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MCQ Set 2

1. The term "natural classification systems" refers to systems based on:
a) Only one characteristic
b) Human-defined criteria
c) Natural affinities among organisms
d) Only fossil records

2. Which system of classification for flowering plants was given by Bentham and Hooker?
a) Artificial system
b) Natural system
c) Phylogenetic system
d) Numerical system

3. Chemotaxonomy uses which of the following to resolve confusions in classification?
a) Chromosome number
b) Chemical constituents
c) Habitat
d) Flower color

4. Algae can be found in all of the following habitats EXCEPT:
a) Moist stones
b) Dry deserts
c) Freshwater
d) Marine water

5. Which of the following is a filamentous green alga?
a) *Volvox*
b) *Chlamydomonas*
c) *Ulothrix*
d) *Chlorella*

6. The most common type of asexual spore in algae is:
a) Aplanospore
b) Zoospore
c) Hypnospore
d) Tetraspore

7. Isogamous reproduction involves:
a) Fusion of similar gametes

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b) Fusion of dissimilar gametes
c) Fusion of one motile and one non-motile gamete
d) No fusion of gametes

8. Anisogamous reproduction is found in:
a) *Ulothrix*
b) *Spirogyra*
c) *Eudorina*
d) *Volvox*

9. The massive plant bodies in marine environments are formed by:
a) Green algae
b) Brown algae (kelps)
c) Red algae
d) Blue-green algae

10. Which algae is responsible for producing algin?
a) Red algae
b) Green algae
c) Brown algae
d) Blue-green algae

11. Carrageen is a hydrocolloid obtained from:
a) Green algae
b) Brown algae
c) Red algae
d) All algae

12. The chloroplasts in Chlorophyceae can be all of the following shapes EXCEPT:
a) Discoid
b) Reticulate
c) Ladder-like
d) Spiral

13. Pyrenoids in green algae are involved in:
a) Photosynthesis
b) Storage of starch and protein
c) Reproduction
d) Attachment

14. The flagella in Chlorophyceae are:
a) Absent
b) Apical and equal

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c) Lateral and unequal
d) Multiple and lateral

15. The outer layer of the cell wall in green algae is composed of:
a) Cellulose
b) Pectose
c) Algin
d) Lignin

16. *Ectocarpus* is an example of:
a) Green algae
b) Brown algae
c) Red algae
d) Golden algae

17. The photosynthetic organ in brown algae is called:
a) Thallus
b) Frond
c) Stipe
d) Holdfast

18. The flagella in Phaeophyceae are:
a) Apical and equal
b) Lateral and unequal
c) Absent
d) Multiple and apical

19. The stored food in Rhodophyceae is:
a) Starch
b) Laminarin
c) Floridean starch
d) Mannitol

20. Red algae can grow at great depths in the ocean because of:
a) Chlorophyll a
b) r-phycoerythrin
c) Fucoxanthin
d) Chlorophyll c

21. Sexual reproduction in red algae is:
a) Isogamous
b) Anisogamous
c) Oogamous
d) Can be any of the above

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22. The plant body of bryophytes is attached to the substratum by:
a) Roots
b) Rhizoids
c) Holdfast
d) Stolons

23. The zygote in bryophytes develops into:
a) Gametophyte
b) Sporophyte
c) Protonema
d) Prothallus

24. Mosses are of great ecological importance because they:
a) Produce flowers
b) Are the first to colonize rocks
c) Have vascular tissues
d) Produce seeds

25. The thallus of *Marchantia* is:
a) Radial
b) Dorsiventral
c) Spherical
d) Branched

26. Asexual buds in liverworts are called:
a) Spores
b) Gemmae
c) Zoospores
d) Antherozoids

27. The sporophyte of liverworts is differentiated into:
a) Root, stem, leaves
b) Foot, seta, capsule
c) Holdfast, stipe, frond
d) Antheridium, archegonium

28. The protonema stage in mosses is:
a) The leafy stage
b) The reproductive stage
c) The first stage developing from a spore
d) The sporophyte stage

29. The sex organs in mosses are produced at the:
a) Base of the plant

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b) Apex of the leafy shoots
c) On the rhizoids
d) Inside the capsule

30. The mechanism of spore dispersal in mosses is:
a) Simple
b) Elaborate
c) Absent
d) By water only

31. Pteridophytes are used for:
a) Food
b) Medicinal purposes and as soil-binders
c) Timber
d) Resin

32. The leaves in pteridophytes can be:
a) Only microphylls
b) Only macrophylls
c) Microphylls or macrophylls
d) Always small

33. Sporangia in pteridophytes are borne on:
a) Roots
b) Stems
c) Leaves or sporophylls
d) Gametophytes

34. Compact structures formed by sporophylls are called:
a) Spores
b) Strobili or cones
c) Prothalli
d) Sori

35. The gametophyte of pteridophytes is:
a) Dominant and long-lived
b) Microscopic and short-lived
c) Free-living, photosynthetic, and called prothallus
d) Dependent on the sporophyte

36. Water is required in pteridophytes for:
a) Photosynthesis
b) Transfer of male gametes

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c) Growth of sporophyte
d) Spore formation

37. Heterospory refers to the production of:
a) One type of spore
b) Two types of spores
c) Three types of spores
d) No spores

38. *Selaginella* belongs to which class of pteridophytes?
a) Psilopsida
b) Lycopsida
c) Sphenopsida
d) Pteropsida

39. The ovules in gymnosperms are:
a) Enclosed in an ovary
b) Naked
c) Found inside fruits
d) Very small

40. *Cycas* has:
a) Branched stems
b) Unbranched stems
c) No stems
d) Underground stems

41. The needle-like leaves in conifers help to:
a) Increase photosynthesis
b) Reduce surface area and water loss
c) Attract pollinators
d) Store water

42. Gymnosperms are:
a) Homosporous
b) Heterosporous
c) Isosporous
d) Asexual

43. The microspores of gymnosperms develop into:
a) Female gametophyte
b) Pollen grains
c) Ovules
d) Seeds

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44. The female gametophyte in gymnosperms bears:
a) Antheridia
b) Archegonia
c) Sporangia
d) Zoospores

45. Pollen grains in gymnosperms are transferred by:
a) Insects
b) Water
c) Wind
d) Birds

46. After fertilization in gymnosperms, the ovule develops into:
a) Fruit
b) Seed
c) Flower
d) Embryo sac

47. The seeds of gymnosperms are:
a) Enclosed in fruit
b) Naked
c) Found in flowers
d) Very small

48. Angiosperms are characterized by the presence of:
a) Cones
b) Flowers
c) Prothallus
d) Archegonia

49. The smallest angiosperm is:
a) *Eucalyptus*
b) *Wolffia*
c) *Sequoia*
d) *Pinus*

50. The class Dicotyledons includes plants with:
a) Parallel venation
b) Two cotyledons
c) Fibrous root system
d) Scattered vascular bundles

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Answers: Set 2

1. c) Natural affinities among organisms
2. b) Natural system
3. b) Chemical constituents
4. b) Dry deserts
5. c) *Ulothrix*
6. b) Zoospore
7. a) Fusion of similar gametes
8. c) *Eudorina*
9. b) Brown algae (kelps)
10. c) Brown algae
11. c) Red algae
12. c) Ladder-like
13. b) Storage of starch and protein
14. b) Apical and equal
15. b) Pectose
16. b) Brown algae
17. b) Frond
18. b) Lateral and unequal
19. c) Floridean starch
20. b) r-phycoerythrin
21. c) Oogamous
22. b) Rhizoids
23. b) Sporophyte
24. b) Are the first to colonize rocks
25. b) Dorsiventral
26. b) Gemmae
27. b) Foot, seta, capsule
28. c) The first stage developing from a spore
29. b) Apex of the leafy shoots
30. b) Elaborate
31. b) Medicinal purposes and as soil-binders
32. c) Microphylls or macrophylls
33. c) Leaves or sporophylls
34. b) Strobili or cones
35. c) Free-living, photosynthetic, and called prothallus
36. b) Transfer of male gametes
37. b) Two types of spores
38. b) Lycopsida
39. b) Naked
40. b) Unbranched stems

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41. b) Reduce surface area and water loss
42. b) Heterosporous
43. b) Pollen grains
44. b) Archegonia
45. c) Wind
46. b) Seed
47. b) Naked
48. b) Flowers
49. b) *Wolffia*
50. b) Two cotyledons