

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 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

2. The name Pinaceae refers to a _____ and the name Homobasidiomycetes refers to a _____.
 - a. class . . . division
 - b. division . . . class
 - c. division . . . family
 - d. family . . . class
 - e. order . . . genus

3. The five kingdoms described by Margulis, as used in your text, 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

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

5. The cyanobacteria
 - a. are also called yellow-green algae
 - b. are heterotrophic
 - c. contain only unicellular forms
 - d. have members that can fix atmospheric nitrogen
 - e. live only in unpolluted, oligotrophic lakes

6. Cyanobacteria grow well in polluted lakes because
 - a. they are not subject to EPA (Environmental Protection Agency) guidelines
 - b. they can fix nitrogen, and phosphorus is abundant from industrial and household sources
 - c. they can grow in the absence of light
 - d. they can metabolize crude oil, converting it into hydrogen sulfide and carbon dioxide
 - e. they eat all the Eubacteria
7. **All** eukaryotes have
 - a. cell walls
 - b. chloroplasts
 - c. flagella
 - d. mitochondria
 - e. nuclei
8. 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
9. 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
10. "Red" chloroplasts
 - a. are found in fungi
 - b. are found in the green algae
 - c. are similar to free-living cyanobacteria
 - d. lack chlorophyll
 - e. show no similarities to free-living prokaryotes
11. Three divisions of heterotrophic organisms that have chitin cell walls are
 - a. Acrasiomycota, Myxomycota, and Oomycota
 - b. Basidiomycota, Zygomycota, and Myxomycota
 - c. Chytridiomycota, Zygomycota, and Ascomycota
 - d. Cyanobacteria, Basidiomycota, and Chytridiomycota
 - e. Zygomycota, Ascomycota, and Oomycota

12. Sporophytes
 - a. always have flagella
 - b. always produce gametes
 - c. are characteristically unicellular
 - d. are diploid
 - e. are haploid
13. Gametophytes
 - a. are always green and heart-shaped
 - b. are diploid
 - c. are never found in plants
 - d. produce gametes
 - e. produce meiospores
14. A multicellular diploid stage is found in the life cycle of
 - a. Ascomycota
 - b. Basidiomycota
 - c. cyanobacteria
 - d. some Chytridiomycota
 - e. Zygomycota
15. A multicellular or multinucleate diploid stage is **never** found in the life cycle of
 - a. Animalia
 - b. Chytridiomycota
 - c. Myxomycota
 - d. Oomycota
 - e. Zygomycota
16. Flagellated cells can be found in the
 - a. Acrasiomycota
 - b. Ascomycota
 - c. Basidiomycota
 - d. Oomycota
 - e. Zygomycota
17. The Acrasiomycota receive nutrition by
 - a. absorbing food from decaying vegetation
 - b. hanging around dumpsters behind supermarkets
 - c. ingesting bacteria and other small organisms
 - d. parasitism
 - e. photosynthesis
18. The plasmodium of the Myxomycota
 - a. can ingest organisms as large as a small puppy
 - b. grows from a single cell
 - c. has a cellulose cell wall
 - d. is formed by the fusion of many separate cells
 - e. is haploid
19. The asexual spores of the Oomycota
 - a. are called zygospores
 - b. are flagellated
 - c. are formed by meiosis
 - d. come from ascogonia
 - e. come from conidia

20. The asexual spores of the Zygomycota
- are called zygospores
 - are formed by meiosis
 - are produced in sac-like sporangia at the ends of hyphae
 - come from ascogonia
 - come from conidia
21. The gametes of the Zygomycota
- are diploid
 - are the tips of hyphae that contact hyphae from another mating strain
 - consist of eggs and sperm
 - have flagella
 - swim long distances
22. The most common condition in the mycelium of Ascomycota is
- anucleate
 - aseptate
 - dikaryotic
 - diploid
 - haploid
23. The structure of compacted hyphae in the Ascomycota that bears the reproductive parts is called the
- ascocarp
 - ascogonium
 - basidiocarp
 - perigynium
 - rhizomorph
24. A mat or web of fungal hyphae is called a
- miltonium
 - morula
 - mycelium
 - mycoplasma
 - myxamoeba

25. A cleistothecium
- consists of diploid cells
 - has asci on the inside
 - has asci on the outside
 - is an open cup-shaped structure
 - is found in the basidiomycota
26. An ascus characteristically produces
- 32 meiospores
 - eight asexual spores
 - eight gametes
 - eight meiospores
 - hundreds of asexual spores
27. The budding of yeast is equivalent to
- all of the above
 - the formation of basidiospores
 - the formation of conidiospores
 - the fusion of flagellated gametes
 - the swarming of myxamoebae
28. The Fungi Imperfecti consist
- mainly of Ascomycota
 - mainly of Basidiomycota
 - mainly of Myxomycota
 - mainly of Zygomycota
 - of fungi for which the sexual cycle is well known
29. The most common condition in the mycelium of Basidiomycota is
- anucleate
 - aseptate
 - dikaryotic
 - diploid
 - haploid
30. The structure of compacted hyphae in the Basidiomycota that bears the reproductive parts is called the
- ascocarp
 - ascogonium
 - basidiocarp
 - perigynium
 - rhizomorph

31. The diploid cells in Basidiomycota are called
- basidiospores
 - dikaryotic
 - mycelial cells
 - zoospores
 - zygotes
32. Asexual reproduction
- in the Ascomycota occurs by means of conidiospores
 - in the Basidiomycota is mostly restricted to the class Homobasidiomycetes
 - in the Basidiomycota occurs by means of flagellated zoospores
 - is more common in the Basidiomycota than in the Ascomycota
 - is unknown in the Oomycota
33. When you eat a common pizza mushroom (*Agaricus brunnescens*), you are eating
- a basidiocarp
 - a mass of conidiospores
 - a member of the kingdom Protista
 - an apothecium
 - haploid mycelium