

CARMEL COLLEGE OF ARTS, SCIENCE & COMMERCE FOR WOMEN
NUVEM - GOA
SEMESTER END EXAMINATION, APRIL-MAY 2023

Semester: II of B.Sc. BOTANY

Class & Div.: F.Y.B.Sc. A & B

Course Title & Code: Biodiversity-II (BOC 102)

Maximum marks: 80 Date: 27/04/2023 Duration: 2 Hours Total No. of Pages: 02

- Instructions:** 1) All questions are compulsory.
2) Figures to the right indicate marks.
3) Draw appropriate diagrams wherever necessary.

Q. 1. Answer any six of the following: (2 marks x 6 = 12)

- Why are pteridophytes called vascular cryptogams?
- List the various types of protostelic vascular bundles.
- Mention any four similarities between pteridophytes and gymnosperms.
- What is author citation?
- What is a botanical garden? Name any two major botanical gardens of India.
- Write the systematic position of family Liliaceae.
- What are the three systems of classification? Give one example for each.
- In numerical taxonomy, what is character coding? Why is coding required?

Q. 2. Answer any five of the following: (4 marks x 5 = 20)

- Write a note on the ecological importance of pteridophytes.
- Give Coulter and Chamberlain's classification of gymnosperms.
- Describe secondary growth in *Gnetum* stem.
- Differentiate between manoxylic and pycnoxylic wood.
- Describe the structure of spikelet in family Poaceae.
- List the differences between cladogram and phenogram.
- Giving examples, explain serology in relation to taxonomy.

Q. 3. A. Describe the anatomical features of *Selaginella* leaf. (6)

OR

A. Describe in detail the stelar evolution in pteridophytes. (6)

B. Write a note on reproductive structure in *Pteris*. (6)

Q. 4. A. Describe in detail the morphological features of *Cycas* plant. (6)

OR

A. Describe the anatomical features of *Pinus* stem. (6)

B. Write a note on various nomenclatural types. (6)

Q. 5. A. Describe the importance of herbarium. (6)

OR

A. What are dichotomous keys? Describe the three types. (6)

B. Describe the terms: a) Numerical taxonomy b) Characters c) OTU's (6)

Q. 6. A. Describe the male and female flowers in family Asteraceae. (6)

OR

A. What are the merits and demerits of Engler and Prantl's system of classification? (6)

B. How has information on proteins helped in understanding the relationships between different groups of plants? (6)
