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**B.Sc. (Part- I) (Semester -I) Examination, 2022**

**BOTANY (PAPER-II)**

**Biodiversity of Archegoniate**

**Q.1. MCQ**

1) ----- are known as ‘amphibians of plant kingdom’.

i) Algae ii) Fungi

iii) Bryophytes iv) Lichens

2) Internally ----- thallus shows upper photosynthetic and lower storage region.

i) Riccia ii) Funaria

iii) Polytrichum iv) Sphagnum

3) In ----- peristome teeth help in dispersal of spores due to their hygroscopic nature.

i) Riccia ii) Funaria

iii) Polytrichum iv) Sphagnum

4) ----- is chief source of Peat.

i) Riccia ii) Funaria

iii) Polytrichum iv) Sphagnum

5) ----- are called as ‘Vascular Cryptogams’

i) Bryophytes ii) Pteridophytes

iii) Gymnosperms iv) Angiosperms

6) Distinctive feature of Selaginella stem is radially arranged endodermal cells are -----.

i) trabeculae ii) air spaces

iii) hypodermis iv) pericycle

7) Pteris is…….

i) monoecious ii) heteroecious

iii) dioecious iv) None of the above

8) Heterospory is considered as pre-requisite for ------- character formation.

i) Ovule ii) seed

iii) fruit iv) sporangium

9) Gymnospermic plant ------ is a living fossil.

i) Pinus roxburghii ii) Ginkgo biloba

iii) Gnetum ula iv) Sequiodendron giganteum

10) Vessels are present in the xylem of -----.

i) Pinus ii) Cycas

iii) Gnetum iv) Zamia

11) Members of class ------ are called as Liverworts.

i) Hepaticopsida ii) Anthocerotopsida

iii) Psilopsida iv) Bryopsida

12) Sporophyte in ----- is with foot, seta and capsule.

i) Hepaticopsida ii) Anthocerotopsida

iii) Psilopsida iv) Bryopsida

13) Gametophyte generation in Riccia is -----.

i) Haploid ii) Diploid

iii) Triploid iv) Tetraploid

14) The rhizoids and scales are present on ----- side of Riccia thallus.

i) dosrsal ii) ventral

iii) dorsi-ventral iv) Tetraploid

15) The sporophyte of Anthoceros is differentiated into -----.

i) only capsule ii) seta and capsule

iii) Foot and capsule iv) foot, seta and capsule

16) In ------ sporophyte remain embedded in the gametophytic thallus.

i) Funaria ii) Porella

iii) Anthoceros iv) Riccia

17) The name Anthocerotopsida is derived as the shape of sporophyte is -----.

i) Erect ii) Horn like

iii) Liver like iv) Erect and branched

18) Pseudo elaters are found in the sporophyte of -----.

i) Riccia ii) Funaria

iii) Marchantia iv) Anthoceros

19) In Funaria the scaly leaves surrounding ----- is called as peri gonial leaves.

i) Gemmae ii) Antheridium

iii) Archegonium iv) Adventitious roots

20) Strobili consisting micro- and megasporangia are found in -----.

i) Equisetum ii) Pteris

iii) Psilotum iv) Selaginella

21) In Pteridophytes ------ genera show heterospory.

i) five ii) nine

iii) twelve iv) sixteen

22) Pteris is…….

i) homosporous ii) heterosporous

iii) asporous iv) None of the above

23) ------- is form genus of Lepidodendron seed.

i) Lepidostrobus ii) Lepidophyllum

iii) Lepidocarpon iv) Stylites

24) In ----- seeds are naked.

i) Gymnosperms ii) Angiosperms

iii) Pteridophytes iv) Bryophytes

25) Vegetative and reproductive characteristics of ----- are showing resemblance with angiosperms.

i) Pinus ii) Cycas

iii) Gnetum iv) Spirogyra

26) G.M. Smith (1955) classified the division Pteridophytes into ----- classes.

i) three ii) four

iii) five iv) six

27) Heterospory is usually observed in …….

i) Equisetum ii) Pteris

iii) Psilotum iv) Selaginella

28) Strobili consisting micro- and megasporagia are found in -----.

i) Equisetum ii) Pteris

iii) Psilotum iv) Selaginella

29) In Seleginella microspores bearing sporangia borne in axil of -----.

i) megasporophyll ii) microsporophyll

iii) synangium iv) sporocrp

30) In Selaginella, megaspores bearing sporangia borne in …..

i) megasporophyll ii) microsporophyll

iii) synangium iv) sporocrp

31) G.M. Smith classified the division Bryophyta into ----- classes.

i) two ii) three

iii) four iv) five

32) Gametophytic phase is independent while sporophytic phase is dependent in ------.

i) Algae ii) Fungi

iii) Bryophytes iv) Pteridophytes

33) ----- is ‘Father of Indian Bryology’.

i) M.O.P. Iyengar ii) Ram Udar

iii) S.R. Kashyap iv) Virendra Nath

34) The gametophyte of ----- has two phases like protonema and leafy phase.

i) Riccia ii) Funaria

iii) Marchantia iv) Sphagnum

35) In Selaginella megasporangia produces --------megaspores.

i) three ii) four

iii) five iv) six

36) Heterospory is considered as pre-requisite for ------- formation.

i) Ovule ii) seed

iii) fruit iv) sporangium

37) In Pteris is dominant phase is …….

i) sporophyte ii) gametophyte

iii) zygote iv) None of the above

38) ------- is smallest pteridophyte.

i) Equisetum ii) Pteris

iii) Psilotum iv) Azolla

39) -----classified gymnosperms into three classes.

i) Smith G.M. ii) Kashyap S. R

iii) Sporne iv) Linnaeus

40) In Gymnosperms the pollination is -----.

i) Anemophilous ii) Hydrophilous

iii) Entomophilous iv) Ornithophilous

41) Parenchymatous pith in old stem of cycas is rich in……useful in manufacture of ‘sago’.

i) resin ii) gum

iii) starch iv) oils

42) The sterile terminal region of microsporophyll is called……

i) apendix ii) axis

iii) apophysis iv) hypophysis

43) ------ is a woody climber growing on large trees in Eastern and Western Ghats.

i) Pinus ii) Cycas

iii) Gnetum iv) Spirogyra

44) Vegetative and reproductive characteristics of ---- are showing resemblance with angiosperms.

i) Pinus ii) Cycas

iii) Gnetum iv) Spirogyra

45) Blue-green-alga ----- is present in velamen region of coralloid root.

i) Nostoc ii) Spirogyra

iii) Polysiphonia iv) Oedogonium

46) The tallest plant in the plant kingdom belongs to -----.

i) Bryophytes ii) Pteridophytes

iii) Gymnosperms iv) Angiosperms

47) Gnetum belons to -----.

i) Bryophytes ii) Pteridophytes

iii) Gymnosperms iv) Angiosperms

48) Spores of Pteridophytes are -----.

i) haloid ii) diploid

iii) triploid iv) tetraploid

49) Largest gametophyte is present in -----.

i) Funaria ii) Pinus

iii) Cycas iv) Selaginella

50) The most primitive living vascular plants are the -----.

i) Cycads ii) Horsetails

iii) Psilophytes iv) Sphagnums

**Q.2 BROAD QUESTIONS**

1) Describe the thallus structure Riccia. Add a note on its sex organs.

2) Give structure of thallus and reproduction in Riccia.

3) Give an account of general characters of Pteridophytes.

4) With suitable diagram describe stem anatomy of Gnetum.

5) Give an account of general characters of Bryophytes.

6) Describe the morphology of gametophyte of Pteris.

7) Describe the reproductive structures of Gnetum

8) Describe the thallus structure Funaria. Add a note on its sex organs.

9) Describe the morphology strobilus of sporophyte of Selaginella.

10) Discuss economic importance of Gymnosperms.

11) Discuss economic importance of Bryophytes.

12) Describe the thallus structure Riccia. Add a note on its sex organs.

13) Discuss 'Heterospory and Seed Habit' in Pteridophytes.

14) Discuss alternation of generation of Pteris.

15) Give an account of general characters of Gymnosperms.

**Q.3 SHORT NOTES**

1) L.S. of capsule of Funaria

2) Sporophyte of Riccia

3) Reproductive characters of Pteridophytes

4) Strobilus of Selaginella

5) Sex organs of Pteris

6) Economic Importance of Gnetum

7) Adaptation of Bryophytes to land habit

8) Sex organs of Riccia

8) Prothallus of Pteris

9) Strobilus of Selaginella

10) Classification of Gymnosperms by Sporne (1965)

11) T.S. of stem of Gnetum

12) Classification of Bryophytes by G.M. Smith.

13) Internal structure of Riccia Thallus

14) Heterospory and seed habit

15) Antheridium of Pteris

16) General characters of Gnetopsida

17) Ovule of Gnetum

18) Sporophyte of Riccia.

19) L.S. of capsule of Funaria.

20) Adaptation of Bryophytes to land habit

21) Reproductive characters of Pteridophytes.

22) T.S. of stem of Selaginella.

23) Sporangium of Pteris

24) General characters of Gnetopsida.

25) Economic Importance of Gnetum.