

**B.Sc. BOTANY**  
**FIRST SEMESTER (REPEAT)**  
**ARCHEGONIATE AND PALAEOBOTANY**  
**BSB-102**  
[USE OMR FOR OBJECTIVE PART]

**SET**  
**A**

Duration: 3 hrs.

Full Marks: 70

Time: 30 mins.

Marks: 20

( Objective )

Choose the correct answer from the following:

1 × 20 = 20

- Gemmae cup is present:
  - Riccia*
  - Marchantia*
  - Anthoceros*
  - Polytrichum*
- Chromosome number of spores in *Riccia* is:
  - n
  - 2n
  - 3n
  - 4n
- Which of the following is the amphibian of plant kingdom?
  - Pteridophytes
  - Bryophytes
  - Gymnosperms
  - Angiosperms
- The unique feature of bryophytes compared to other green plant group is that:
  - They produce spores
  - They lack vascular tissues
  - They lack roots
  - The sporophyte is attached to gametophyte
- The protonema is a stage in the life cycle of:
  - Riccia*
  - Funaria*
  - All bryophytes
  - Cycas*
- Identify the species that belongs to "Hepaticopsida".
  - Anthoceros*
  - Riccia*
  - Polytrichum*
  - Sphagnum*
- Study of fossils is known as:
  - Paleobotany
  - Mycology
  - Pathology
  - Pterology
- Identify the fossil pteridophyte.
  - Equisetum*
  - Lycopodium*
  - Ginkgo*
  - Rhynia*
- In which order of Gymnosperms only fossils are present?
  - Cycadofilicales
  - Ginkgoales
  - Coniferales
  - Gnetales
- Pollination drop is:
  - A bunch of pollen grains
  - Pollen grains suspended in a drop of water
  - A liquid produced by disorganization of nucellar beak
  - None of the above

11. Coralloid roots are found in:
  - a. *Pinus khasiana*
  - b. *Pinus roxburghi*
  - c. *Cycas revoluta*
  - d. *Gnetum gnemone*
12. Edible seeds are found in:
  - a. *Pinus khasiana*
  - b. *Pinus roxburghi*
  - c. *Pinus wallichiana*
  - d. *Pinus gerardiana*
13. Winged seeds are found in:
  - a. *Cycas*
  - b. *Gnetum*
  - c. *Pinus*
  - d. *Cycas* and *Pinus* both
14. Which of the following resembles to angiosperms?
  - a. *Pinus khasiana*
  - b. *Gnetum gnemone*
  - c. *Pinus gerardiana*
  - d. *Cycas revoluta*
15. Pteridophyte is also known as:
  - a. Vascular plants
  - b. Vascular cryptogams
  - c. Phanerogams
  - d. Thallophytes
16. Which of the following is a heterosporous pteridophyte?
  - a. *Rhynia*
  - b. *Dryopteris*
  - c. *Pteris*
  - d. *Selaginella*
17. Heart shaped microscopic structure found in pteridophyte is called:
  - a. Prothallus
  - b. Gametophyte
  - c. Sporophyte
  - d. All of the above
18. The chief function of the indusium of the fern is:
  - a. Protective
  - b. To produce sporophylls
  - c. To produce spores
  - d. No function
19. "Sporophyll" is seen in:
  - a. *Rhynia*
  - b. *Psilotum*
  - c. *Selaginella*
  - d. *Equisetum*
20. Name the stele found in *Lycopodium*.
  - a. Siphnostele
  - b. Protostele
  - c. Solenostele
  - d. Dictyostele

( Descriptive )

Time : 2 hr. 30 mins.

Marks : 50

[ Answer question no.1 & any four (4) from the rest ]

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| 1. What is fossil? Write about different types of fossils.   | 2+8=10 |
| 2. Describe characteristic feature of <i>Rhynia</i> with suitable diagram.   | 8+2=10 |
| 3. Write the classification of Gymnosperm. Add few similarities and differences between Gymnosperm and Angiosperm. | 5+5=10 |
| 4. Give a comparative account of morphological and reproductive characteristics of <i>Cycas</i> and <i>Pinus</i> . | 5+5=10 |
| 5. What is heterospory? Write about heterospory seen in pteridophytes.   | 2+8=10 |
| 6. Describe the structure and life cycle of <i>Lycopodium</i> with suitable diagram.                               | 7+3=10 |
| 7. Discuss briefly the alternation of generation of bryophytes with suitable diagram.                              | 7+3=10 |
| 8. Discuss briefly the reproductive process in <i>Riccia</i> with suitable diagram.                                | 6+4=10 |

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