

# CLASS XI BIO CH:3

## MCQ Set 1

1. According to the five-kingdom classification proposed by Whittaker, which kingdom do plants belong to?

- a) Monera
- b) Protista
- c) Fungi
- d) Plantae

2. Which of the following is NOT included in Kingdom Plantae in the current classification?

- a) Blue-green algae
- b) Bryophytes
- c) Gymnosperms
- d) Angiosperms

3. The classification system given by Linnaeus was based mainly on:

- a) Evolutionary relationships
- b) Androecium structure
- c) Phytochemistry
- d) Ultrastructure

4. Natural classification systems consider all of the following EXCEPT:

- a) External features
- b) Anatomical features
- c) Evolutionary relationships
- d) Only vegetative characters

5. Phylogenetic classification systems are based on:

- a) All observable characteristics
- b) Evolutionary relationships
- c) Chemical constituents
- d) Chromosome number

6. Numerical Taxonomy assigns importance to:

- a) Only reproductive characters
- b) Only a few key characters
- c) All observable characters equally
- d) Only fossil evidence

7. Cytotaxonomy is based on:

- a) Chemical constituents

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- b) Chromosome information
- c) Evolutionary history
- d) Habitat data

8. Algae are primarily:

- a) Heterotrophic
- b) Autotrophic
- c) Saprophytic
- d) Parasitic

9. The colonial form of alga is:

- a) *Ulothrix*
- b) *Spirogyra*
- c) *Volvox*
- d) *Chlamydomonas*

10. Asexual reproduction in algae occurs through:

- a) Fragmentation
- b) Zoospores
- c) Isogamy
- d) Oogamy

11. Sexual reproduction with non-flagellated gametes similar in size is called:

- a) Anisogamous
- b) Oogamous
- c) Isogamous
- d) Zoogamous

12. *Volvox* exhibits which type of sexual reproduction?

- a) Isogamous
- b) Anisogamous
- c) Oogamous
- d) Isogamous and Oogamous

13. The primary pigment responsible for the red color in red algae is:

- a) Chlorophyll a
- b) Fucoxanthin
- c) r-phycoerythrin
- d) Chlorophyll b

14. Which algae is used as a food supplement by space travellers?

- a) *Porphyra*
- b) *Laminaria*

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- c) *Chlorella*
- d) *Sargassum*

15. Agar is commercially obtained from:

- a) *Gelidium* and *Gracilaria*
- b) *Laminaria* and *Sargassum*
- c) *Chlorella* and *Volvox*
- d) *Ulothrix* and *Spirogyra*

16. The stored food in Chlorophyceae is:

- a) Starch
- b) Laminarin
- c) Mannitol
- d) Floridean starch

17. The cell wall of green algae is made of:

- a) Cellulose and algin
- b) Cellulose and pectin
- c) Cellulose and poly sulphate esters
- d) Cellulose and pectose

18. Brown algae are predominantly found in:

- a) Freshwater
- b) Terrestrial habitats
- c) Marine habitats
- d) On moist rocks

19. The pigment fucoxanthin is found in:

- a) Chlorophyceae
- b) Phaeophyceae
- c) Rhodophyceae
- d) All algae

20. The food stored in Phaeophyceae is:

- a) Starch and oil droplets
- b) Laminarin and mannitol
- c) Floridean starch
- d) Glycogen

21. The gelatinous coating on the cell wall of brown algae is due to:

- a) Pectose
- b) Algin
- c) Cellulose
- d) Poly sulphate esters

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22. Flagella are absent in:

- a) Chlorophyceae
- b) Phaeophyceae
- c) Rhodophyceae
- d) Both (a) and (b)

23. Bryophytes are called amphibians of the plant kingdom because:

- a) They live in water
- b) They live in soil but need water for reproduction
- c) They have a vascular system
- d) They have flagellated gametes

24. The main plant body of bryophytes is:

- a) Diploid sporophyte
- b) Haploid gametophyte
- c) Triploid endosperm
- d) Haploid sporophyte

25. The male sex organ in bryophytes is called:

- a) Archegonium
- b) Antheridium
- c) Sporangium
- d) Oogonium

26. The female sex organ in bryophytes is:

- a) Flask-shaped
- b) Star-shaped
- c) Cup-shaped
- d) Spiral

27. The sporophyte in bryophytes is:

- a) Free-living and photosynthetic
- b) Dependent on gametophyte for nourishment
- c) The dominant phase
- d) Haploid in nature

28. *Sphagnum* is used as:

- a) Food
- b) Fuel and packing material
- c) Medicine
- d) Ornamental

29. Asexual reproduction in liverworts occurs through:

- a) Zoospores

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- b) Gemmae
- c) Fragmentation only
- d) Budding

30. Gemmae are produced in:

- a) Antheridia
- b) Archegonia
- c) Gemma cups
- d) Sporangia

31. The first stage in the life cycle of a moss is:

- a) Leafy stage
- b) Protonema
- c) Sporophyte
- d) Rhizoids

32. The sporophyte of moss is differentiated into:

- a) Root, stem, leaves
- b) Foot, seta, capsule
- c) Holdfast, stipe, frond
- d) Antheridium, archegonium

33. Pteridophytes are the first plants to have:

- a) Seeds
- b) Flowers
- c) Vascular tissues
- d) Fruits

34. The dominant phase in pteridophytes is:

- a) Gametophyte
- b) Sporophyte
- c) Protonema
- d) Prothallus

35. The gametophyte of pteridophytes is called:

- a) Protonema
- b) Prothallus
- c) Sporophyll
- d) Thallus

36. *Selaginella* and *Salvinia* are examples of:

- a) Homosporous plants
- b) Heterosporous plants

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- c) Isosporous plants
- d) Seed plants

37. Heterospory is considered a precursor to:

- a) The flower habit
- b) The seed habit
- c) The fruit habit
- d) The vascular habit

38. Gymnosperms are characterized by:

- a) Enclosed ovules
- b) Naked seeds
- c) Fruits
- d) Absence of vascular tissues

39. In *Pinus*, roots have a fungal association known as:

- a) Lichen
- b) Mycorrhiza
- c) Coralloid roots
- d) Rhizoids

40. In *Cycas*, roots associated with  $N_2$ -fixing cyanobacteria are called:

- a) Mycorrhiza
- b) Tap roots
- c) Coralloid roots
- d) Adventitious roots

41. The male gametophyte in gymnosperms is called:

- a) Antheridium
- b) Archegonium
- c) Pollen grain
- d) Prothallus

42. In gymnosperms, the ovules are borne on:

- a) Microsporophylls
- b) Megasporophylls
- c) Scales
- d) Strobili

43. The tallest tree species, *Sequoia*, is a:

- a) Bryophyte
- b) Pteridophyte
- c) Gymnosperm
- d) Angiosperm

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44. Angiosperms are characterized by:

- a) Naked seeds
- b) Seeds enclosed in fruits
- c) Dominant gametophyte
- d) Absence of flowers

45. Angiosperms are divided into:

- a) Homosporous and heterosporous
- b) Vascular and non-vascular
- c) Dicotyledons and monocotyledons
- d) Seedless and seeded

46. Which of the following is a dicotyledon?

- a) Wheat
- b) Maize
- c) Rice
- d) Sunflower

47. The main basis for classifying algae is:

- a) Type of pigment and stored food
- b) Habitat
- c) Flagellation
- d) Cell wall structure

48. Reduction division in a fern occurs in:

- a) Leaf cells
- b) Spore mother cells
- c) Prothallus cells
- d) Zygote

49. Which of the following groups bear archegonia?

- a) Bryophytes, Pteridophytes, Gymnosperms
- b) Algae, Bryophytes, Pteridophytes
- c) Only Bryophytes
- d) Only Pteridophytes

50. The ploidy of the leaf cell of a moss is:

- a) Haploid
  - b) Diploid
  - c) Triploid
  - d) Polyploid
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## Answers: Set 1

1. d) Plantae
2. a) Blue-green algae
3. b) Androecium structure
4. d) Only vegetative characters
5. b) Evolutionary relationships
6. c) All observable characters equally
7. b) Chromosome information
8. b) Autotrophic
9. c) *Volvox*
10. b) Zoospores
11. c) Isogamous
12. c) Oogamous
13. c) r-phycoerythrin
14. c) *Chlorella*
15. a) *Gelidium* and *Gracilaria*
16. a) Starch
17. d) Cellulose and pectose
18. c) Marine habitats
19. b) Phaeophyceae
20. b) Laminarin and mannitol
21. b) Algin
22. c) Rhodophyceae
23. b) They live in soil but need water for reproduction
24. b) Haploid gametophyte
25. b) Antheridium
26. a) Flask-shaped
27. b) Dependent on gametophyte for nourishment
28. b) Fuel and packing material
29. b) Gemmae
30. c) Gemma cups
31. b) Protonema
32. b) Foot, seta, capsule
33. c) Vascular tissues
34. b) Sporophyte
35. b) Prothallus
36. b) Heterosporous plants
37. b) The seed habit
38. b) Naked seeds
39. b) Mycorrhiza
40. c) Coralloid roots



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- 41. c) Pollen grain
- 42. b) Megasporophylls
- 43. c) Gymnosperm
- 44. b) Seeds enclosed in fruits
- 45. c) Dicotyledons and monocotyledons
- 46. d) Sunflower
- 47. a) Type of pigment and stored food
- 48. b) Spore mother cells
- 49. a) Bryophytes, Pteridophytes, Gymnosperms
- 50. a) Haploid

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