Nms _____ Class _____ Date _____

Chapter 21 Fungi Section Review 21-1

Reviewing Key Concepts

Multiple Choice *On the lines provided, write the* answer *that* best completes *the sentence or* answers *the* question.

_____ I. Which term best describes how fungi obtain energy?
a. phototrophic c. autotrophic
b. chemoautokophic d. heterotrophic

_____ 2. Fungi have cell walls composed of
a. hyphae. c. chitin.
b. sporangia. d. mycelium.

_____ 3. The body of a multicellular funds is composed of a mass of hyphae called a
a. mycelium. c. sporangia.
b. gametangium. d. spore.

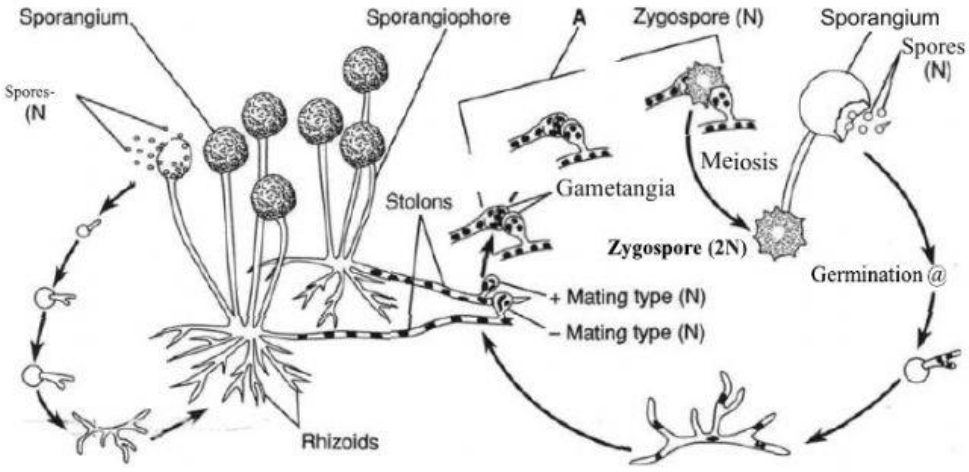
Matching *On the lines provided, match each term with its description.*

4. Terms are on the left and definitions are on the right

_____ 1.hyphae	a. A chemical that provides both toughness and flexibility
_____ 2. chitin	b. Spores formed in a sac (sporangium)
_____ 3. mycelium	c. Asexual reproductive or resting cell capable of developing into a new organism without fusion with another cell, in contrast to a gamete
_____ 4. arthrospores	d. gamete-forming structure
_____ S. sporangiophore	e. thick mass of hyphae
_____ 6. gametangium	f. spore capsule in which haploid spores are produced by meiosis
_____ 7. spores	g. filaments of fungi
	h. hyphal segments that are formed by the fragmentation of hyphae.

Reviewing Key Concepts

The following diagram shows the sexual and asexual reproduction of *zygomycetes.*



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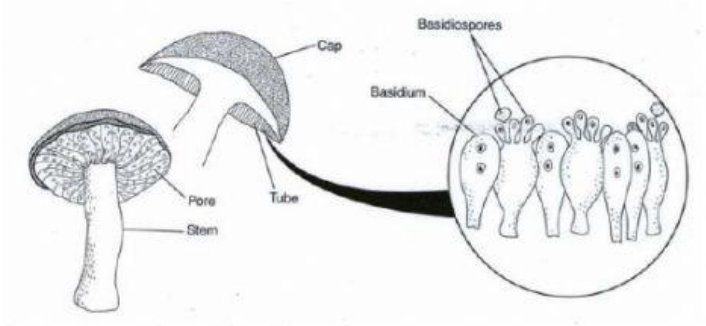
5. **Comparing and Contrasting** How are asexual and sexual reproduction in fungi different?

6. Explain the process of reproduction in zygomycetes. Remember, they reproduce both sexually and asexually.

Basidiomycota on Your Pizza?

Do you like Basidiomycota on your pizza? Basidiomycota is a division of fungi, some types of which are edible. *Basidion* is Greek for "small base" and *mykes* means fungus. The basidiomycetes include smuts, rusts, jelly fungi, puffballs, stinkhorns-and mushrooms. There are approximately 25,000 different species of basidiomycetes, some of which are the mushrooms you put on your pizza.

The Basidiomycota are different from all other fungi because they have microscopic, clublike reproductive structures called basidia. Each basidium bears haploid sexual spores called basidiospores. All basidiomycetes produce a primary and secondary mycelium. The primary (haploid) mycelium is called the monokaryon. The secondary mycelium, the dikaryon, contains pairs of parental nuclei. The parental nuclei replicate by conjugate division.



There are two classes of basidiomycetes. One class, the Homobasidiomycete, includes two subclasses. The subclass Hymenomycetes includes common mushrooms, shelf fungi, and coral fungi. The other subclass, Gasteromycetes, includes the puffballs, earthstars, stinkhorns, and bird's nest fungi. The other class of basidiomycetes is the Heterbasidiomycetae, which includes the jelly fungi, rusts, and shuts.

The spores of many basidiomycetes mature inside a structure called a basidiocarp. The spores are released when the basidiocarp is ruptured or decays. Rusts and smuts produce a spore on the secondary mycelium. This spore produces the basidium. Rusts and smuts are parasites. They do not produce fruiting bodies but develop teliospores in the tissues of higher plants. Some rusts cause diseases of cereal crops.

Based on the reading, write True (T) or False (F) to the following statements.	
There are approximately 15,000 different species of basidiomycetes	
Basidiomycetes reproduce by asexual spores	
Hymenomycetes are the second type of mycelium	
Basidiocarps are spores where basidiomycetes mature inside	

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