

B. Sc. DEGREE END SEMESTER EXAMINATION - OCTOBER 2019**SEMESTER 3: B. Sc. BOTANY (CORE COURSE)****COURSE: 15U3CRBOT3 - BRYOLOGY, PTERIDOLOGY, GYMNOSPERMS & PALAEOBOTANY***(For Regular - 2018 Admission and Supplementary / Improvement 2017, 2016, 2015 Admissions)*

Time: Three Hours

Max Marks: 60

PART - AI. Answer **ALL** questions; each question carries ONE mark.

1. Name the aquatic species of Riccia.
2. Who is regarded as Father of Bryology in India?
3. Name a Bryophyte which produce Gemmae .
4. What is the technical name of whisk fern?
5. Name the genus popularly called 'Spike moss.
6. How many cotyledons are found in the seed of Gnetum?
7. Name a gymnosperm showing circinate vernation.
8. What is a compression?

(1 x 8 = 8)

PART - BII. Answer **ANY SIX** questions; each question carries TWO marks.

9. What are pseudo-elators ? Name a genus which produce pseudo-elators.
10. Describe the pyrenoids of *Anthoceros* .
11. Write a note on peristome teeth .
12. What is a resurrection plant? Give an example from pteridophytes.
13. Define prothallus.
14. What are spermatophytes?
15. What is siphonogamy?
16. What are dimorphic leaves? Name a gymnosperm plant having dimorphic leaves.
17. Give an account of geological time scale.
18. Write a note on *Williamsonia*.

(2 x 6 = 12)

PART - CIII. Answer **ANY FOUR** questions; each question carries FOUR marks.

19. Draw L.S. of *Riccia* sporophyte. Label the parts and mention its salient features.
20. Describe the gametophyte of *Funaria*.
21. Describe the spore producing organ of *Psilotum* and mention the views regarding its morphology.

22. Draw the L.S. of the strobilus of *Selaginella*, label the parts and briefly describe its structure.
23. With the help of a diagram explain the structure of *Pinus* needle. Explain its adaptations to reduce water loss.
24. Classify types of fossils. Explain the formation of each type. (4 x 4 = 16)

PART - D

IV. Answer ANY TWO questions; each question carries TWELVE marks.

25. With the help of diagrams describe structure and evolutionary trends in the sporophytes of *Riccia*, *Marchantia* and *Anthoceros*.

OR

26. With suitable diagrams, explain the life cycle of *Funaria*.

27. With the help of diagrams describe the mature gametophyte of *Pteris* and explain the process of fertilization in it.

OR

28. With the help of suitable diagrams describe the structure of female cone and ovule of *Gnetum* and also explain pollination and fertilization processes of this genus. (12 x 2 = 24)
