

Bachelor of Science (B.Sc.) Semester—II (C.B.S.) Examination

BOTANY (Pteridophyte and Gymnosperms)

Compulsory Paper—1 (New)

Time : Three Hours]

[Maximum Marks : 50

Note :— (1) **ALL** questions are compulsory and carry equal marks.

(2) Illustrate your answers with suitable examples and diagrams wherever necessary.

1. Write on : 5×2
 - (a) L.S. Strobilus of *Selaginella*
 - (b) *Rhynia*.

OR

Write short notes on : 2½×4

- (c) T.S. Stem of *Selaginella* (Diagram only)
 - (d) Characters of Sphenopsida.
 - (e) Microspore and male gametophyte of *Selaginella*.
 - (f) Classification of Pteridophyta.
2. Write on : 5×2
 - (a) Dictyostele and amphiphloic siphonostele.
 - (b) Apospory.

OR

Write short notes on : 2½×4

- (c) Apogamy
 - (d) T.S. Stem through internode of *Equisetum* (Diagram only)
 - (e) Sporangiphore of *Equisetum*.
 - (f) Plectostele.
3. Write on : 5×2
 - (a) L.S. male cone of *Cycas*
 - (b) General characters and classification of Gymnosperms.

OR

Write short notes on : 2½×4

- (c) Economic importance of Gymnosperms
 - (d) Morphology of *Cycas* plant.
 - (e) T.S. Coralloid root of *Cycas* (Diagram only)
 - (f) T.S. leaflet of *Cycas* (Diagram only).

4. Write on : 5×2
- (a) R.L.S. and T.L.S. stem of *Pinus*
 - (b) L.S. female cone of *Pinus*.

OR

Write short notes on : 2½×4

- (c) Morphology of *Cycadeoidea* plant
 - (d) Microsporophyll of *Pinus*
 - (e) T.S. needle of *Pinus* (Diagram only)
 - (f) T.S. stem of *Cycadeoidea*.
5. Write in **two** or **three** lines only (any **ten**). Diagrams are not necessary. 1×10
- (a) Pteropsida
 - (b) Glossopodium
 - (c) Trabeculae
 - (d) Annulus
 - (e) Heterospory
 - (f) Actinostele
 - (g) Megasporophyll.
 - (h) Circinate vernation
 - (i) Transfusion tissue
 - (j) Interseminal scale
 - (k) Resin canal
 - (l) Mycorrhiza.

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Note :— (1) **ALL** questions are compulsory and carry equal marks.

(2) Illustrate your answers with suitable examples and diagrams wherever necessary.

1. Write on : 5×2
 - (a) General character of Pteropsida and Lycopsida.
 - (b) Classification of Pteridophytes.

OR

Write short notes on : 2½×4

- (c) *Rhynia* sporophyte
 - (d) Economic importance of Pteridophytes.
 - (e) L.S. Strobilus of *Selaginella* (Diagram only)
 - (f) Alternation of generation in Pteridophyta.
2. Write on : 5×2
 - (a) L.S. Strobilus of *Equisetum*.
 - (b) Sporocarp of *Marsilea*.

OR

Write short notes on : 2½×4

- (c) T.S. *Equisetum* stem (Diagram only)
 - (d) T.S. *Marsilea* rhizome (Diagram only)
 - (e) Heterospory and seed habit
 - (f) Sporophyte of *Marsilea*.
3. Write on : 5×2
 - (a) General characters of Gymnosperms
 - (b) T.S. *Cycas* rachis.

OR

Write short notes on : 2½×4

- (c) Stewart's classification of Gymnosperms
 - (d) T.S. *Cycadeoidea* stem
 - (e) Microsporophyll of *Cycas*
 - (f) T.S. *Cycas* leaflet (Diagram only).

4. Write on : 5×2
- (a) T.S. *Ephedra* stem
 - (b) L.S. female cone of *Pinus*.

OR

Write short notes on : 2½×4

- (c) L.S. *Pinus* male cone (Diagram only)
 - (d) T.S. *Pinus* needle (Diagram only)
 - (e) Female flower of *Ephedra*
 - (f) L.S. *Ephedra* ovule (Diagram only).
5. Write in **two** or **three** lines each (any **ten**). Diagrams are not necessary.
- (a) Ligule
 - (b) Rhizophore
 - (c) Heterospory
 - (d) Annulus
 - (e) Vallecular canal
 - (f) Amphiphloic siphonostele
 - (g) Coralloid root
 - (h) Ramenta
 - (i) Microsporophyll
 - (j) Toms
 - (k) Dwarf shoot
 - (l) Winged pollen grains. 1×10