1. Read the following statements and choose the set of correct statements : In the membrane of Phaeophycean. **(2024)**

A. Asexual reproduction occurs usually by biflagellate zoospores.

B. Sexual reproduction is by oogamous method only.

C. Stored food is in the form of carbohydrates which is either mannitol or laminarin.

D. The major pigments found are chlorophyll a,c and carotenoids and xanthophyll.

E. Vegetative cells have a cellulosic wall, usually covered on the outside by gelatinous coating of algin.

Choose the correct answer from the option given below.

(a) B, C, D and E only

(b) A, C, D and E only

(c) A, B, C and E only

(d) A, B, C and D only

2. Identify the pair of heterosporous pteridophytes among the following : **(2023)**

(a) Equisetum and Salvinia

(b) Lycopodium and Selaginella

(c) Selaginella and Salvia

(d) Psilotum and Salvinia

3. **Assertion A:-** The first stage of gametophyte in the life cycle of moss is protonema stage.

Reason R :- Protonema develops directly from spores produced in capsule. **(2023)**

(a) A is not correct but R is correct.

(b) Both A and R are correct and R is the correct explanation of A

(c) Both A and R are correct but R is NOT the correct explanation of A

(d) A is correct but R is not correct

4. **Assertion A :-** In gymnosperm the pollen grains are released from the microsporangium and carried by air currents.

Reason R :- Air currents carry that pollen grains to the mouth of the archegonia where the male gametes are discharged and pollen tube is not formed. **(2023)**

(a) A is false but R is true

(b) Both A and R are true and R is the correct explanation of A

(c) Both A and R are true but R is NOT the currect explanation of A

(d) A is the true but R is false

5. Match List - I with List - II. **(2023)**

	List – I		**List – II**
A	Pteropsida	(i)	Psilotum
B	Lycopsida	(ii)	Equisetum
C	Psilpsida	(iii)	Adiantum
D	Sphenopsida	(iv)	Selaginella

Choose the correct answer from the options given below:

(a) (A)-(II), (B)-(III), (C)-(I), (D)-(IV)

(b) (A)-(III), (B)-(I), (C)-(IV), (D)-(II)

(c) (A)-(II), (B)-(III), (C)-(IV), (D)-(I)

(d) (A)-(III), (B)-(IV), (C)-(I), (D)-(II)

6. Which classes of algae possess pigment fucoxanthin and pigment phycoerythrin, respectively? **(Manipur 2023)**

(a) Phaeophyceae and Chlorophyceae

(b) Phaeophyceae and Rhodophyceae

(c) Chlorophyces and Rhodophycea

(d) Rhodophyceae and Phaeophycea

7. Match List - I with List - II. **(2022)**

List – I		List – II	
A	Chlamydomonas	(i)	Moss
B	Cycas	(ii)	Pteridophyte
C	Selaginella	(iii)	Alga
D	Sphagnum	(iv)	Gymnosperm

Choose the correct answer from the options given below
(a) (A)-(ii), (B)-(ii), (C)-(i), (D)-(iv)
(b) (A)-(iii), (B)-(i), (C)-(ii), (D)-(iv)
(c) (A)-(iii), (B)-(iv), (C)-(ii), (D)- (i)
(d) (A)-(iii), (B)-(ii), (C)-(i), (D) (iv)

8. Read the following statements and identify the characters related to the alga shown in the diagram: **(2022)**

(A) It is a member of Chlorophyceae
(B) Food is stored in the form of starch
(C) It is monoecious plant showing oogonium and antheridium
(D) Food is stored in the form of laminarin or mannitol
(E) It shows dominance of pigments Chlorophyll a, c and Fucoxanthin

Choose the correct answer from the options given below:
(a) (C), (D) and (E) only
(b) (A), and (B) only
(c) (A), (B) and (C) only
(d) (A), (C) and (D) only

9. Hydrocolloid carrageen is obtained form: **(2022)**
(a) Chlorophyceae and Phaeophyceae
(b) Phaeophyceae and Rhodophyceae
(c) Rhodophyceae only
(d) Phaeophyceae only

10. Which of the following is incorrectly matched? **(2022)**
(a) Ectocarpus-Fucoxanthin
(b) Ulothrix-Mannitol
(c) Porphyra-Floridian Starch
(d) Volvox-Starch

11. Match the plant with the kind of life cycle it exhibits: **(2022)**

List – I		LIst – II	
A	Spirogyra	(i)	Dominant diploid sporophyte vascular plant, with highly reduced male or female gametophyte
B	Fern	(ii)	Dominant haploid free-living gametophyte
C	Funaria	(iii)	Dominant diploid sporophyte alternating with reduced gametophyte called prothallus
D	Cycas	(iv)	Dominant haploid leafy gametophyte alternating with partially dependent multicellular sporophyte

Choose the correct answer from the options given below:
(a) (A)-(iv), (B)-(i), (C)-(ii), (D)-(iii)
(b) (A)-(ii), (B)-(iii), (C)-(iv), (D)-(i)
(c) (A)-(iii), (B)-(iv), (C)-(i), (D)-(ii)
(d) (A)-(ii), (B)-(iv), (C)-(i), (D)-(iii)

12. Which of the following algae produce Carrageen? **(2021)**
(a) Brown algae
(b) Red algae
(c) Blue-green algae
(d) Green algae

13. Genera like Selaginella and Salvinia produce two kinds of spores. Such plants are known as: **(2021)**
(a) Heterosorus
(b) Homosporous
(c) Heterosporous
(d) Homosorus

14. Which of the following algae contains mannitol as reserve food material? **(2021)**
(a) Gracilaria
(b) Volvox
(c) Ulothrix
(d) Ectocarpus

15. Gemmae are present in: **(2021)**
(a) Pteriodophytes
(b) Some Gymnosperms
(c) Some Liverworts
(d) Mosses

16. Which of the following pairs is of unicellular algae? **(2020)**
(a) Gelidium and Gracilaria
(b) Anabaena and Volvox
(c) Chlorella and Spirulina
(d) Laminaria and Sargassum

17. Floridean starch has structure similar to: **(2020)**
(a) Amylopectin and glycogen
(b) Mannitol and algin
(c) Laminarin and cellulose
(d) Starch cellulose

18. Strobili or cones are found in: **(2020)**
(a) Pteris (b) Marchantia
(c) Equisetum (d) Salvinia

19. Male and female gametophytes do not have an independent free living existence in: **(2020 Covid Re-NEET)**
(a) Algae (b) Angiosperms
(c) Bryophytes (d) Pteridophytes

20. Phycoerythrin is the major pigment in: **(2020 Covid Re-NEET)**
(a) Blue green algae
(b) Green algae
(c) Brown algae
(d) Red algae

21. Which of the following statements is incorrect about gymnosperms? **(2020 Covid Re-NEET)**
(a) Male and female gametophytes are free living
(b) Most of them have narrow leaves with thick cuticle
(c) Their seeds are not covered
(d) They are heterosporous

22. From evolutionary point of view, retention of the female gametophyte with developing young embryo on the parent sporophyte for some time, is first observed in **(2019)**
(a) Liverworts
(b) Mosses
(c) Pteridophytes
(d) Gymnosperms

23. Pinus seed cannot germinate and established without fungal association. This is because : **(2019)**
(a) Its embryo is immature.
(b) It has obligate association with mycorrhizae.
(c) It has very hard seed coat.
(d) Its seeds contain inhibitors that prevent germination.

24. Which of the following statement is correct? **(2018)**
(a) Ovules are not enclosed by ovary wall in gymnosperms
(b) Selaginella is heterosporous, while Salvinia is homosporous
(c) Horsetails are gymnosperms
(d) Stems are usually unbranched in both Cycas and Cedrus

25. Which one is wrongly matched? **(2018)**
(a) Uniflagellate gametes - Polysiphonia
(b) Biflagellate zoospores - Brown algae
(c) Gemma cups - Marchantia
(d) Unicellular organism – Chlorella

26. Winged pollen grains are present in **(2018)**
(a) Mustard
(b) Cycas
(c) Mango
(d) Pinus

27. Double fertilisation is exhibited by **(2017)**
(a) Gymnosperms (b) Algae
(c) Fungi (d) Angiosperms

28. Select the mismatch: **(2017)**
(a) Pinus – Dioecious
(b) Cycas – Dioecious
(c) Salvinia – Heterosporous
(d) Equisetum – Homosporous

29. Life cycle of Ectocarpus and Fucus respectively are: **(2017)**
(a) Haplontic, Diplontic
(b) Diplontic, Haplodiplontic
(c) Haplo-diplontic, Diplontic
(d) Haplo-diplontic, Haplontic

30. Zygotic meiosis is characteristic of: **(2017)**
(a) Marchantia
(b) Fucus
(c) Funaria
(d) Chlamydomonas

31. An example of colonial alga is **(2017)**
(a) Chlorella (b) Volvox
(c) Ulothrix (d) Spirogyra

32. Identify and select the wrong statement out of the following: **(2017)**
(a) In conifers the needle like leaves are Well adapted to extremes of temperature, moisture conservation and onslaught of wind
(b) Roots of pines enter into a symbiotic relationship with higher fungi
(c) The coralloid roots in Cycas have nitrogen fixing cyanobacteria
(d) The giant redwood tree Sequoia, one of the tallest trees in an angiosperm.

33. What is not true for an angiospermic embryo sac? **(2017)**
(a) One male gamete is discharged into it during ferilisation
(b) It is present within an ovule
(c) It represents female gametophyte
(d) Its formation is preceded by meiosis

34. Which one of the following statements is wrong? **(2016 - II)**
(a) Agar-agar is obtained from Gelidium and Gracilaria
(b) Laminaria and Sargassum are used as food
(c) Algae increase the level of dissolved oxygen in the immediate environment
(d) Algin is obtained from red algae, and carrageen from brown algae.

35. Conifers are adapted to tolerate extreme environmental conditions because of: **(2016 - II)**
(a) Thick cuticle
(b) Presence of vessels
(c) Broad hardy leaves
(d) Superficial stomata

36. Select the correct statement **(2016 - I)**
(a) Gymnosperms are both homosporous and heterosporous
(b) Salvinia, Ginkgo and Pinus all are gymnosperms
(c) Sequoia is one of the tallest trees
(d) The leaves of gymnosperms are not well adapted to extremes of climate

37. Which one is wrong statement? **(2015)**
(a) Mucor has biflagellate zoospores
(b) Haploid endosperm is typical feature of gymnosperms
(c) Brown algae have chlorophyll a and c and fucoxanthin
(d) Archegonia are found in Bryophyta, Pteridophyta and Gymnosperms.

38. Male gametes are flagellated in: **(2015)**
(a) Ectocarpus (b) Spirogyra
(c) Polysiphonia (d) Anabaena

39. Read the following statements (A-E) and answer the question which follows them: **(2013)**
A. In liverworts, mosses, and ferns gametophytes are free-living
B. Gymnosperms and some ferns are heterosporous
C. Sexual reproduction in Fucus, Volvox and Albugo is oogamous
D. The sporophyte in liverworts is more elaborate than that in mosses
E. Both Pinus and Marchantia are dioecious.

How many of the above statements are correct?
(a) Four (b) One
(c) Two (d) Three

40. Isogamous condition with non-flagellated gametes is found in: **(2013)**
(a) Fucus
(b) Chlamydomonas
(c) Spirogyra
(d) Volvox

41. Select the wrong statement: **(2013)**
(a) Chlamydomonas exhibits both isogamy and anisogamy and Fucus shows oogamy
(b) Isogametes are similar in structure, function and behaviour
(c) Anisogametes differ either in structure, function or behaviour
(d) In oogamous reproduction, female gamete is smaller and motile, while male gamete is larger and non motile