BOT 125 - Plant Morphology
Fall 1991
Midterm Exam

Name_____Section_____

Answer all questions on the Scantron sheet. There is only one correct answer to each question. Please turn in this sheet as well as the Scantron.

1. The five kingdoms described by Margulis, as used in your text, are
   a. Protista, Cyanobacteria, Animalia, Plantae, Monera
   b. Fungi, Archaebacteria, Animalia, Protista, Monera
   c. Animalia, Monera, Fungi, Plantae, Protista
   d. Protozoa, Plantae, Fungi, Algae, Animalia
   e. monasteries, proctologists, animists, functionaries, and planners

2. The archaebacteria and the true bacteria are similar because they both
   a. have membrane-bound organelles
   b. have chromosomes
   c. lack flagella
   d. lack cell walls
   e. lack a membrane-bound nucleus

3. The cell walls of true bacteria (Kingdom Monera) consist of
   a. cellulose
   b. peptidoglycan
   c. chitin
   d. calcium carbonate
   e. they have no cell walls

4. The cyanobacteria
   a. are also called blue-green algae
   b. have members that can fix atmospheric nitrogen
   c. contain filamentous and colonial forms as well as unicellular forms
   d. all of the above
   e. none of the above

5. Cyanobacteria grow well in polluted lakes because
   a. they can fix nitrogen, and phosphorus is abundant from industrial and household sources
   b. they can metabolize crude oil, converting it into hydrogen sulfide and carbon dioxide
   c. they can grow in the absence of light
   d. all of the above
   e. none of the above

6. **All** eukaryotes have
   a. flagella
   b. mitochondria
   c. chloroplasts
   d. nuclei
   e. cell walls

7. According to the endosymbiosis theory,
   a. chloroplasts, mitochondria, and perhaps flagella of eukaryotic cells originated from symbiotic prokaryotic organisms
   b. the original eukaryotic cells had no DNA
   c. The naked, circular DNA and bacterial-type ribosomes of chloroplasts and mitochondria are evidence of their prokaryotic origin
   d. **a** and **b**
   e. **a** and **c**

8. It is believed that mitochondria were acquired by eukaryotes only once in their evolution because
   a. all eukaryotes have mitochondria
   b. all mitochondria have similar structures and similar genes
   c. all mitochondria carry out oxidative respiration
   d. all mitochondria have the same chlorophyll
   e. all mitochondria are spherical

9. "Red" chloroplasts
   a. are found in the green algae
   b. show no similarities to free-living prokaryotes
   c. lack chlorophyll
   d. are similar to free-living cyanobacteria
   e. are found in fungi

10. We can always recognize the evolutionary kinship between specific organisms by
    a. the homologies they share
    b. their similar fossils
    c. their position in the classification in the book
    d. how advanced or primitive they are
    e. their cell wall materials

11. Three divisions of heterotrophic organisms that have chitin cell walls are
    a. Zygomycota, Ascomycota, and Oomycota
    b. Acrasiomycota, Myxomycota, and Oomycota
    c. Cyanobacteria, Basidiomycota, and Chytridiomycota
    d. Basidiomycota, Zygomycota, and Myxomycota
    e. Chytridiomycota, Zygomycota, and Ascomycota

12. Sporophytes
    a. are characteristically multicellular
    b. are diploid
    c. always produce gametes
    d. **a** and **b**
    e. **a** and **c**

13. Gametophytes
    a. produce gametes
    b. are diploid
    c. produce meiospores
    d. are never found in plants
    e. are always green and heart-shaped

14. A multicellular diploid stage is found in the life cycle of
    a. Myxomycota
    b. Ascomycota
    c. Basidiomycota
    d. all of the above
    e. none of the above

15. A multicellular haploid stage is found in the life cycle of
    a. Oomycota
    b. Animalia
    c. Zygomycota
    d. all of the above
    e. none of the above

16. Flagellated cells can be found in the
    a. Myxomycota
    b. Basidiomycota
    c. Ascomycota
    d. all of the above
    e. none of the above

17. The Acrasiomycota receive nutrition by
    a. photosynthesis
    b. parasitism
    c. absorbing food from decaying vegetation
    d. ingesting bacteria and other small organisms
    e. hanging around dumpsters behind supermarkets

18. The plasmodium of the Myxomycota
    a. grows from a single cell
    b. is formed by the fusion of many separate cells
    c. is haploid
    d. has a cellulose cell wall
    e. can ingest organisms as large as a small puppy

19. The asexual spores of the Oomycota
    a. come from conidia
    b. are formed by meiosis
    c. are flagellated
    d. are called zygospores
    e. come from ascogonia

20. The asexual spores of the Zygomycota
    a. come from ascogonia
    b. come from conidia
    c. are called zygospores
    d. are produced in sac-like sporangia at the ends of hyphae
    e. are formed by meiosis

21. The gametes of the Zygomycota
    a. have flagella
    b. consist of eggs and sperm
    c. are the tips of hyphae that contact hyphae from another mating strain
    d. are diploid
    e. all of the above

22. The most common condition in the hyphae of Ascomycota is
    a. haploid
    b. diploid
    c. dikaryotic
    d. anucleate
    e. aseptate

23. The structure of compacted hyphae in the Ascomycota that bears the reproductive parts is called the
    a. perigynium
    b. ascogonium
    c. ascocarp
    d. basidiocarp
    e. rhizomorph

24. A mat or web of fungal hyphae is called a
    a. myxamoeba
    b. morula
    c. mycoplasma
    d. mycelium
    e. miltonium

25. A cleistothecium
    a. is found in the basidiomycota
    b. has asci on the inside
    c. has asci on the outside
    d. is a cup-shaped structure
    e. consists of diploid cells

26. An ascus characteristically produces
    a. eight asexual spores
    b. eight meiospores
    c. eight gametes
    d. 32 meiospores
    e. hundreds of asexual spores

27. The budding of yeast is equivalent to
    a. the formation of conidiospores
    b. the fusion of flagellated gametes
    c. the swarming of myxamoebae
    d. the formation of basidiospores
    e. all of the above

28. The Fungi Imperfecti consist
    a. of fungi for which the sexual cycle is unknown or poorly known
    b. mainly of Ascomycota
    c. mainly of Basidiomycota
    d. **a** and **b**
    e. **a** and **c**

29. The most common condition in the hyphae of Basidiomycota is
    a. haploid
    b. diploid
    c. dikaryotic
    d. anucleate
    e. aseptate

30. The structure of compacted hyphae in the Basidiomycota that bears the reproductive parts is called the
    a. perigynium
    b. ascogonium
    c. ascocarp
    d. basidiocarp
    e. rhizomorph

31. The diploid cells in Basidiomycota are called
    a. basidiospores
    b. dikaryotic
    c. zoospores
    d. zygotes
    e. mycelial cells

32. Asexual reproduction
    a. in the Basidiomycota is mostly restricted to the class Homobasidiomycetes
    b. is more common in the Basidiomycota than in the Ascomycota
    c. in the Basidiomycota occurs by means of flagellated zoospores
    d. all of the above
    e. none of the above

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