11th Science Lesson 11 Questions in English

11] Plant Kingdom

1. Recently with the aid of molecular characteristics which among the following was not segregated from plant kingdom and placed under separate kingdoms?

a) Bacteria
b) Algae
c) Fungi
d) None of the above

Explanation

Traditionally organisms existing on the earth were classified into plants and animals based on nutrition, locomotion and presence or absence of cell wall. Bacteria, Fungi, Algae, Bryophytes, Pteridophytes, Gymnosperms and Angiosperms were included under plant group. Recently with the aid of molecular characteristics Bacteria and Fungi were segregated and placed under separate kingdoms.

2. Plants are unique living entities as they are endowed with the power to harvest the light energy from the sun and to convert it into which energy in the form of food?

a) Mechanical energy
b) Thermal energy
c) Chemical energy
d) Block energy

Explanation

Plants are unique living entities as they are endowed with the power to harvest the light energy from the sun and to convert it to chemical energy in the form of food through the astounding reaction, photosynthesis. They not only supply nutrients to all living things on earth but sequester carbon-di-oxide during photosynthesis, thus minimizing the effect of one of the major green-house gases that increase the global temperature.

3. In classification which among the following is divided into Bryophyta and Tracheophyta?

a) Embryophyta
b) Bacillariophyta
c) Polypodiophyta
d) Thallophyta

Explanation

Classification widely accepted for plants now include Embryophyta which is divided into Bryophyta and Tracheophyta. The latter is further divided into Pteridophyta and Spermatophyta (Gymnospermae and Angiospermae).

4. Alternation of the haploid gametophytic phase (n) with diploid sporophytic phase (2n) during the life cycle is _____

a) Alternation of germination
b) Alternation of commodity
c) Alternation of generation
d) Alternation of fertility

Explanation

Alternation of generation is common in all plants. Alternation of the haploid gametophytic phase (n) with diploid sporophytic phase (2n) during the life cycle is called alternation of generation.

5. Which among the following is not the life cycle pattern in plant?

a) Haplontic
b) Diplontic
c) Elenctic
d) None of the above

Explanation

Life cycle patterns in plants are a) Haplontic, b) Diplontic, c) Haplo-diplontic.

6. Which among the following statement is correct

1) Haplontic Life Cycle: Gametophytic phase is dominant, photosynthetic and independent, whereas sporophytic phase is represented by the zygote. Zygote undergoes meiosis to restore haploid condition.
2) Diplontic Life Cycle: Sporophytic phase (2n) is dominant, photosynthetic and independent. The gametophytic phase is represented by the single to few celled gametophyte. The gametes fuse to form zygote which develops into sporophyte.
3) Haplodiplontic Life Cycle: This type of life cycle is found in embryophytes, bryophytes and pteridophytes which is intermediate between haplontic and diplontic type. These three phases are unicellular. but they differ in their dominant phase.

a) Both 1 and 2
b) Both 1 and 3
c) Both 2 and 3
d) All 1, 2 and 3

Explanation

Haplodiplontic Life Cycle This type of life cycle is found in bryophytes and pteridophytes which is intermediate between haplontic and diplontic type. Both the phases are multicellular. but they differ in their dominant phase.

7. Which among the following is not the example of Diplontic Life Cycle?

a) Fucus
b) Gymnosperms
c) Angiosperms
d) Spirogyra

Explanation

Fucus, gymnosperms and angiosperms are example of Diplontic life cycle. Volvox, Spirogyra are example of Haplontic life cycle.

8. In which among the following dominant independent phase is gametophyte and it alternates with short-lived multicellular sporophyte totally or partially dependent on the gametophyte?

a) Bryophytes
b) Pteridophytes
c) Embryophytes
d) Dermatophytes

Explanation

In bryophytes dominant independent phase is gametophyte and it alternates with short-lived multicellular sporophyte totally or partially dependent on the gametophytes.

9. Which are simple plants that lack true roots, true stems and true leaves.?

a) Fungi
b) Bryophytes
c) Algae
d) All the above

Explanation

Algae are simple plants that lack true roots, true stems and true leaves. Two-third of our earth's surface is covered by oceans and seas. The photosynthetic plants called algae are present here. More than half of the total primary productivity of the world depends on this plant group. Further, other aquatic organisms also depend upon them for their existence.

10. In which among the following, sporophyte is the independent phase. It alternates with multicellular saprophytic or autotrophic, independent, short lived gametophyte(n)?

a) Chamaephytes
b) Pteridophytes
c) Embryophytes
d) Dermatophytes

Explanation

In pteridophytes sporophyte is the independent phase. It alternates with multicellular saprophytic or autotrophic, independent, short lived gametophyte(n).

11. The study of algae is called ____

a) Vexillology
b) Onomatology
c) Lichenology
d) Phycology

Explanation

The study of algae is called algology or phycology. Some of the eminent algologists include F.E. Fritsch, F.E. Round, R.E. Lee, M.O.Parthasarathy Iyengar, M.S. Randhawa, Y. Bharadwaja, V.S. Sundaralingam and T.V.Desikachary.

12. Who among the following is the father of Father of Indian Phycology?

a) T. V. Desikachary
b) M. O. Parthasarathy
c) Y. Bharadwaj
d) M. S. Randhawa

Explanation

M.O.Parthasarathy (1886-1963) 'Father of Indian Phycology'. He conducted research on structure, cytology, reproduction and taxonomy of Algae. He published a Monograph on Volvocales.

13. Which among the following algal was not reported by M. O. Parthasarathy?

a) Ecballocystopsis
b) Oedogonium
c) Charasiphon
d) Cylindrocapsopsis

Explanation

New algal forms like Fritschiella, Ecballocystopsis, Charasiphon and Cylindrocapsopsis. were reported by M. O. Parthasarathy.

14. Which algae grow in snow covered mountains and impart red colour to the snow (Red snow)?

a) Chlamydomonas nivalis
b) Oedogonium chara
c) Cephaleuros virescens
d) Chondrus crispus

Explanation

Chlamydomonas nivalis grow in snow covered mountains and impart red colour to the snow (Red snow).

15. A few algae grow on the surface of aquatic plants and are called ____

a) Endophytic algae
b) Epiphytic algae
c) Macrophytic algae
d) Holophytic algae

Explanation

A few algae grow on the surface of aquatic plants and are called epiphytic algae (Coleochaete, and Rhodymenia).

16. Which among the following algae grow on the shells of molluscs?

a) Oedogonium chara
b) Cephaleuros virescens
c) Dunaliella salina
d) Cladophora crispata

Explanation

Chlorella leads an endozoic life in hydra and sponges whereas Cladophora crispata grow on the shells of molluscs.

17. Which among the following algae grows in salt pans?

a) Oedogonium chara
b) Dunaliella salina
c) Cephaleuros virescens
d) Chondrus crispus

Explanation

Algae are adapted to thrive in harsh environment too. Dunaliella salina grows in salt pans (Halophytic alga).

18. Which among the following algae is freshwater algae?

a) Gracilaria
b) Sargassum
c) Ulothrix
d) All the above

Explanation

Algae are autotrophs, and grow in a wide range of habitats. Majority of them are aquatic, marine (Gracilaria, and Sargassum) and freshwater (Oedogonium, and Ulothrix) and also found in soils (Fritschiella, and Vaucheria).

19. Which is the Oldest recorded alga, which was discovered in the banded iron formations of northern Michigan?

a) Volvox
b) Grypania
c) Ulva
d) Chlorella

Explanation

The Oldest recorded alga is Grypania, which was discovered in the banded iron formations of northern Michigan and dated to approximately 2100Ma.

20. Match the following thallus organization in algae with example

i. Unicellular motile – 1. Volvox
ii. Unicellular non-motile – 2. Chlamydomonas
iii. Colonial motile – 3. Vaucheria
iv. Colonial non-motile – 4. Hydrodictyon
v. Siphonous – 5. Chlorella

a) 4 – 3 – 5 – 2 – 1
b) 2 – 5 – 1 – 4 – 3
c) 3 – 2 – 4 – 1 – 5
d) 5 – 1 – 3 – 2 – 4

Explanation

The algae show a great diversity in size, shape and structure. A wide range of thallus organisation is found in algae. Unicellular motile (Chlamydomonas), unicellular non-motile (Chlorella), Colonial motile (Volvox), Colonial non motile (Hydrodictyon), siphonous (Vaucheria).

21. Algae are eukaryotes except which algae?

a) Dinoflagellates
b) Red algae
c) Brown algae
d) Blue green algae

Explanation

Algae are eukaryotes except blue green algae. The plant body does not show differentiation into tissue systems.

22. In Chara the thallus is encrusted with what?

a) Silicon sulphate
b) Sodium carbonate
c) Calcium carbonate
d) Potassium sulphate

Explanation

In Chara the thallus is encrusted with calcium carbonate. Some algae possess algin, polysulphate esters of polysaccharides which are the sources for the alginate, agar agar and carrageenan.

23. Which among the following statement is correct

1) The cell wall of algae is made up of cellulose and hemicellulose. Siliceous walls are present in diatoms. The cell has a membrane bound nucleus and cell organelles like chloroplast, mitochondria, endoplasmic reticulum, golgi bodies etc., Pyrenoids are present.
2) They are proteinaceous bodies found in chromatophores and assist in the synthesis and storage of starch. The pigmentation, reserve food material and flagellation differ among the algal groups.
    a) Only 1
    b) Only 2
    c) Both 1 and 2
    d) None

Explanation

The cell wall of algae is made up of cellulose and hemicellulose. Siliceous walls are present in diatoms. The cell has a membrane bound nucleus and cell organelles like chloroplast, mitochondria, endoplasmic reticulum, golgi bodies etc., Pyrenoids are present.

24. In which among the following method algae does not reproduce?

a) Vegetative
b) Asexual
c) Sexual
d) None of the above

Explanation

Algae reproduces by vegetative, asexual and sexual methods.

25. Which among the following is not the vegetative reproduction of algae?

a) Fission
b) Fragmentation
c) Akinetes
d) Anisogamy

Explanation

Vegetative reproduction includes fission, fragmentation, budding, bulbils, akinetes, and tubers.

26. In which vegetative reproduction of algae Thick-walled spores meant for perennation and germinates with the advent of favourable condition?

a) Fission
b) Akinetes
c) Budding
d) Tubers

Explanation

In Akinetes (vegetative reproduction) Thick-walled spores meant for perennation and germinates with the advent of favourable condition.

27. Which among the following is the example of Akinetes?

a) Chlamydomonas
b) Ulothrix
c) Pithophora
d) All the above

Explanation

Pithophora is example of Akinetes.

28. In which vegetative reproduction in algae, in unicellular forms the cell divides mitotically to produce two daughter cells?

a) Fission
b) Fragmentation
c) Budding
d) Tubers

Explanation

During fission (vegetative reproduction) in unicellular forms the cell divides mitotically to produce two daughter cells.

29. In which vegetative reproduction of algae, Structures found on the rhizoids and the lower nodes of Chara which store food materials?

a) Fragmentation
b) Budding
c) Tubers
d) Bulbils

Explanation

In Tubers Structures found on the rhizoids and the lower nodes of Chara which store food materials.

30. In which among the following vegetative reproduction a wedge-shaped modified branch develop in Sphacelaria?

a) Fragmentation

b) Budding
c) Bulbils
d) All the above

Explanation

In bulbils, a wedge-shaped modified branch develops in Sphacelaria. In Budding a lateral bud is formed in some members like Protosiphon and helps in reproduction

31. Which among the following is the example of Fragmentation (vegetative reproduction)?

e) Chlamydomonas
f) Ulothrix
g) Pithophora
h) All the above

Explanation

In Fragmentation the fragments of parent thallus grow into new individual Example: Ulothrix. Chlamydomonas is example of fission.

32. In which among the following asexual reproduction take place by production of thin walled non motile spores?

a) Tetraspores
b) Hypnospore
c) Autospores
d) Aplanospore

Explanation

Asexual reproduction takes place by the production of zoospores motile spores (Ulothrix, Oedogonium). In aplanospore asexual reproduction take place by production of thin walled non motile spores.

33. In asexual reproduction, spores which look similar to parent cell are called ____

a) Zoospores
b) Autospore
c) Hypnospore
d) Tetraspores

Explanation

In asexual reproduction, spores which look similar to parent cell are called autospores.

34. The thick walled aplanospore are called ____

a) Zoospores
b) Autospore

c) Hypnospore
d) Tetraspores

Explanation

The thick walled aplanospore are called Hypnospore.

35. Diploid thallus of Polysiphonia produce haploid spores after meiosis, these spores are called __

a) Zoospores
b) Teliospore
c) Androspore
d) Tetraspores

Explanation

Diploid thallus of Polysiphonia produce haploid spores after meiosis, these spores are called Tetraspores.

36. Which among the following is the example aplanospore?

a) Chlorella
b) Vaucheria
c) Chlamydomonas nivalis
d) All the above

Explanation

Vaucheria is example of aplanospore.

37. Which among the following is the example of autospore?

a) Chlorella
b) Ulothrix
c) Chlamydomonas nivalis
d) All the above

Explanation

Chlorella is example of autospore. Chlamydomonas nivalis is example of Hypnospore.

38. Which among the following is not the sexual reproduction in algae?

a) Isogamy
b) Anisogamy
c) Oogamy
d) Polygamy

Explanation

Sexual reproduction in algae is of three types 1. Isogamy, 2. Anisogamy and 3. Polygamy.

39. Fusion of both morphologically and physiologically dissimilar gametes is known as ___

a) Isogamy
b) Anisogamy
c) Oogamy
d) None of the above

Explanation

Fusion of both morphologically and physiologically dissimilar gametes is known as Oogamy.

40. Which among the following sexual reproduction in algae is incorrectly matched with its example?

1) Isogamy – Pandorina
2) Anisogamy – Ulothrix
3) Oogamy – Sargassum

a) Both 1 and 2
b) Both 1 and 3
c) Both 2 and 3
d) All 1, 2 and 3

Explanation

Ulothrix is example of Isogamy and Pandorina is example of Isogamy.

41. Fusion of morphologically and Physiologically similar gametes is known as ____

a) Isogamy
b) Anisogamy
c) Oogamy
d) None of the above

Explanation

Fusion of morphologically and Physiologically similar gametes is known as Isogamy. Fusion of either morphologically or physiologically dissimilar gametes is known as Anisogamy.

42. Who proposed a classification for algae based on pigmentation, types of flagella, reserve food materials, thallus structure and reproduction?

a) William T. Stearn
b) Johannes Schmidt
c) F. E. Fritsch
d) Albert Seward

Explanation

F.E. Fritsch proposed a classification for algae based on pigmentation, types of flagella, reserve food materials, thallus structure and reproduction. He published his classification in the book "The structure and reproduction of the Algae" (1935).

43. F. E. Fritsch classifies algae into how many classes?

a) Three
b) Seven
c) Eleven
d) Fourteen

Explanation

F. E. Fritsch classified algae into 11 classes.

44. Which among the following is not the classification of algae by F. E. Fritsch?

a) Chlorophyceae
b) Xanthophyceae
c) Euglenophyceae
d) Anthrophyceae

Explanation

F. E. Fritsch classified algae into 11 classes namely Chlorophyceae, Xanthophyceae, Chrysophyceae, Bacillariophyceae, Cryptophyceae, Dinophyceae, Chloromonadineae, Euglenophyceae, Phaeophyceae, Rhodophyceae, Cyanophyceae.

45. The members of Chlorophyceae are commonly called _____

a) Red algae
b) Blue green algae
c) Green algae
d) Yellow algae

Explanation

The members of Chlorophyceae are commonly called 'Green algae'.

46. Which among the following species of Chlorophyceae is terrestrial?

a) Spirogyra
b) Ulva
c) Trentipohlia
d) All the above

Explanation

Most of the species of Chlorophyceae are aquatic (Fresh water-Spirogyra, Marine -Ulva). A few are terrestrial (Trentipohlia).

47. Which among the following algae is not the example of Chlorophyceae

a) Chlorella

b) Dictyota
c) Chlamydomonas
d) Volvox

Explanation

Examples for the Chlorophyceae algae includes Chlorella, Chlamydomonas, Volvox, Spirogyra, Ulothrix, Chara and Ulva

48. Match the following Chlorophyceae members based on size with example

i. Cup shaped – 1. Zygnema
ii. Discoid – 2. Ulothrix
iii. Girdle shaped – 3. Chara
iv. Reticulate – 4. Chlamydomonas
v. Stellate – 5. Oedogonium

a) 4 – 3 – 2 – 5 – 1
b) 3 – 1 – 2 – 4 – 5
c) 2 – 5 – 1 – 3 – 4
d) 1 – 4 – 5 – 2 – 3

Explanation

Variation among the shape of the chloroplast is found in members of Chlorophyceae. It is cup shaped (Chlamydomonas), discoid (Chara), girdle shaped, (Ulothrix), reticulate (Oedogonium), spiral (Spirogyra), stellate (Zygnema) and plate like (Mougeoutia).

49. Which among the following statement is incorrect regarding Chlorophyceae

1) Chlorophyll 'a' and Chlorophyll 'b' are the major photosynthetic pigments. Storage bodies called Riella are present in the chloroplast and store potash. They also contain proteins. The cell wall is made up of outer layer of cellulose and inner layer of pectin.
2) Vegetative reproduction takes place by means of fragmentation and asexual reproduction is by the production of zoospores, aplanospores and akinetes. Sexual reproduction is present and may be isogamous, anisogamous or oogamous.

a) Only 1
b) Only 2
c) Both 1 and 2
d) None

Explanation

Chlorophyll 'a' and Chlorophyll 'b' are the major photosynthetic pigments. Storage bodies called pyrenoids are present in the chloroplast and store starch. They also contain proteins. The cell wall is made up of inner layer of cellulose and outer layer of pectin.

50. The member of Phaeophyceae class are called _____

a) Brown algae
b) Red algae
c) Green algae
d) Blue green algae

Explanation

The members of Phaeophyceae class are called 'Brown algae'.

51. Majority of the phaeophyceae are found in which habitats?

a) Marine
b) Fresh water
c) Terrestrial
d) Air

Explanation

Majority of the phaeophyceae are found in marine habitats. Pleurocladia is a fresh water form. The thallus is filamentous (Ectocarpus) frond like (Dictyota)or may be giant kelps (Laminaria and Macrocystis).

52. In Phaeophyceae, thallus is differentiated into leaf like photosynthetic part called ____

a) Stipe
b) Fronds
c) Cupid
d) Poes

Explanation

The thallus is differentiated into leaf like photosynthetic part called fronds, a stalk like structure called stipe and a holdfast which attach thallus to the substratum.

53. Which among the following statement is correct regarding Phaeophyceae

1) The Pigments in Phaeophyceae include Chlorophyll x, y, Carotenoids and Xanthophylls. A yellow-green pigment called fucoxanthin is present and it gives shades of colour from shiny red to white to the algal members of this group.
2) Mannitol and Laminarin are the reserve food materials. Motile reproductive structures are present. Two laterally inserted unequal flagella are present. Among these one is whiplash and another is tinsel.
3) Although sexual reproduction ranges from isogamy to oogamy, most of the forms show oogamous type. Alternation of generation is present (isomorphic, heteromorphic or diplontic).
    a) Both 1 and 2
    b) Both 1 and 3
    c) Both 2 and 3

d) All 1, 2 and 3

Explanation

The Pigments in Phaeophyceae include Chlorophyll a, c, Carotenoids and Xanthophylls. A golden brown pigment called fucoxanthin is present and it gives shades of colour from olive green to brown to the algal members of this group.

54. Which among the following is not the examples of Phaeophyceae

a) Gelidium
b) Sargassum
c) Laminaria
d) Dictyota

Explanation

Examples for Phaeophyceae include Sargassum, Laminaria, Fucus and Dictyota.

55. The members of the Rhodophyceae are called ____

a) Brown algae
b) Yellow algae
c) Pink algae
d) Red algae

Explanation

The members of the Rhodophyceae are called Red algae are mostly marine.

56. Which among the following statement is correct regarding Rhodophyceae

1) In Rhodophyceae thallus is multicellular, macroscopic and diverse in form. Porphyridium is the unicellular form. Filamentous (Goniotrichum) ribbon like (Porphyra) are also present. Corallina and Lithothamnion are heavily impregnated with lime and form coral reefs.
2) Apart from chlorophyll a, r-phycoerythrin and r-phycocyanin are the photosynthetic pigments. Asexual reproduction takes place by means of monospores, neutral spores and tetraspores. The storage product is floridean starch.

a) Only 1
b) Only 2
c) Both 1 and 2
d) None

57. In Rhodophyceae Sexual reproduction take place by ____

a) Isogamous
b) Anisogamous
c) Oogamous
d) All the above

Explanation

In Rhodophyceae Sexual reproduction is oogamous. Male sex organ is spermatangium which produces spermatium.

58. In Rhodophyceae Female sex organ is called ____

a) Carpogonium
b) Ceramium
c) Polygonium
d) Serapogonium

Explanation

In Rhodophyceae Female sex organ is called carpogonium. The spermatium is carried by the water currents and fuse with egg nucleus to form zygote. The zygote develops into carpospores. Meiosis occurs during carpospore formation. Alternation of generation is present.

59. Which among the following is not the example of Rhodophyceae?

a) Ceramium
b) Gigartina
c) Gelidium
d) Ulothrix

Explanation

Examples for Rhodophyceae algae include Ceramium, Polysiphonia, Gelidium, Cryptonemia and Gigartina.

60. Who is the father of Indian Bryology?

a) Vinay Simha
b) V. S. Sundaralingam
c) Shiv Ram Kashyap
d) F. E. Round

Explanation

Shiv Ram Kashyap is the father of Indian Bryology. He published a book- 'Liverworts of Western Himalayas and Punjab Plains' He identified new genera like Atchinsoniella, Sauchia, Sewardiella and Stephansoniella.

61. Which among the following Algae is used for food purpose?

a) Chlorella
b) Laminaria
c) Sargassum
d) All the above

Explanation

Chlorella, Laminaria, Sargassum, Ulva, Enteromorpha are the algae used for Food.

62. Which among the following algae is involved in red rust of coffee?

a) Chlamydomonas crispus
b) Chondrus crispus
c) Ascophyllum virescens
d) Cephaleuros virescens

Explanation

Cephaleuros virescens is the algae involved in Red rust of coffee.

63. Which among the following algae is not used for Fertilizer?

a) Lithophyllum
b) Laminaria
c) Chara
d) Fucus

Explanation

Lithophyllum, Chara, Fucus are the algae used for Fertilizer.

64. Which is a Cell wall material used for media preparation in the microbiology lab obtained from algae?

a) Agar Agar
b) Carrageenan
c) Alginate
d) Polish

Explanation

Agar Agar – Cell wall material used for media preparation in the microbiology lab. The algae used are Gracilaria, Gelidiella, Gigartina. Packing canned food, cosmetic, textile paper industry.

65. Which among the following algae is used for Sewage treatment, Pollution indicators?

a) Chlorella
b) Scenedesmus
c) Chlamydomonas
d) All the above

Explanation

Chlorella, Scenedesmus, Chlamydomonas are the algae used for Sewage treatment, Pollution indicator.

66. Which algae is used for antibiotics?

a) Laminaria
b) Chlorella
c) Fucus
d) Ascophyllum

Explanation

Chlorella is used for antibiotics (Chlorellin).

67. Which green alga is employed in Biofuel production?

a) Botryococcus braunii
b) Chondrus crispus
c) Gracilaria virescens
d) All the above

Explanation

A green alga Botryococcus braunii is employed in Biofuel production.

68. Which are the rich source of Iodine Chlorella is used as single cell Protein (SCP)?

a) Arame
b) Kelp
c) Alaria
d) Undaria

Explanation

Kelps are the rich source of Iodine Chlorella is used as single cell Protein (SCP).

69. Which is an alga growing in salt pan is complement to our health and provide β carotene?

a) Diatom salina
b) Lithophyllum salina
c) Dunaliella salina
d) Ascophyllum salina

Explanation

Dunaliella salina an alga, growing in salt pan is complement to our health and provide β carotene.

70. Which algae is used for carrageenan (preparation n of tooth paste, paint, blood coagulant)?

a) Chondrus crispus
b) Cephaleuros virescens
c) Postelia palmaeformis
d) All the above

Explanation

Chondrus crispus is algae used for Carrageenan (Preparation of tooth paste, paint, blood coagulant).

71. Which among the following algae is not used for Alginate – ice cream, paints, flame proof fabrics?

a) Laminaria
b) Ascophyllum
c) Fucus
d) All the above

Explanation

Laminaria, Ascophyllum are algae used for Alginate – ice cream, paints, flame proof fabrics.

72. Which among the following statement is correct

1) Algae like Laminaria, Sargassum, Ascophyllum, Fucus are used for Fodder. Diatom is algae used for Diatomaceous earth– water filters, insulation material, reinforcing agent in concrete and rubber.
2) Algae like Kappaphycus alvarezii, Gracilaria edulis and Gelidiella acerosa are commercially grown in the sea for harvesting the phycocolloids. Sea Palm is Postelia palmaeformis a brown alga.
    a) Only 1
    b) Only 2
    c) Both 1 and 2
    d) None

73. Which are simplest land inhabiting cryptogams and are restricted to moist, shady habitats and they lack vascular tissue and hence called 'Non- vascular cryptogams'?

a) Bryophytes
b) Pteridophytes
c) Mesophyte
d) Xerophytes

Explanation

Bryophytes are simplest land inhabiting cryptogams and are restricted to moist shady habitats. They lack vascular tissue and hence called 'Non- vascular cryptogams.

74. Bryophytes are also called as _____

a) Reptiles of plant kingdom
b) Joints of plant kingdom
c) Amphibians of plant kingdom
d) Extension of plant kingdom

Explanation

Bryophytes are also called as 'amphibians of plant kingdom' because they need water for completing their life cycle.

75. Which among the following statement is correct

1) A wide range of thallus organization known as Algae, majority of them are aquatic. The development of heterotrichous habit, development of parenchyma tissue and dichotomous branching in some algae supports the view that colonization of plants in land occurred in the past.
2) Bryophytes are simplest and non-primitive plant groups descended from alga – like ancestors. They are simple embryophytes. The plant body of bryophyte is pteridophyte and is differentiated into root, stem and leaf like structure.
3) Most of them are primitive land dwellers. Some of them are aquatic (Riella, Ricciocarpus). Vascular tissue like xylem and phloem are completely absent, hence called 'Non vascular cryptogams'.
    a) Both 1 and 2
    b) Both 1 and 3
    c) Both 2 and 3
    d) All 1, 2 and 3

Explanation

Bryophytes are simplest and most primitive plant groups descended from alga – like ancestors. They are simple embryophytes. The plant body of bryophyte is gametophyte and is not differentiated into root, stem and leaf like structure.

76. In bryophytes sexual reproduction is ____

a) Isogamous
b) Anisogamous
c) Oogamous
d) All the above

Explanation

In bryophytes Sexual reproduction is oogamous. Antheridia and Archegonia are produced in a protective covering and are multicellular. Water is essential for fertilization.

77. Which among the following statement is correct regarding bryophytes

1) The gametophyte is conspicuous, short lived phase of the life cycle. Thalloid forms are present in liverworts and absent in Hornworts. In Mosses leaf like, stem like structures are absent. In Liverworts thallus grows prostrate on the ground and is attached to the substratum by means of chord.
2) Two types of rhizoids are present namely smooth walled and pegged or tuberculate. Multicellular scales are also present. In Moss the plant body is erect with central axis bearing leaf like expansions. Multicellular rhizoids are present.

a) Only 1
b) Only 2
c) Both 1 and 2
d) None

Explanation

The gametophyte is conspicuous, long lived phase of the life cycle. Thalloid forms are present in liverworts and Hornworts. In Mosses leaf like, stem like structures are present. In Liverworts thallus grows prostrate on the ground and is attached to the substratum by means of rhizoids.

78. In bryophytes, which is the first cell of the sporophyte generation?

a) Morula
b) Zygote
c) Blastocyst
d) None of the above

Explanation

The zygote is the first cell of the sporophyte generation. It undergoes mitotic division to form multicellular undifferentiated embryo. The embryogeny is exoscopic (the first division of the zygote is transverse and the apex of the embryo develops from the outer cell). The embryo divides and give rise to sporophyte.

79. Which among the following statement is correct regarding sexual reproduction in bryophytes?

1) The antheridia produce biflagellate antherozoids which swims in thin film of water and reach the archegonium and fuse with the egg to form diploid zygote. Water is essential for fertilization.
2) The sporophyte is dependent on gametophyte. It is differentiated into three recognizable parts namely foot, seta and capsule. Foot is the basal portion and is embedded in the gametophyte through which water and nutrients are supplied for the sporophyte.
3) The diploid spore mother cells found in the capsule region undergoes meiotic division and give rise to haploid spores. Bryophytes are homosporous. In some sporophytes elaters are present and help in dispersal of spores (Example: Marchantia). The spores germinate to produce gametophyte.

a) Both 1 and 2
b) Both 1 and 3
c) Both 2 and 3
d) All 1, 2 and 3

80. The zygote, embryo and the sporogonium constitute sporophytic phase. The green long living haploid phase is called ____

a) Periphytic phase
b) Gametophytic phase

c) Xerophytic phase
d) Halophytic phase

Explanation

The zygote, embryo and the sporogonium constitute sporophytic phase. The green long living haploid phase is called gametophytic phase. The haploid gametophytic phase alternates with diploid sporophyte and shows heterologous alternation of generation.

81. Vegetative reproduction in bryophytes takes place by the formation of adventitious buds (Riccia fluitans) tubers develop in ____

a) Anthoceros
b) Santeros
c) Braceros
d) Cilantros

Explanation

Vegetative reproduction takes place by the formation of adventitious buds (Riccia fluitans) tubers develop in Anthoceros.

82. What was the propagative organ in Marchantia formed and help in reproduction?

a) Gemmae
b) Riella
c) Funaria
d) Porella

Explanation

In some form small detachable branches or brood bodies are formed, they help in vegetative reproduction as in Bryopteris fruticulose. In Marchantia propagative organs called gemmae are formed and help in reproduction.

83. Proskauer in the year 1957 classified Bryophytes into how many classes?

a) Two
b) Three
c) Seven
d) Nine

Explanation

Proskauer in the year 1957 classified Bryophytes into 3 Classes namely i. Hepaticopsida ii. Anthocerotopsida iii. Bryopsida.

84. Which among the following does not belong to class Hepaticopsida?

a) Riccia

b) Marchantia
c) Porella
d) Funaria

Explanation

Hepaticopsida - Riccia, Marchantia, Porella and Riella.

85. Which among the following does not belong to class Bryopsida?

a) Funaria
b) Polytrichum
c) Dendroceros
d) Sphagnum

Explanation

Funaria, Polytrichum and Sphagnum belong to class Bryospida ; Anthoceros and Dendroceros belong to class Hepaticopsida.

86. Which among the following statement is incorrect regarding Economic importance of bryophytes

1) Dead thalli of Sphagnum gets accumulated and compressed, hardened to form peat. In northern Europe (Netherlands)peat is used as fuel in commercial scale. Apart from this nitrates, brown dye and tanning materials are derived from peat.
2) Sphagnum and peat are also used in horticulture as packing material because of their water holding capacity. Marchantia polymorpha is used to cure pulmonary tuberculosis. Sphagnum, Bryum and Polytrichum are used as food. Bryophytes play a major role in soil formation through succession and help in soil conservation
    a) Only 1
    b) Only 2
    c) Both 1 and 2
    d) None

87. Which are the vascular cryptogams and were abundant in the Devonian period of Palaeozoic era (400 million years ago)?

a) Bryophytes
b) Pteridophytes
c) Mesophyte
d) Xerophytes

Explanation

Pteridophytes are the vascular cryptogams and were abundant in the Devonian period of Palaeozoic era (400 million years ago).

88. Which among the following statement is correct regarding Pteridophytes?

1) we are aware of the salient features of amphibious plants called bryophytes. But there is a plant group called pteridophytes which are considered as first true land plants. Further, they were the first plants to acquire vascular tissue namely xylem and phloem, hence called vascular cryptogams.
2) Club moss, horsetails, quill worts, water ferns and tree ferns belong to this group. These plants are mostly small, herbaceous and grow well in moist, cool and shady places where water is available.
3) Plant body is sporophyte (n) and it is the variant phase. It is not differentiated into root, stem and leaves. Stele is protostele but in some forms siphonostele is present (Marsilea). Tracheids are the major nitrogen conducting elements but in Selaginella vessels are found.

a) Both 1 and 2
b) Both 1 and 3
c) Both 2 and 3
d) All 1, 2 and 3

Explanation

Plant body is sporophyte (2n) and it is the dominant phase. It is differentiated into root, stem and leaves. Roots are adventitious. Stem shows monopodial or dichotomous branching. Leaves may be microphyllous or megaphyllous. Stele is protostele but in some forms siphonostele is present (Marsilea) Tracheids are the major water conducting elements but in Selaginella vessels are found.

89. Sporangia, spore bearing bag like structures are borne on special leaves called ___

a) Sporogamy
b) Sporogosm
c) Sporophyll
d) All the above

Explanation

Sporangia, spore bearing bag like structures are borne on special leaves called sporophyll. The Sporophylls get organized to form cone or strobilus. Example: Selaginella, Equisetum. They may be homosporous (produce one type of spores-Lycopodium) or Heterosporous (produce two types of spores-Selaginella). Heterospory is the origin for seed habit.

90. The success and dominance of vascular plants is due to the development of ____

a) Extensive root system
b) Efficient conducting tissues
c) Cuticle to prevent desiccation
d) All the above

Explanation

The success and dominance of vascular plants is due to the development of • Extensive root system. • Efficient conducting tissues. • Cuticle to prevent desiccation. • Stomata for effective gaseous exchange.

91. In pteridophytes the development of sporangium from group of initials is called ____

a) Leptosporangiate
b) Capeosporabgiate
c) Marsporangiate
d) Eusporangiate

Explanation

The development of sporangium from group of initials is called Eusporangiate.

92. The development of sporangium from single initial is called ____

a) Leptosporangiate
b) Capeosporabgiate
c) Marsporangiate
d) Eusporangiate

Explanation

The development of sporangium from single initial is called Leptosporangiate. Development of sporangia may be eusporangiate or leptosporangiate

93. Which among the following statement is correct regarding pteridophytes

1) Spore mother cells undergo meiosis and produce spores (2n). Spore germinates to produce haploid, unicellular brown, spiral shaped independent gametophytes called prothallus. Fragmentation, resting buds, root tubers and adventitious buds help in asexual reproduction.
2) Sexual reproduction is oogamous. Sex organs, namely antheridium and archegonium are produced on the prothallus. Antheridium produces spirally coiled and multiflagellate antherozoids. Archegonium is flask shaped with broad venter and elongated narrow neck.
3) The venter possesses egg or ovum and neck contain neck canal cells. Water is essential for fertilization. After fertilization a diploid zygote is formed and undergoes mitotic division to form embryo. Pteridophytes show apogamy and apospory.

a) Both 1 and 2
b) Both 1 and 3
c) Both 2 and 3
d) All 1, 2 and 3

Explanation

Spore mother cells undergo meiosis and produce spores (n). Spore germinates to produce haploid, multicellular green, cordate shaped independent gametophytes called prothallus. Fragmentation, resting buds, root tubers and adventitious buds help in vegetative reproduction.

94. In classification of pteridophytes proposed by reamer, pteridophytes are classified into how many subdivisions?

a) Three
b) Five
c) Seven
d) Nine

Explanation

Reimer (1954) proposed a classification for pteridophytes. In this classification, the pteridophytes are divided into five subdivisions. There are 19 orders and 48 families in the classification.

95. Which among the following is not the subdivision of pteridophytes?

a) Psilophytopsida
b) Psilotopsida
c) Ycopsida
d) Pscopitospida

Explanation

The five subdivision of pteridophytes 1. Psilophytopsida 2. Psilotopsida 3. Lycopsida 4. Sphenopsida 5. Pteropsida.

96. Which among the following term refers to the central cylinder of vascular tissues consisting of xylem, phloem, pericycle and sometimes medullary rays with pith?

a) Borne
b) Mitotic
c) Stele
d) Grid

Explanation

The term stele refers to the central cylinder of vascular tissues consisting of xylem, phloem, pericycle and sometimes medullary rays with pith.

97. Which among the following is not the type of steles?

a) Protostele
b) Siphonostele
c) Xylostele
d) None of the above

Explanation

There are two types of steles 1. Protostele 2. Siphonostele.

98. Which among the following is not the type of Protostele?

a) Haplostele
b) Actinostele
c) Plectostele
d) Solenostele

Explanation

In protostele phloem surrounds xylem. The type includes Haplostele, Actinostele, Plectostele, and Mixed protostele.

99. Which among the following is incorrect regarding Protostele

a) Xylem surrounded by phloem is known as haplostele
b) Sphere shaped xylem core is surrounded by phloem is known as actinostele
c) Xylem plates alternates with phloem plates is known as plectostele
d) Xylem groups uniformly scattered in the phloem is known as Mixed protostele

Explanation

Star shaped xylem core is surrounded by phloem is known as actinostele.

100. Match the following Protostele with its example

i. Haplostele – 1. Lycopodium clavatum
ii. Actinostele – 2. Lycopodium serratum
iii. Plectostele – 3. Selaginella
iv. Mixed protostele – 4. Lycopodium cernuum

a) 2 – 1 – 4 – 3
b) 4 – 3 – 2 – 1
c) 3 – 2 – 1 – 4
d) 1 – 4 – 3 – 2

Explanation

Haplostele (Selaginella), Actinostele (Lycopodium Serratum), Plectostele (Lycopodium clavatum) and Mixed Protostele (Lycopodium cernuum).

101. In which among the following xylem is surrounded by phloem with pith at the centre?

a) Protostele
b) Siphonostele
c) Xylostele
d) None of the above

Explanation

In siphonostele xylem is surrounded by phloem with pith at the centre.

102. Which among the following is not included in Siphonostele?

a) Solenostele
b) Eustele
c) Pxycostele
d) Atactostele

Explanation

Siphonostele includes Ectophloic siphonostele, Amphiphloic siphonostele, Solenostele, Eustele, Atactostele and Polycylic stele.

103. In which siphonostele the vascular tissues are present in the form of two or more concentric cylinders?

a) Polycyclicstele
b) Atactostele
c) Dictyostele
d) Eustele

Explanation

In Polycyclicstele vascular tissues are present in the form of two or more concentric cylinders.

104. Which among the following is incorrect regarding Siphonostele

a) Ectophloic siphonostele: The phloem is restricted only on the external side of the xylem and pith is in the centre
b) Amphiphloic siphonostele: The phloem is present on both the sides of xylem and the pith is in the centre
c) Atactostele: The stele is perforated at a place or places corresponding the origin of the leaf trace.
d) Eustele: The stele is split into distinct collateral vascular bundles around the pith.

Explanation

Atactostele: The stele is split into distinct collateral vascular bundles and are scattered in the ground tissue.

105. Match the following Siphonostele with its example

i. Ectophloic siphonostele – 1. Monocot stem
ii. Amphiphloic siphonostele – 2. Dicot stem
iii. Eustele – 3. Osmunda
iv. Atactostele – 4. Pteridium
v. Polycyclicstele – 5. Marsilea

a) 3 – 5 – 2 – 1 – 4
b) 2 – 1 – 5 – 3 – 4
c) 4 – 1 – 5 – 3 – 2

d) 5 – 3 – 1 – 4 – 2

Explanation

Ectophloic siphonostele – Osmunda; Amphiphloic siphonostele – Marsilea; Eustele - Dicot stem; Atactostele – Monocot stem; Polycyclicstele – Pteridium.

106. Which among the following is not the type of Solenostele?

a) Ectophloic solenostele
b) Amphiphloic solenostele
c) Vaseostele
d) Dictyostele

Explanation

In Solenostele, stele is perforated at a place or places corresponding the origin of the leaf trace. They are (a) Ectophloic solenostele, (b) Amphiphloic solenostele and (c) Dictyostele.

107. Which are naked seed producing plants, were dominant in the Jurassic and Cretaceous periods of Mesozoic era and members are distributed throughout the temperate and tropical region of the world?

a) Gymnosperm
b) Angiosperm
c) Xenosperm
d) Paleosperm

Explanation

Gymnosperm are naked seed producing plants. They were dominant in the Jurassic and Cretaceous periods of Mesozoic era. The members are distributed throughout the temperate and tropical region of the world.

108. Which among the following is a plant secretion which is an efficient preservative that doesn't get degraded and hence can preserve remains of extinct life forms?

a) Amber
b) Flip
c) Camper
d) Clamp

Explanation

Amber is a plant secretion which is an efficient preservative that doesn't get degraded and hence can preserve remains of extinct life forms. The amber is produced by Pinites succinifera, a Gymnosperm.

109. Which among the following statement is correct regarding Gymnosperm?

1) Most of the gymnosperms are evergreen, woody trees or shrubs. Some are lianas (Gnetum). The plant body is sporophyte and is differentiated into root, stem and leaves. A well-developed tap root system is present. Coralloid roots of Cycas have symbiotic association with blue green algae. In Pinus the roots have mycorrhizae.
2) The stem is aerial, erect and branched or unbranched (Cycas) with leaf scars. In conifers two types of branches namely branches of limited growth (Dwarf shoot) and Branches of unlimited growth (Long shoot) is present.
3) Leaves are dimorphic, foliage and scale leaves are present. Foliage leaves are green, photosynthetic and borne on branches of limited growth. They show xerophytic features. The xylem consists of tracheids but in Gnetum and Ephedra vessels are present. They are heterosporous. The plant may be monoecious (Pinus) or dioecious (Cycas)
    a) Both 1 and 2
    b) Both 1 and 3
    c) Both 2 and 3
    d) All 1, 2 and 3

110. Which among the following is incorrect regarding Gymnosperms resemble with angiosperms?

a) Flowers in Gnetum resemble the male flower of the angiosperm. The zygote represent the first cell of sporophyte.
b) Presence of integument inside the ovule. Both plant groups absence seeds.
c) Pollen tube helps in the transfer of male nucleus in both. Presence of eustele.
d) Presence of well organised plant body which is differentiated into roots, stem and leaves.

Explanation

Presence of integument around the ovule. Both plant groups produce seeds.

111. Which among the following statement is correct regarding gymnosperm?

1) In gymnosperm Secondary growth is present. The wood may be Manoxylic (Porous, soft, more parenchyma with wide medullary ray -Cycas) or Pycnoxylic (compact with narrow medullary ray-Pinus).
2) Microsporangia and megasporangia are produced on microsporophyll and megasporophyll respectively. Male and female cones are absent. Anemophilous pollination is absent. Fertilization is siphonogamous and pollen tube helps in the transfer of female nuclei.
3) Polyembryony (presence of many embryo) is present. The naked ovule develops into seed. The endosperm is haploid and develop before fertilization. The life cycle shows alternation of generation. The sporophytic phase is dominant and gametophytic phase is highly reduced.
    a) Both 1 and 2
    b) Both 1 and 3
    c) Both 2 and 3
    d) All 1, 2 and 3

Explanation

Microsporangia and megasporangia are produced on microsporophyll and megasporophyll respectively. Male and female cones are produced. Anemophilous pollination is present. Fertilization is siphonogamous and pollen tube helps in the transfer of male nuclei.

112. Sporne (1965) classified gymnosperms into how many classes?

a) Three
b) Five
c) Seven
d) Nine

Explanation

Sporne (1965) classified gymnosperms into 3 classes, 9 orders and 31 families.

113. Which among the following is not the classes of gymnosperm?

a) Cycadospsida
b) Steredospsida
c) Coniferopsida
d) Gnetopsida

Explanation

The classes of gymnosperm include i) Cycadospsida ii) Coniferopsida iii) Gnetopsida.

114. Which among the following statement is correct

1) In gymnosperm Vessels are present (except Gnetales). Phloem lacks companion cells, Ovules are naked and Wind pollination is maximum. Double fertilization is absent, Endosperm is haploid, Fruit formation is present and Flowers present.
2) In Angiosperm Vessels are present. Companion cells are present, Ovules are enclosed within the ovary, Insects, wind, water, animals etc., act as pollinating agents. Double fertilization is present, Endosperm is triploid, Fruit formation is present and Flowers present.
    a) Only 1
    b) Only 2
    c) Both 1 and 2
    d) None

Explanation

In gymnosperm Vessels are absent (except Gnetales). Phloem lacks companion cells, Ovules are naked and Wind pollination only. Double fertilization is absent, Endosperm is haploid, Fruit formation is absent and Flowers absent.

115. Match the following gymnosperm plants with its economic products?

i. Pinus gerardiana – 1. Resin (Canada balsam)
ii. Abies balsamea – 2. oil

iii. Pinus roxburghii – 3. wood
iv. Cedrus deodara – 4. Oleoresin
v. Cedrus atlantica – 5. Roasted seed

a) 2 – 1 – 3 – 5 – 4
b) 3 – 2 – 5 – 4 – 1
c) 4 – 5 – 3 – 2 – 1
d) 5 – 1 – 4 – 3 – 2

Explanation

1. Pinus gerardiana – Roasted seed – Used as a food; 2. Abies balsamea – Resin (Canada balsam) – Used as mounting medium in permanent slide preparation; 3. Pinus roxburghii – Oleoresin – Used to make soap, varnishes and printing ink; 4. Cedrus deodara – wood – Used to make doors, boats and railway sleepers; 5. Cedrus atlantica – oil – Used in perfumery.

116. Spermatophytes also include plants bearing ovules enclosed in a protective cover called ovary, such plants are called _____

a) Androsperm
b) Rhodosperm
c) Angiosperm
d) Pteridosperm

Explanation

Spermatophytes also include plants bearing ovules enclosed in a protective cover called ovary, such plants are called Angiosperms. They constitute major plant group of our earth and are adapted to the terrestrial mode of life. This group of plants appeared during the early cretaceous period (140 million years ago) and dominates the vegetation on a global scale.

117. In Angiosperm which is the dominant phase?

a) Gametophyte
b) Sporophyte
c) Endophyte
d) Xerophyte

Explanation

In Angiosperm sporophyte is the dominant phase and gametophyte is highly reduced.

118. Which among the following salient feature of angiosperm is incorrect

a) Vascular tissue (Xylem and Phloem) is well developed.
b) Cone are produced instead of flower. The Ovule remains open in the ovary
c) Pollen tube helps in fertilization, so water is not essential for fertilization.
d) Double fertilization is present. The endosperm is triploid.

Explanation

Flowers are produced instead of cone. The Ovule remains enclosed in the ovary.

119. Which among the following is not the classification of Angiosperm?

a) Dicotyledons
b) Monocotyledons
c) Boustrophedons
d) None of the above

Explanation

Angiosperms are broadly classified into two classes namely Dicotyledons and Monocotyledons.

120. Which among the following gymnosperm plant does not produce sago, in which starch used as food?

a) Cycas circinalis
b) Cycas revoluta
c) Ephedra gerardiana
d) None of the above

Explanation

Cycas circinalis, Cycas revoluta produce Sago, in which Starch used as food.

121. Which among the following morphological feature of Dicotyledons is incorrect

a) Reticulate venation is present in the flowers and stems.
b) Presence of two cotyledons in the seed.
c) Primary root radicle persists as tap root.
d) Flowers tetramerous or pentamerous.

Explanation

Reticulate venation is present in the leaves. Tricolpate (3 furrow) pollen is present

122. Which among the following anatomical feature of Dicotyledons is incorrect

a) Vascular bundles are arranged in the form of a ring in stem.
b) Vascular bundles are open (Cambium present).
c) Secondary growth is present.
d) None of the above

123. Which among the following plant (Gymnosperm) does not produce Rosin and Turpentine used for Paper sizing and varnishes?

a) Pinus insularis
b) Pinus roxburghii
c) Taxus brevifolia

d) None of the above

Explanation

Pinus insularis, Pinus roxburghii produce Rosin and Turpentine used for Paper sizing and varnishes.

124. Which among the following plant (Gymnosperm) produce Drug used for cancer treatment?

a) Ephedra gerardiana
b) Taxus brevifolia
c) Pinus roxburghii
d) All the above

Explanation

Taxus brevifolia produce Taxol (Drug) used for cancer treatment.

125. Which among the following morphological feature of monocotyledons is incorrect

a) Parallel venation is present in the leaves.
b) Presence of double cotyledon in the seed.
c) Radicle doesn't persist and fibrous root is present.
d) Flowers trimerous. Monocolpate (1 furrow) Pollen is present

Explanation

Presence of single cotyledon in the seed.

126. Which among the following statement is incorrect regarding Anatomical features of Monocotyledons?

a) Vascular bundles are scattered in the stem
b) Vascular bundles are closed (Cambium absent)
c) Secondary growth is present
d) None of the above

Explanation

Secondary growth is absent in Monocotyledons.

127. Which among the following plant (Gymnosperm) is used for r the treatment of asthma, bronchititis?

a) Ephedra gerardiana
b) Picea smithiana
c) Cedrus deodara
d) All the above

Explanation

Ephedra gerardiana produce Ephedrine used for the treatment of asthma, bronchititis.

128. Which among the following plant (Gymnosperm) does not produce wood pulp Used to make papers?

a) Pinus roxburghii
b) Cedrus atlantica
c) Picea smithiana
d) None of the above

Explanation

Pinus roxburghii, Picea smithiana produce Wood pulp used to make papers.

129. The National wood fossil park is situated in which district of Tamil Nadu?

a) Chengalpattu
b) Coimbatore
c) Madurai
d) Villupuram

Explanation

The National wood fossil park is situated in Tiruvakkarai, a Village of Villupuram district of Tamil Nadu. The park contains petrified wood fossils approximately 20 million years old.

130 Which among the following fossil park is incorrectly matched with its state?

1) Shiwalik fossil park – Himachal Pradesh
2) Mandla Fossil park – Gujarat
3) Rajmahal Hills – Assam

a) Both 1 and 2
b) Both 1 and 3
c) Both 2 and 3
d) All 1, 2 and 3

Explanation

Shiwalik fossil park-Himachal Pradesh, Mandla Fossil park-Madhya Pradesh, Rajmahal Hills–Jharkhand, Ariyalur – Tamilnadu are some of the fossil rich sites of India.

131. Which among the following plant (Gymnosperm) produce Tannins used for Bark yield tannins and is used in Leather industries?

a) Araucaria (Monkey's puzzle)
b) Picea
c) Phyllocladus
d) All the above

Explanation

Araucaria (Monkey's puzzle), Picea and Phyllocladus are plat produce Tannins used as Bark yield tannins and is used in Leather industries.

132. Which among the following is not the fossil algae?

a) Palaeoporella
b) Dimorphosiphon
c) Hepaticites
d) None of the above

Explanation

Fossil Algae - Palaeoporella, Dimorphosiphon.

133. Which among the following is not the fossil bryophytes?

a) Furcula
b) Naiadita
c) Hepaticites
d) Muscites

Explanation

Fossil Bryophytes – Naiadita, Hepaticites, Muscites.

134. Which among the following plant (Gymnosperm) is used as Ornamental plants/Floral Decoration?

a) Pinus gerardiana
b) Araucaria
c) Phyllocladus
d) Balsamea

Explanation

Thuja, Cupressus, Araucaria, and Cryptomeria are plant used as Ornamental plants/Floral Decoration.

135. Which among the following is not Fossil Pteridophytes?

a) Cooksonia
b) Rhynia
c) Baragwanthia
d) Lepidodendron

Explanation

Fossil Pteridophytes – Cooksonia, Rhynia,, Baragwanthia, Calamites.

136. Which among the following is not the fossil angiosperm?

a) Archaeanthus
b) Furcula
c) Medullosa
d) None of the above

Explanation

Fossil Angiosperms – Archaeanthus, Furcula.

137. Which among the following is not the fossil gymnosperm?

a) Medullosa
b) Lepidocarpon
c) Williamsonia
d) None of the above

Explanation

Fossil Gymnosperms – Medullosa, Lepidocarpon, Williamsonia, Lepidodendron.

138. Which term is used to name the fossil plants because the whole plant is not recovered as fossils instead organs or parts of the extinct plants are obtained in fragments?

a) Plot genera
b) Cameo genera
c) Form genera
d) Paleo genera

Explanation

The term 'form genera' is used to name the fossil plants because the whole plant is not recovered as fossils instead organs or parts of the extinct plants are obtained in fragments.

139. Who is the father of Indian Palaeobotany?

a) Prof. Birbal Sahni
b) Prof. Albert Seward
c) Prof. Meghnad Saha
d) Homi J. Bhabha

Explanation

Prof. Birbal Sahni (1891-1949) is Father of Indian Palaeobotany. He described Fossil plants from Rajmahal Hills of Eastern Bihar. Pentoxylon sahnii, Nipanioxylon are some of the form genera described by him.

140. Birbal Sahni Institute of Palaebotany is located in _____

a) Raipur
b) Lucknow

c) Ahmedabad
d) Ranchi

Explanation

Birbal Sahni Institute of Palaebotany is located in Lucknow.