



## RAVI MATHS TUITION CENTRE , WHATSAPP - 8056206308

Time : 60 Mins

3 PLANT KINGDOM 1

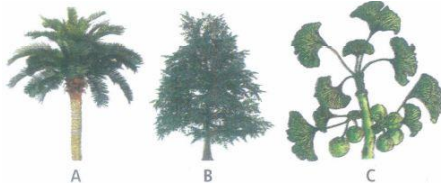
Marks : 240

1. **Assertion:** In pteridophytes, zygote produces a multicellular sporophyte.  
**Reason:** Sporophyte is the dominant phase in life cycle of pteridophytes.  
a) If both assertion and reason are true and reason is the correct explanation of assertion.  
b) If both assertion and reason are true but reason is not the correct explanation of assertion.  
c) If assertion is true but reason is false. c d) If both assertion and reason are false.
2. Which of the following represents maximum number of species among global biodiversity?  
a) Mosses and ferns b) Algae c) Lichens d) Fungi
3. Evolution of seed habit first started in:-  
a) Selaginella like ancestral pteridophytes b) Psilotum like ancestral pteridophytes c) Gymnosperms  
d) Mosses
4. In Chlorophyceae, sexual reproduction occurs by \_\_\_\_\_.  
a) isogamy and anisogamy b) isogamy, anisogamy and oogamy c) oogamy only  
d) anisogamy and oogamy
5. Which one of the following is a slime mould?  
a) Anabaena b) Rhizopus c) Physarum d) Thiobacillus
6. A member of Class Chlorophyceae is  
a) Chlamydomonas b) Volvox c) Ulothrix d) all of these.
7. Organisms which obtain energy by the oxidation of reduced inorganic compounds are called  
a) Photo autotrophs b) Photo autotrophs c) Saprozoic d) Heterotrophs
8. Match the column I with column II  

	Column -I		Column-II
(i)	Chlorophyceae	(a)	Ectocarpus
(ii)	Hemichordata	(b)	Chara
(iii)	Phaeophyceae	(c)	Selaginella
(iv)	Liverwort	(d)	Marchantia

  
a) i-b, ii-c, iii-a, iv-d b) i-b, ii-d, iii-a, iv-c c) i-a, ii-d, iii-c, iv-b d) i-c, ii-a, iii-b, iv-d
9. \_\_\_\_\_ classification systems were based on evolutionary relationships between various organisms.  
a) Natural b) Artificial c) Phylogenetic d) Both (a) and (b)
10. Multicellular branched rhizoids and leaf gametophytes are characteristics of \_\_\_\_\_.  
a) all bryophytes b) some bryophytes c) all pteridophytes d) some pteridophytes
11. cone bearing Pteridophyta are:-  
a) Lycopsida and Psilopsida b) Filicinae and Lycopsida c) Filicinae and Sphenopsida  
d) Lycopsida and Sphenopsida
12. The cyanobacteria are also referred to as:-  
a) Slime moulds b) Blue green algae c) Protists d) Golden algae

13. Identify the gymnosperms shown in figure and select the correct option.



a)

A	B	C
Cycas	Cedrus	Ginkgo

b)

A	B	C
Pinus	Cycas	Cedrus

c)

A	B	C
Ginkgo	Pinus	Cycas

d)

A	B	C
Cycas	Ginkgo	Pinus

14. Which are chief producers of oceans?

- a) Diatoms   b) Dinoflagellates   c) Euglenoid   d) Green algae

15. Division "Tracheophyta" includes:-

- a) Bryophyta   b) All vascular plants   c) All non-vascular plants   d) All non-vascular and vascular plants

16. Gymnosperm called as a living fossil is

- a) Cycas   b) Ginkgo   c) Juniperus   d) both (a) and (b).

17. Which one of the following is monoecious?

- a) Cycas   b) Pinus   c) Date palm   d) Marchantia

18. Euglenoids have a protein rich layer instead of cell wall. This layer is called as:-

- a) Cellulose   b) Chitin   c) Pellicle   d) Pectin

19. Which one of the following pairs is wrongly matched?

- a) Coliforms-Vinegar   b) Methanogens-Gobar gas   c) Yeast-Ethanol   d) Streptomyces-Antibiotic

20. The sequencing of DNA and chemical nature of proteins have been used as the basis of classification by a

- a) Cytotaxonomist   b) karyotaxonomist   c) chemotaxonomist   d)  $\alpha$  - taxonomist

21. Which of the following characters indicate similarity between fungi and animals?

- a) Heterotrophic nutrition   b) Type of stored food   c) Presence of chitin   d) All the above

22. Pteridophytes differ from mosses/ bryophytes in possessing \_\_\_\_\_.

- a) flagellate spermatozooids   b) independent gametophyte   c) well developed vascular system  
d) archegonia

23. Choose the correct statement:-

- a) Aspergillus niger is a bacterium which is used for obtaining acetic acid & citric acid  
b) Streptokinase is used as a clot buster  
c) Monascus purpureus is responsible for production of large holes in Swiss cheese  
d) Toddy is manufactured by Lactobacillus

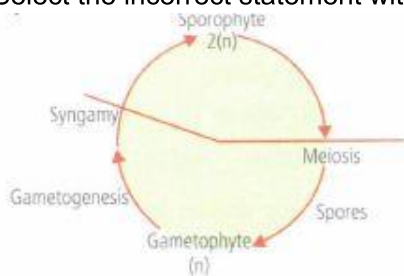
24. Among the following plant groups which have independent gametophyte and sporophyte?

- a) Bryophyta   b) Pteridophyta   c) Gymnosperms   d) Angiosperms

25. Which one of the following is a living fossil?

- a) Pinus   b) Opuntia   c) Ginkgo   d) Thuja

26. Select the incorrect statement with respect to given type of life cycle.

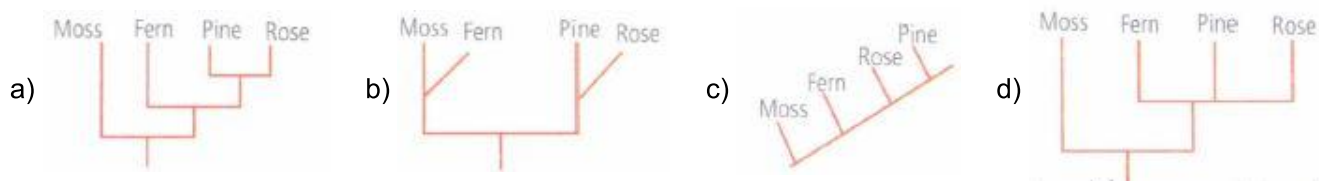


- a) Meiosis occurs at the time of spore formation in sporophytic plant.
- b) Gametophytic plant is produced by germination of spores.
- c) This life cycle is exhibited by most algae and some seed bearing plants
- d) This life cycle is exhibited by many bryophytes and pteridophytes.

27. Largest sperms in the plant world are found in \_\_\_\_\_ .

- a) Pinus    b) Banyan    c) Cycas    d) Thuja

28. A phylogenetic tree or evolutionary tree is a branching diagram showing the inferred evolutionary relationships among various biological species. Which of the following phylogenies is correctly represented?



29. Heterosporous pteridophytes show certain characteristics, which are precursor to the 'seed habit' in gymnosperms. One of such characteristics is

- a) presence of vascular tissues    b) external water required for fertilisation    c) presence of embryo stage
- d) development of embryo inside the female gametophyte.

30. Select false statement:-

- a) Lichens are symbiotic associations between algae & fungi    b) Virus name was given smaller than bacteria
- c) virus name was given by pasteur    d) virus are facultative parasite

31. Which of the following is commonly known as "chilgoza pine"?

- a) Pinus roxburghii    b) P.strobus    c) P.gerardiana    d) P.sylvestris

32. Plants which posseses seeds but not fruits are

- a) bryophytes    b) pteridophytes    c) gymnosperms    d) algae.

33. Bacterial leaf blight of rice is caused by a species of:-

- a) Alternaria    b) Erwinia    c) Xanthomonas    d) Pseudomonas

34. Gymnosperms

- a) Are Homosporous
- b) Possess a male gametophyte which is highly reduced and is confined to single cell only
- c) possess strobill on same or different trees
- d) Show the presences of female gametophyte which is reined within microsporangium

35. Which of the following pairs is of unicellular algae?

- a) Anabaena and volvox    b) Chlorella and spirulina    c) Laminaria and Sargossum
- d) Gelidium and Gracilaria

36. Membrane-bound organelles are absent in:

- a) Plasmodium    b) Mustard    c) Castor    d) Chlamdononas

37. In **Pinus**, male strobilus bears a large number of

- a) anthers    b) stamens    c) microsporophylls    d) megasporophylls.

38. Which of the following statements is correct regarding microbes in human welfare?

- a) Saccharomyces cerevisiae is useful in industries for production of citric acid
- b) Trichoderma polysporum is used as blood cholesterol lowering agent
- c) Aspergillus niger used to obtain acetic acid
- d)

In sewage treatment CO<sub>2</sub>, H<sub>2</sub>, and CH<sub>4</sub> gases are produced from activated sludge by bacteria such as Methanobacterium

39. Yeast is used in the production of:-

- a) Bread and beer    b) Cheese and butter    c) Citric acid and lactic acid    d) Lipase and pectinase

40. Gymnosperms do not include

- a) herbs    b) shrubs    c) trees    d) both (a) and (b).

41. Assertion: Stomata are found on the surface of leaves in gymnosperms.

Reason: In gymnosperms, cuticle of leaves is thin.

- a) If both assertion and reason are true and reason is the correct explanation of assertion.  
 b) If both assertion and reason are true but reason is not the correct explanation of assertion.  
 c) If assertion is true but reason is false.    d) If both assertion and reason are false.

42. In Pinus, endosperm cells have 30 chromosomes then how many chromosomes are present in sieve cells:-

- a) 30    b) 60    c) 10    d) 15

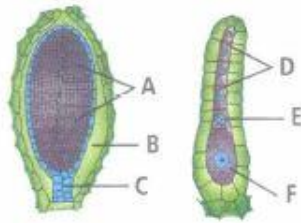
43. Gymnosperms are referred to as "naked seeded plants", because

- a) they lack ovule    b) they lack ovaries    c) they have no seed coat    d) the embryo is unprotected.

44. Gemmae are asexual reproductive bodies of

- a) brown algae    b) mosses    c) liverworts    d) red algae

45. Refer to the following figures regarding Division Bryophyta.



- (i) 'A' are the androcyte mother cells of the antheridium, which give rise to a large number of biflagellate male gametes.  
 (ii) 'B' is the antheridial chamber and 'C' is the multicellular stalk of antheridium.  
 (iii) 'D' and 'E' respectively represent venter canal cells and neck canal cell of the female sex organ.  
 (iv) 'F' is the egg cell of the archegonium, which usually possesses several female gametes.

Which of the following combinations of above statements is incorrect?

- a) (i) and (ii)    b) (iii) and (iv)    c) (ii) and (iii)    d) (i) and (iv)

46. Pyrenoids are the centres for formation of \_\_\_\_\_.

- a) porphyrin    b) enzymes    c) fat    d) starch

47. No zoospore formation has been observed in the algal members belonging to:-

- a) Chlorophyceae    b) Brown algae    c) Phaeophyceae    d) Cyanophyceae

48. Which of the statements regarding haplontic life cycle is incorrect?

- a) Sporophytic generation is represented only by the one-celled zygote.    b) There is no free-living sporophyte.  
 c) Mitosis in the zygote results in the formation of haploid spores.  
 d) The haploid spores divide mitotically and form the gametophyte.

49. The sporophyte is the dominant phase in

- a) pteridophytes    b) gymnosperms    c) angiosperms    d) all of these.

50. Which statement is correct about mosses?

- a) They have dominant and independent sporophyte    b) Their antherozoids require water for fertilisation  
 c) Their archegonia produce many eggs    d) Their antherozoids are multiflagellated

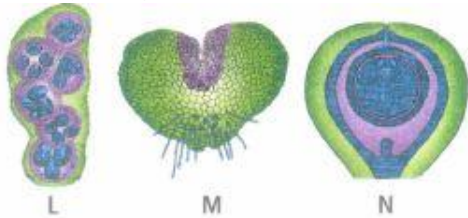
51. The number of species that are known and described ranges between:

- a) 1-2 million    b) 1.7-1.8 billion    c) 1.7-1.8 million    d) 7 million

52. Endosperm of gymnosperm is ontogenetically similar to angiospermic

- a) Endosperm    b) Embryo sac    c) Archegonium    d) Megasporangia

53. Identify the given structures and select the correct option



a)

L	M	N
Aplanospore of Ulothrix	Prothallus (2n) of pteridophyte	Ovule of angiosperm

b)

L	M	N
Palmella stage of Ulothrix	Prothallus (n) of bryophyte	Ovule of gymnosperm

c)

I	M	N
Akinetes of Chlamydomonas	Sporophyte (2n) of bryophyte	Endosperm of gymnosperm

d)

I	M	N
Palmella stage of Chlamydomonas	Prothallus (n) of pteridophyte	Ovule of gymnosperm

54. Read the following five statements (A to E) and select the option with all correct statements:-

- (A) Mosses and Lichens are the first organisms to colonise a bare rock  
 (B) Selaginella is a homosporous pteridophyte  
 (C) Coralloid roots in cycas have VAM  
 (D) Main plant body in bryophytes is gametophytic, whereas in pteridophytes it is sporophytic  
 (E) In gymnosperms, male and female gametophytes are present are within sporangia located on sporophyte
- a) (B), (C) and (D)    b) (A), (D) and (E)    c) (B), (C) and (E)    d) (A), (C) and (D)

55. Read the following five statements (A-E) and answer as asked next to them:-

- (A) In Equisetum the female gametophyte is retained on the parent sporophyte  
 (B) In Ginkgo male gametophyte is not independent  
 (C) The sporophyte in Riccia is more developed than that in Polytrichum  
 (D) Sexual reproduction in -Vovox is isogamous  
 (E) The spores of slime molds lack cell walls

How many of the above statements are correct?

- a) Four    b) One    c) Two    d) Three

56. In gymnosperms, the pollen chamber represents:

- a) The microsporangium in which pollen grains develop  
 b) A cell in in the pollen grain in which the sperms are formed  
 c) A cavity in the ovule in which pollen grains are stored after pollination  
 d) An opening in the megagametophyte through which the pollen tube approaches the egg

57. Phycobilins are characteristic pigments of:-

- a) Rhodophyta and phaeophyta    b) Rhodophyta and phrophyta    c) phrophyta and cyanophyta  
 d) Rhodophyta and cyanophyta

58. Blue-green algae belong to \_\_\_\_\_ .

- a) eukaryotes    b) prokaryotes    c) Rhodophyceae    d) Chlorophyceae

59. Choose the incorrect statement from following

- a) Dinoflagellates have stiff cellulose plates on the outer surface  
 b) Euglenoids have two flagella, one lies longline dinally and the other transversely  
 c) Slime mould's spores are dispersed by currents    d) In diatoms the cell walls form two overlapping shells

60. Which one of the following is a vascular cryptogam?

a) Ginkgo   b) Marchantia   c) Cedrus   d) Equisetum