

1. The _____ are primarily terrestrial.
 - a. Acrasiomycota
 - b. Chrysophyta
 - c. Euglenophyta
 - d. Oomycota
 - e. Pyrrhophyta
2. Although a few Fungi Imperfecti belong in the _____, and most of the rest in the _____, mycologists retain the group because of its historical importance.
 - a. Ascomycota . . . Oomycota
 - b. Basidiomycota . . . Ascomycota
 - c. Basidiomycota . . . Zygomycota
 - d. Pyrrhophyta . . . Acrasiomycota
 - e. Zygomycota . . . Ascomycota
3. _____ are **always** diploid.
 - a. Gametangia
 - b. Gametes
 - c. Meiospores
 - d. Oocytes
 - e. Zoospores
4. Gametes are the only haploid cells in the
 - a. Ascomycota
 - b. Chytridiomycota
 - c. Oomycota
 - d. Rhodophyta
 - e. Xanthophyceae
5. Heterocysts are found in the _____ and are specialized for _____.
 - a. Chytridiomycota . . . asexual reproduction
 - b. Cyanobacteria . . . survival
 - c. Myxomycota . . . dispersal
 - d. Cyanophyta . . . nitrogen fixation
 - e. Phaeophyta . . . nutrient transport
6. You are eating California Creamy Cow Custard nutrition-free partially-frozen artificially brown-flavored milk-like dessert. You would not be surprised to find that it owes its creamy texture to _____ obtained from _____.
 - a. carrageenan . . . Rhodophyta
 - b. carrageenan . . . Phaeophyta
 - c. chitin . . . Rhodophyta
 - d. mannitol . . . Phaeophyta
 - e. laminarin . . . Rhodophyta
7. You are taking a lab exam. The card says "What is the ploidy level of this meiocyte of *Fissidens* of the Bryophyta?" You were certain that Bryophyta weren't supposed to be on the exam. In fact, Dr. Clark never even lectured about them. But you have to put down an answer anyway. The correct answer is
 - a. dikaryotic
 - b. diploid
 - c. gamete
 - d. haploid
 - e. zygote
8. An ascus characteristically produces
 - a. 32 ascospores
 - b. 4 basidiospores
 - c. 8 ascospores
 - d. flagellated sperm cells
 - e. hundreds of asexual spores
9. Zygospores, auxospores, and oospores are all _____ because they are all _____.
 - a. diploid . . . asexual spores
 - b. diploid . . . meiospores
 - c. diploid . . . zygotes
 - d. haploid . . . meiospores
 - e. haploid . . . zygotes
10. The Basidiomycota and Ascomycota have a dikaryotic phase because
 - a. karyogamy is not immediately followed by plasmogamy
 - b. meiosis is not immediately followed by syngamy
 - c. neither has a haploid phase
 - d. plasmogamy is not immediately followed by karyogamy
 - e. they are both aseptate
11. Flagellated cells are never found in the
 - a. Chytridiomycota
 - b. Euglenophyta
 - c. Oomycota
 - d. Pyrrhophyta
 - e. Zygomycota
12. Reproductive cells of the Basidiomycota have _____ flagella.
 - a. 0
 - b. 1
 - c. 2
 - d. 3-5
 - e. 6-25

13. The Chytridiomycota were once placed in the kingdom Fungi. They are different from fungi because
- their life cycle is alternation of generations
 - they are aseptate
 - they are never parasitic
 - they have no cell walls
 - they have no flagellated cells
14. Perithecia, cleistothecia, and apothecia are all types of
- ascocarps
 - basidiocarps
 - gametangia
 - plasmodia
 - zygocarps
15. A cleistothecium
- has basidia on the inside
 - is a basidiocarp
 - is an ascocarp
 - is an open, cup-shaped structure
 - is found in the Zygomycota
16. Tetraspores come from _____ and give rise to _____.
- carposporophytes . . . gametophytes
 - carposporophytes . . . tetrasporophytes
 - gametes . . . carposporophytes
 - tetrasporophytes . . . carposporophytes
 - tetrasporophytes . . . gametophytes
17. A common food storage substance in the division Euglenophyta is _____; it is found in the _____.
- chrysolaminarin . . . chloroplast
 - glycogen . . . pellicle
 - lipid . . . cytoplasm
 - paramylon . . . cytoplasm
 - starch . . . chloroplast
18. The cyanobacteria
- are also called yellow-green algae
 - are eukaryotic
 - are heterotrophic
 - can fix atmospheric nitrogen
 - contain only unicellular forms
19. Xanthophyceae differ from Bacillariophyceae because Xanthophyceae
- are filamentous
 - have brown plastids
 - have a diploid-dominant life cycle
 - only live in the ocean
 - have silica in their cell walls
20. Diatomaceous earth is composed mainly of the _____ of _____.
- cell walls . . . Bacillariophyceae
 - cell walls . . . Pyrrhophyta
 - cell walls . . . Xanthophyceae
 - crushed remains . . . swimming pools
 - pellicles . . . diatoms
21. An *Ectocarpus* (Phaeophyta: isomorphic group) **gametophyte**
- may have unilocular sporangia
 - will always have unilocular sporangia
 - will never be haploid
 - will never have plurilocular sporangia
 - will never have unilocular sporangia
22. **All** eukaryotes have
- a nucleus
 - basal bodies
 - cell walls
 - chloroplasts
 - mitochondria
23. The filaments that form a mycelium are called
- conidiophores
 - dikaryon
 - heterokonts
 - hyphae
 - myconemata
24. Oogamous gametes
- are diploid
 - are egg and sperm
 - are never flagellated
 - are produced only by fungi
 - are the same size
25. Rhodophyta grow deeper in the ocean than any other type of algae. This is because
- their carotenoid pigments efficiently absorb the blue light that penetrates the furthest into the water
 - their carotenoid pigments efficiently absorb the yellow light that penetrates the furthest into the water
 - their phycobilin pigments efficiently absorb the blue light that penetrates the furthest into the water
 - their phycobilin pigments efficiently absorb the red light that penetrates the furthest into the water
 - they can live heterotrophically by ingesting dinoflagellates
26. Euglenas have _____ eyespots; thus, they can't see _____.
- blue . . . red
 - green . . . yellow
 - red . . . blue
 - red . . . red
 - transparent . . . anything
27. *Phytophthora infestans* is the causative organism of
- aflatoxin
 - eutrophication
 - late blight of potato
 - the antibiotic penicillin
 - the red tide

28. _____ is a Family and _____ is a Class.
- Alismataceae . . . Magnoliopsida
 - Brassicaceae . . . Ginkgophyta
 - Chrysophyceae . . . Heterobasidiomycetes
 - Magnoliopsida . . . Magnoliales
 - Penicillium* . . . *Phytophthora*
29. Food is stored in Rhodophyta in the form of
- floridean starch
 - glycogen
 - laminarin
 - mannitol
 - paramylon
30. Fucoxanthin is not found in the chloroplasts of division
- Chrysophyta, class Bacillariophyceae
 - Chrysophyta, class Chrysophyceae
 - Oomycota
 - Phaeophyta
 - Pyrrhophyta
31. Carl Linnaeus
- believed that variation *within* species was “accidental”, not as important as the “essential” variation *between* species.
 - gave organisms Latin names because few scientists in Europe knew Latin and he wanted to keep their characteristics secret.
 - grouped organisms according to evolutionary kinship.
 - invented binomial names because he thought they were better than long phrases.
 - invented the Linnaean hierarchy of Kingdom, Phylum, Division, Order, Genus, and Species.
32. In marine coastal waters of the tropics, the ecologically dominant seaweeds are members of the division
- Cyanophyta
 - Euglenophyta
 - Myxomycota
 - Phaeophyta
 - Rhodophyta
33. The Myxomycota are like the _____ because they both ingest bacteria, and they are like the _____ because they both have no cell walls.
- Acrasiomycota . . . Euglenophyta
 - Ascomycota . . . Chrysophyta
 - Chytridiomycota . . . Acrasiomycota
 - Euglenophyta . . . Ascomycota
 - Oomycota . . . Cyanobacteria
34. “Alternation of generations” refers to alternation of
- a diploid, gamete-producing generation with a haploid, meiospore-producing generation
 - a haploid, gamete-producing generation with a diploid, meiospore-producing generation
 - dikaryotic hyphae with diploid hyphae
 - Jean-Luc Picard and James T. Kirk
 - sexual and asexual reproduction
35. _____ ordinarily have two flagella located in grooves on the cell wall
- Acrasiomycota
 - Cyanobacteria
 - Euglenophyta
 - Pyrrhophyta
 - Zygomycota
36. An organism has aseptate haploid filaments. If it forms zygospores and is not photosynthetic, its cell walls are probably made of
- cellulose
 - chitin
 - nothing—it has no cell walls
 - peptidoglycan
 - silica
37. An organism has silica cell walls and brown plastids. It is most likely a member of the division
- Chrysophyta
 - Euglenophyta
 - Myxomycota
 - Oomycota
 - Rhodophyta
38. One piece of evidence that the lichen association is parasitic is that
- a lichen-forming fungus can attack different species of algae
 - air pollution kills the fungi, but the algae survive
 - lichens can be grouped as crustose, foliose, squamulose, and fruticose
 - lichens can live anywhere
 - the fungi can live on their own, but the algae can't
39. _____ produces aflatoxin.
- Agaricus brunnescens*
 - Aspergillus flavus*
 - Penicillium notatum*
 - Phytophthora infestans*
 - Saccharomyces cerevisiae*

40. *Penicillium* produces substances that kill bacteria so that
- humans will have a ready source of antibiotic
 - it can easily contaminate petri dishes
 - it can more easily grow on fruits, which are prokaryotic like bacteria
 - it will kill bacteria that would otherwise compete for its food
 - it will reproduce asexually
41. In rockweeds such as *Fucus*, the receptacles (swollen branch tips) often contain chambers called
- antheridia
 - intercalaries
 - oogonia
 - paraphyses
 - conceptacles
42. In some of the organisms you have studied so far, the gametangia, meiosporangia, and asexual sporangia are similar in appearance. This is most likely because
- the same structure can provide all three functions
 - the sexual cycle is not known
 - they are all diploid
 - they are formed through the same developmental pathways
 - they form on the same gametophyte
43. In the Rhodophyta, carposporophytes
- come from tetraspores
 - come from zygotes
 - produce carpospores by meiosis
 - produce gametes by mitosis
 - produce tetraspores by meiosis
44. Of the fungi that take part in the lichen symbios, the smallest number are members of the division
- Acrasiomycota
 - Ascomycota
 - Basidiomycota
 - Pyrrhophyta
 - Sorediomycota
45. Of the five kingdoms of Margulis, the _____ are eukaryotic and primarily unicellular.
- Animalia
 - Fungi
 - Monera
 - Plantae
 - Protista
46. Even though they are autotrophic, some members of the _____ can eat other organisms and live as heterotrophs.
- Basidiomycota
 - Chytridiomycota
 - Cyanobacteria
 - Oomycota
 - Pyrrhophyta
47. The two-part sporophyte (tetrasporophyte and carposporophyte) of the Rhodophyta and the dikaryotic mycelium of the Basidiomycota both serve to
- increase the number of meiospores per zygote
 - increase the amount of asexual reproduction relative to sexual reproduction
 - eliminate the need for syngamy
 - eliminate the need for meiosis
 - produce greater numbers of zoospores.
48. Cell walls of the _____ contain neither cellulose nor chitin
- Ascomycota
 - Cyanophyta
 - Euglenophyta
 - Myxomycota
 - Xanthophyceae
49. If you were looking for a member of the kingdom Fungi that reproduces primarily sexually (rather than asexually), you would most likely find it in the division
- Acrasiomycota
 - Ascomycota
 - Basidiomycota
 - Euglenophyta
 - Zygomycota
50. When you are eating *Agaricus brunnescens*, the common pizza mushroom, you are eating
- an ascocarp
 - diploid mycelium
 - haploid mycelium
 - plectenchyma
 - zygospores