BIOLOGY

BOOKS - NIKITA PUBLICATION

Kingdom Plantae

Example

1. Why do Dicots show secondary growth while Monocots don't?

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2. Why bryophytes are called as amphibians of kingdom plantae

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3. Give one example of aquatic and xerophytic Pteridophytes.

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4. What is double fertilization?

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5. Give examples of liverworts.

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6. Ginkgo biloba is called a living fossil.

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7. Give examples of gymnosperms having largest ovule, spermatozoids.

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8. Which gymnosperms has bitegmic ovules, having vessels in xylem?

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9. Food is stored as Floridens starch in Rhodophyceae. Mannitol is the reserve food material of which group of algae?

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10. Give an example of plants with Haplontic life cycle

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11. Give an example of plants with

Diplontic life cycle

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12. Give an example of plants with

Haplo-diplontic life cycle

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13. The plants body in higher plants in well differentiated and well developed. Roots are the organs used for the purpose of absorption. What is the equivalent of roots in the less developed lower plants?

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14. Most algal genera show haplontic life style. Name an alga which is

Haplo - diplontic

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15. Most algal genera show haplontic life style.

Name an alga which is

Diplontic

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16. In bryophytes male and female sex organs are called.....and..... .

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17. Why do we call as plants producers on land?

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18. What are the differences between sub-kingdom Cryptogamae and Phanerogamae.

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19. Pteridophytes are also known as vascular Cryptogams. Justify.

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20. What is double fertilization?

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21. Explain in brief two classes of Angiosperms? Draw and lable one example of

each class.

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22. Give characteristic features of archegonia of bryophytes.

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23. There is transition phase from zooidogamy to siphonogamy in plantae.

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24. Differentiate between monocots and dicots.

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25. Fern is a vascular plant, yet it is not considered as Phanerogam. Why?

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26. We observe that land becomes barren soon after monsoon. But in the next monsoon it flourishes again with varieties we observed in season earlier. How you think it takes place?

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27. Radha observed a plant in rainy season on the compound wall of her school. The plant did not have true roots but root like

structures were present. Vascular tissue was absent. To which group the plant may belong?

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28. Draw neat labelled diagrams.

Spirogyra

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29. Draw neat labelled diagrams.

Chlamydomonas

Watch Video Solution

30. Draw neat labelled diagrams.

Moss

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31. Draw neat labelled diagrams.

Fern

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32. Draw neat labelled diagrams.

Haplontic life cycle

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33. Draw neat labelled diagrams.

Haplo-diplontic life cycle

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34. Identify the plant groups on the basis of following features: Seed producing plants

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35. Identify the plant groups on the basis of following features: Spore producing plants

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36. Identify the plant groups on the basis of following features

Plant body undifferentiated into root, stem & leaves

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37. Identify the plant groups on the basis of following features

First vascular plants

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38. Girth of a maize plant does not increase over a period of time. Jusity.

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39. Why bryophytes are called as amphibians of kingdom plantae

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40. The male and female reproductive organs of several pteridophytes and gymnosperms are comparable to floral structures of angiosperms. Make an attempt to compare the various reproductive parts of pteridophytes and gymnosperms with reproductive structures of angiosperms.

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41. Heterospory i.e. formation of two types of spores - microspores and megaspores is a characteristic feature in the lfe cylce of a few members of pteridophytes and all spermatophytes. Do you think heteroporyhas some evolutionary significance in plant kingdom?

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42. Each plant or group of plants has some phylogenetic significance in relation to evolution: Cycas, one of the few living members of gymnosperms is called as the relic of past. Can you establish a phlogenetc relationship of Cycas with any other group of plants that justifies the above statement?

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43. The heterosporous pteridophytes show certain characteristics, which are precursor to the seed habit in gymnosperms. Explain.

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44. Comment on the life cycle and nature of a fern prothallus.

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45. How are the male and female gametophytes of pteridophytes and gymnosperms different from each other?

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46. In which plant will you look for mycorrhiza and corolloid roots? Also explain what these terms mean.

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47. Describe the asexual reproduction in pteridophytes.

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48. Differentiate between Thallophytes and Bryophytes.

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49. Name the accessory pigments of algae.

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50. Which of the following nuts will not be enclosed in fruits? What are the peculiar characteristics of these plants? Betel nut/Areca nut, pine nut, walnut, almond, cashew nut, nutmeg.

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51. Give salient characters of moss.

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52. Differentiate between Chlorophyceae and Phaeophycae.

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53. Difference between dicot and monocot.

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54. Distinguish between Bryophyta and Pteridophyta.

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55. What are the salient features of Angiosperms?

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56. Give general characters of Gymnosperms and Angiosperms.

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57. Gametophyte is a dominant phase in the life cycle of a bryophyte. Explain.

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58. With the help of a schematic diagram describe the haplo-diptontic life cycle pattern of a plant group.

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59. Lichen is usually cited as an example of symbiosis in plants where an algal and a fungal species live together for their mutual benefit. Which of the following will happen if algal and fungal partners are separated from

each other?

Both will survive and grow normally and independent from each other.

both will die.

Algal component will survive while the fungal component will die.

Fungal component will survive while the algal partner will die.

Based on your answer how do you justify this association as symbiosis.

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60. Explain why sexual reproduction in angiosperms is said to take place through double fertilization and triple fusion. Also draw a labelled diagram of embryo sac to explain the phenomena.

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61. What is the basis of classification of algae?

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62. When and where does reduction division take place in the life cycle of a liverwort, a moss, a fern, a gymnosperm and an angiosperm?

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63. Name three groups of plants that bear archegonia. Briefly describe the life cycle of anyone of them.

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64. Mention the ploidy of the following protonemal cell of a moss primary endosperm nucleus in dicot, leaf cell of a moss prothallus cell of a fern, gemma cell in Marchantia, meristem cell of monocot, ovum of a liverwort, and zygote of a fern.

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65. Write short note on: Economic importance of algae.

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66. Both gymnosperms and angiosperms bear seeds, then why are they classified separately?

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67. What is heterospory? Briefly comment on its significance. Give two examples.

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68. Explain briefly the following terms with suitable examples.

protonema

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69. Explain briefly the following terms with suitable examples.

antheridium

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70. Explain briefly the following terms with suitable examples.

archegonium

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71. Explain briefly the following terms with suitable examples.

diplontic

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72. Explain briefly the following terms with suitable examples.

sporophyll

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73. Explain briefly the following terms with suitable examples.

isogamy

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74. Differentiate between the following.

homosporous and heterosporous pteridophyte

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75. Differentiate between the following.

liverworts and moss

Watch Video Solution

76. Differentiate between the following.

red alage and brown algae.

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77. Differentiate between monocots and dicots.

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Exercise

1. Which of the following is dominant phase in pteridophytes?

A. capsule

B. gametophyte

C. sporophyte

D. embryo

Answer:

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2. State the tallest living gymnospermae.

A. Sequoia semopervirens

B. Taxodummucronatum

C. Zamia pygmae

D. Ginkgo biloba

Answer:

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3. In bryophytes.....

A. gametophyte & sporophytic generations are independent

B. sporophyte is partially dependent on gametophyte

C. gametophyte is dependent on sporophyte

D. Ginkgo biloba

Answer:

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4. A characteristic of angiosperm is.....

A. collateral V.B

B. radial V.B

C. seed formation

D. double fertilization

Answer:

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5. Angiosperm & gymnosperm resemble in having.....

A. vessels in wood

B. mode of nutrition

C. siphonogamy

D. nature of seed

Answer:

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6. Which of the following is primitive cryptogams ..and ..is advanced cryptogam

A. bryophyte, pteridophyte

B. pteridophyta, thallophyta

C. thallophyta, pteridophyta

D. gymnosperms, pteridophyta

Answer:

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7. Which of the following are non embryophytes...& first embryophytes in kingdom plantae

A. thallophyta, bryophyta

B. bryophyte, pteridophyta

C. pteridophyta, bryophyte

D. spermatophyte, bryophyta

Answer:

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8. On the basis of conducting system the kingdom plantae classified into non tracheophytes and tracheophytes, which groups are included in non tracheophyta& which are tracheophyta?

A. thallophyta, bryophyte & pteridophta, spermatophyta

B. bryophyta and pteridophyta, spermatophyta

C. pteridophyta, gymnosperms & thallophyta, bryophyte

D. gymnosperm and angiosperm & thallophyte, bryophyte

Answer:

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9. Which of following is true for thallophyta

A. they are thalloid, autotrophic

B. they are non vascular

C. sex organs are unicelled

D. all of these

Answer:

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10. Which is diploid cell in life cycle of thallophyta

A. spores

B. sex organs

C. plant body

D. zygote

Answer:

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11. All of the following are true except

A. somethallophtes like chlorella are unicellular

B. somethallophytes like volvox are colonial

C. some are unbranched Ulothryx, spirogyra and some branched filamentous forms

D. unicellular forms are absent

Answer:

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12. The large marine forms of thallophyta are called

A. kelps

B. sea weeds

C. both a and b

D. thallus

Answer:

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13. The one to many protenaceous body surroundedby starch, concerned with storage of starch and mostly found in chloroplast is called as

A. leucosin

B. mannitol

C. pyrenoids

D. laminarin

Answer:

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14. Which of the following false statement

A. reserve food is starch in green algae, laminarin, mannitol in brown algae

B. reserve food is floridean starch in red algae

C. cyanophycean starch in blue green algae

D. Chitin and oil in green algae

Answer:

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15. Which method of sexual reproduction is common in algae

A. isogamy

B. anisogamy

C. oogamy

D. all of these

Answer:

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16. Isogametes are

A. morphologically similar, physiologically dissimilar

B. morphologically dissimilar, physiologically similar

C. morphologically similar, physiologically similar

D. morphologically dissimlar, physiologically dissimilar

Answer:

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17. Which are characters of oogamy in Volvox, Fucus.

A. male gametes are small, motile

B. female gametes are large non motile

C. fertilization is internal

D. all of these

Answer:

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18. Which of thefollowingis reserve food material in green algae..... brown algae...red algae....

A. mannitol, cyanophycean starch, lamnarin

B. lamnarin, floriedian starch, mannitol

C. starch, mannitol & amnarin, floriedian starch

D. cyanophycean starch, mannitol, lamnarin

Answer:

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19. The plant body 60 meter - 100 meter is differentiated into hold fast for attachment to substratum, stalk called stipe and leaf like photosynthetic organ frond in...

A. green algae

B. brown algae

C. blue green algae

D. red algae

Answer:

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20. Which of the following is false statement for red algae

A. there is no motile stage in life cycle

B. grow in well lightened as well as depth in ocean, mostly multicellular with some exceptions, they are predominant

C. reserve food is primitive type of starch called floridean starch which is very similar to amylopeetin & glycogen in structure

D. floridean starch is more advanced type of starch

Answer:

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21. Make correct pair:

A. Cyanophyceae	i. Green colour
B. Chlorophyceae	ii. Blue green colour
C. Phaephyceae	iii. Red colour
D. Rhodophyceae	iv. Brown color

A. a-I, b-ii, c-iii, d-iv

B. a-iv, b-ii, c-iii, d-I

C. a-ii, b-I, c-iv, d-iii

D. a-iii, b-ii, c-iv, d-I

Answer:

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22. Polysacchoride agar-agar is obtained from

A. brown algae Sargassum

B. green algae Chlorella

C. blue green algae Nostoc

D. red algae Gacilaria, Gelidium

Answer:

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23. Which of the following is true for plant body of bryophytes.

A. plant body is gametophyte/haploid producing gametes

B. multicellular

C. prostrate or erect thallus and parenchymatous

D. all of these

Answer:

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24. Which of the following is true for bryophytes

A. unicellular4 or multicellular rhizoids fix plant to substratum and absorb water minerals

B. Conducting system like xylem and phloem are absent in bryophytes

C. In lower bryophytes scales are present for capillary conduction and projection

D. all above are true

Answer:

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25. In bryophytes antheridia produces....

A. uniflagellated nandtherozoids

B. biflagellated antherozoids

C. multiflagellated antherozoids

D. non motile male gametes

Answer:

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26. Which of the following is odd one about archegonium of bryophytes

A. neck contains cover cells and N.C.C

B. venter contains motile egg and V.C.C.

C. venter and neck are jacketed

D. venter contain non motile egg and V.C.C

Answer:

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27. Antherozoids are attracted towards neck of archogonium due to

A. physical movement

B. chemotaxic movement due to K+

C. physio chemical movements

D. no movement

Answer:

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28. State the economic importance of Bryophytes.

A. sphagnum used as packing material for trans shipping of living material

B. mosses and lichens are first organisms to colonize rooks & decompoose rock mosses form dense mat to prevent soil erosion

C. play important role in ecological succession

D. all above

Answer:

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29. Bryophytes and pteridophytes are restricted in their distribution because.

A. they grows on moist places

B. plant body gametophyse and produce motile male gametes

C. water is necessary for fertilization

D. all of these

Answer:

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30. Bryophytes are dependent on water because

A. archegonium has to remain filled with water for fertilization

B. water is essential for fertilization for their homosporous nature

C. water is essential for their vegetative propagation

D. The sperms can easily reach upto egg in the archegonium

Answer:

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31. Common between bryophytes and pteridophytes is

A. absence of sporophyte

B. gametophyte dependent on sporophyte

C. sporophyte dependent on gametophyte

D. multicellular sex organs with sterile jacket

Answer:

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32. Which of the following is correc match

a) Riccia	i) sporophyteis differentiated in to foot, seta & capsule
b) Moss	ii) liverworts
c) Anthoceros	iii)advanced bryophytes
d) Marchantia	iv) hornworts

A. a-I, b-ii, c-iv, d-I

B. a-I, b-iii, c-iv, d-ii

C. a-ii, b-iii, c-iv, d-I

D. a-ii, b-iii, c-I, d-iv

Answer:

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33. The unique feature of pteridophyta is

A. well differentiated plant body, used for medicinal, soil builder as well as ornamental.

B. sporophyte and gametophytes are independent and autotrophic

C. gametophyte is dominant in life cycle

D. asexually reproduces by spores and sex organs are jacketed

Answer:

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34. One of the following is true.

A. all pteridophytes are homosporous

B. all pteridophytes are heterosporous

C. mostly heterosporous and few members are homosporous

D.

Answer:

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35. When sporangia develops from single initial cell is called as.....& When sporangia develops from group of initial cells it is called as.....

A. leptosporangiate, eusporangiate

B. pseudosporangiate, leptosporangiate

C. eusporangiate, leptosporangiate

D. homosporangiate, leptosporangiate

Answer:

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36. In ferns the gametophyte/prothallus.

A. homothallic/monoecious bisexual

B. require cool, damp, shady places

C. restricted requirement is because fertilization takes place in presence of water so pteridophytes are restricted in narrow geographical area

D. all of these

Answer:

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37. In Selaginella & Salvinia..... Is correct.

A. heterospry is common produces mega & microspores

B. megaspore produces female prothallus while microspore produces male prothallus

C. female prothallus/gametophyte retained on parent prothallus for variable time

heterospory is most important event in seed habit

D. all of these

Answer:

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38. Formation of zygote, embryo and new sporophyte takes place on.....of homosporous pteridophtes &..... In heterosporous pteridophyte.

A. sporophyte

B. unisexual prothallus, zygote develops to embryo takes place in female gametophyte

C. sporangia, spore

D. bisexual gametophyte, zygote develops to embryo takes place in female gametophyte

Answer:

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39. Cyanobacteria are classified under.

A. Protista

B. Plantae

C. Monera

D. Algae

Answer:

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40. Fusion of two gametes which are dissimilar in size is termed as

A. Oogamy

B. Isogamy

C. Anisogamy

D. Zoogamy

Answer:

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41. Holdfast, stipe and frond constitutes the plant body in case of

A. Rhodophyceae

B. Cholrophyceae

C. Phaeophyceae

D. All of the above

Answer:

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42. A plant shows thallus level of organization. It shows rhizoids and is haploid. It needs water to complete its life cycle because the male gametes are motile. Identify the group to which it belongs to

A. Pteridophytes

B. Gymnosperms

C. Monocots

D. Bryophytes

Answer:

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43. A Prothallus is

A. A structure in pteridophytes formed before the thallus develops

B. A sporophytic free living structure formed in pteridophytes

C. A gametophyte free living structure formed in pteridophytes

D. A primitive structure formed after fertilization in pteridophytes

Answer:

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44. Plants of this group are diploid and well adapted to extreme conditions. They grow bearing sporophylls in compact structures called cones. The group in reference is.

A. Monocots

B. Dicots

C. Pteridophytes

D. Gymnosperms

Answer:

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45. The embryo sac of an Angiosperms is made up of

A. 8 cells

B. 7 cells and 8 nuclei

C. 8 nuclei

D. 7 cells and 7 nuclei

Answer:

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46. If the diploid number of a flowering plant is 36. What would be the chromosome number in its endosperm.

A. 36

B. 18

C. 54

D. 72

Answer:

47. Protonema is

A. Haploid and is found in mosses

B. Diploid and is found in liverworts

C. Diploid and is found in pteridophytes

D. Haploid and is found in pteridophytes

Answer:

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48. The giant Redwood tree (Sequoia sempervirens) is a/an

A. Angiosperm

B. Free fern

C. Pteridophyte

D. Gymnosperm

Answer: