that comes from a fungus. Another fungus is the source of anti-headache drugs for organ transplant patients.

10. People eat fungi such as truffles, mushrooms, and the yeast in bread. Fungi also give flavor to cheeses and cola drinks.

11. Respiration produces airy bread and the alcohol in beer and wine.

12. The use of fungi and bacteria to remove pollution is called enviroremediation.