

Roll.No.

20UPBCT2004

SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN
(AUTONOMOUS)

(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)
Chromepet, Chennai - 600 044.

B.Sc PBPBT - END SEMESTER EXAMINATIONS - NOVEMBER 2025
SEMESTER - II

20UPBCT2004- Bryophytes and Pteridophytes

Total Duration : 2 Hrs.30 Mins.

Total Marks : 60

Section B

Answer any **SIX** questions ($6 \times 5 = 30$ Marks)

1. Compare gametophyte structure in mosses, ferns, and angiosperms.
2. List five distinguishing features of bryophytes.
3. Explain how ferns help prevent soil erosion and stabilize slopes.
4. List 8 specific pteridophyte species and their economic uses.
5. How haplostele evolved into siphonosteles and eusteles?
6. How the pith originated in the siphonosteles and explain the two theories?
7. Compare actinosteles ontogeny between *L. selago* and *L. clavatum*.
8. Which cell divisions initiate xylem rib formation in actinosteles?

Section C

Answer any **THREE** questions ($3 \times 10 = 30$ Marks)

9. Outline the reproductive cycle of bryophytes highlighting the formation of gametes and spores.
10. How does moisture level influence archegonium development and enlist environmental factors that trigger archegonium maturation?
11. Compare traditional vs molecular-based pteridophyte classifications.
12. Explain the variations in protosteles in detail.
13. Highlight key external and internal morphological traits, reproductive modes, life cycle features, and spore dispersal mechanisms for the three pteridophytes.
