

**BOT 125 - Plant Morphology**  
**Spring 1992**  
**Midterm Exam**

Answer all questions on the Scantron sheet. Please **keep** this sheet, and turn in the Scantron only. There is only one correct answer to each question.

1. A mat or web of fungal hyphae is called a
  - a. miltonium
  - b. morula
  - c. mycelium
  - d. mycoplasma
  - e. myxamoeba
  
2. A multicellular or multinucleate haploid stage is **never** found in the life cycle of
  - a. Ascomycota
  - b. Basidiomycota
  - c. Chytridiomycota
  - d. Oomycota
  - e. Zygomycota
  
3. A multinucleate diploid stage is found in the life cycle of
  - a. Basidiomycota
  - b. cyanobacteria
  - c. most Ascomycota
  - d. Oomycota
  - e. Zygomycota
  
4. According to the endosymbiosis theory,
  - a. chloroplasts and mitochondria of eukaryotic cells originated from symbiotic prokaryotic organisms
  - b. cyanobacteria have the same chloroplasts as red algae
  - c. the naked, circular DNA and bacterial-type ribosomes of chloroplasts and mitochondria show that prokaryotes evolved from eukaryotes
  - d. the nuclei of eukaryotic cells were originally bacteria
  - e. the original eukaryotic cells had no DNA
  
5. **All** eukaryotes have
  - a. cell walls
  - b. chloroplasts
  - c. flagella
  - d. mitochondria
  - e. nuclei

6. An apothecium
  - a. consists of diploid cells
  - b. has asci on the inside
  - c. has asci on the outside
  - d. is a closed flask-shaped structure
  - e. is found in the basidiomycota
7. An ascus characteristically produces
  - a. 32 meiospores
  - b. eight asexual spores
  - c. eight gametes
  - d. eight meiospores
  - e. hundreds of asexual spores
8. Asexual reproduction
  - a. in the Ascomycota occurs by means of zygospores
  - b. in the Basidiomycota is mostly restricted to the class Homobasidiomycetes
  - c. in the Basidiomycota occurs by means of flagellated zoospores
  - d. is more common in the Ascomycota than in the Basidiomycota
  - e. is unknown in the Oomycota
9. *Aspergillus flavus*, a member of the Fungi Imperfecti, is important because
  - a. it is the cause of late blight of potatoes.
  - b. it is the source of carbon dioxide in breadmaking
  - c. it is the source of ethanol in beer and wine
  - d. it is the source of penicillin
  - e. it produces aflatoxin when growing on stored peanuts, beans, and grains
10. Flagellated cells are never found in the
  - a. Ascomycota
  - b. Chytridiomycota
  - c. Myxomycota
  - d. Oomycota
11. Gametophytes
  - a. are always green and heart-shaped
  - b. are diploid
  - c. are never found in plants
  - d. produce gametes
  - e. produce meiospores
12. It is believed that mitochondria were acquired by eukaryotes only once in their evolution because
  - a. all eukaryotes have mitochondria
  - b. all mitochondria are spherical
  - c. all mitochondria carry out oxidative respiration
  - d. all mitochondria have similar structures and similar genes
  - e. all mitochondria have the same chlorophyll
13. Sporophytes
  - a. always produce gametes
  - b. are characteristically unicellular
  - c. are diploid
  - d. are haploid
  - e. never have sporangia

14. The asexual spores of the Ascomycota
  - a. are called zygospores
  - b. are formed by meiosis
  - c. are produced in sac-like sporangia at the ends of hyphae
  - d. come from ascogonia
  - e. come from conidia
15. The asexual spores of the Chytridiomycota
  - a. are called zygospores
  - b. are flagellated
  - c. are formed by meiosis
  - d. come from conidia
  - e. come from gametangia
16. The budding of yeast is equivalent to
  - a. plasmogamy
  - b. the formation of basidiospores
  - c. the formation of conidiospores
  - d. the fusion of flagellated gametes
  - e. the swarming of myxamoebae
17. The cell walls of cyanobacteria consist of
  - a. cellulose
  - b. chitin
  - c. peptidoglycan
  - d. silica
  - e. they have no cell walls
18. The cyanobacteria
  - a. are also called yellow-blue algae
  - b. are autotrophic
  - c. contain only unicellular forms
  - d. cannot fix atmospheric nitrogen
  - e. live only in unpolluted, oligotrophic lakes
19. The diploid cells in Ascomycota are called
  - a. basidiospores
  - b. dikaryotic
  - c. mycelial cells
  - d. zoospores
  - e. zygotes
20. The five kingdoms described by Margulis and used in many textbooks are
  - a. Animalia, Monera, Fungi, Plantae, Protista
  - b. Fungi, Archaeobacteria, Animalia, Protista, Monera
  - c. monasteries, proctologists, animists, functionaries, and planners
  - d. Protista, Cyanobacteria, Animalia, Plantae, Monera
  - e. Protozoa, Plantae, Fungi, Algae, Animalia
21. The Fungi Imperfecti consist
  - a. mainly of Ascomycota
  - b. mainly of Basidiomycota
  - c. mainly of Myxomycota
  - d. mainly of Zygomycota
  - e. of fungi for which the sexual cycle is well known

22. The gametes of the Zygomycota
  - a. are diploid
  - b. are the tips of hyphae that contact hyphae from another mating strain
  - c. consist of eggs and sperm
  - d. have flagella
  - e. swim long distances
23. The Linnaean hierarchy, in order from the most inclusive to the least inclusive, is
  - a. Kingdom, Division, Class, Order, Family, Genus, Species
  - b. Kingdom, Division, Family, Order, Class, Genus, Species
  - c. Specie, Genius, Homily, Odor, Clasp, Phylum, Kingdome
  - d. Species, Genus, Class, Order, Family, Division, Kingdom
  - e. Species, Genus, Family, Order, Class, Division, Kingdom
24. The most common condition in the mycelium of Ascomycota is
  - a. anucleate
  - b. aseptate
  - c. dikaryotic
  - d. diploid
  - e. haploid
25. The most common condition in the mycelium of Basidiomycota is
  - a. anucleate
  - b. aseptate
  - c. dikaryotic
  - d. diploid
  - e. haploid
26. The most probable adaptive value of the dikaryotic condition is that
  - a. it allows genetic crossing-over
  - b. it allows the formation of a diploid sporophyte
  - c. it mimics some of the genetic consequences of diploidy
  - d. the two nuclei in each cell are genetically identical
  - e. there is a spare nucleus in every cell in case the main nucleus is eaten
27. The multicellular "slug" of the Acrasiomycota
  - a. can ingest organisms as large as a small puppy
  - b. grows from a single cell
  - c. has no cell walls
  - d. is dikaryotic
  - e. is formed by the fusion of many separate cells
28. The Myxomycota receive nutrition by
  - a. absorbing food from decaying vegetation
  - b. autotrophic processes
  - c. hanging around dumpsters behind supermarkets
  - d. ingesting bacteria and other small organisms
  - e. parasitism
29. The name Ulvaceae refers to a \_\_\_\_\_ and the name Heterobasidiomycetes refers to a \_\_\_\_\_.
  - a. class . . . division
  - b. division . . . class
  - c. division . . . family
  - d. family . . . class
  - e. order . . . genus

30. The structure of compacted hyphae in the Ascomycota that bears the reproductive parts is called the
- ascocarp
  - ascogonium
  - basidiocarp
  - basidiothecium
  - perigynium
31. The structure of compacted hyphae in the Basidiomycota that bears the reproductive parts is called the
- ascocarp
  - ascogonium
  - basidiocarp
  - cleistothecium
  - perigynium
32. Three divisions of heterotrophic organisms that have chitin cell walls are
- Acrasiomycota, Myxomycota, and Oomycota
  - Basidiomycota, Chytridiomycota, and Ascomycota
  - Basidiomycota, Zygomycota, and Myxomycota
  - Cyanobacteria, Basidiomycota, and Chytridiomycota
  - Zygomycota, Ascomycota, and Oomycota

33. When you eat a common pizza mushroom (*Agaricus brunnescens*), you are eating
- a. a basidiocarp
  - b. a mass of conidiospores
  - c. a member of the kingdom Protista
  - d. an apothecium
  - e. haploid mycelium