

**CARMEL COLLEGE OF ARTS, SCIENCE AND COMMERCE FOR WOMEN,
NUVEM – GOA.
SEMESTER END EXAMINATION, JUNE 2022**

Semester: **II of B.Sc.**

Subject: **BOTANY**

Course Title: **Biodiversity II**

Course Code: **BOC 102**

Total marks: **80**

Date: **/06/2022**

Duration: **2 Hours**

Total No. of Pages: **02**

Instructions: 1) All questions are **compulsory**; however **internal** choice is **available**.
2) Briefly answer sub-questions in **Question I and II**.
3) Figure to the **right** indicate **maximum marks** assigned to the question.
4) **Draw** appropriate labelled diagrams **wherever** necessary.

Q. 1. Answer **any six** of the following:

(6 x 2 marks = 12)

- i. List the morphological features of *Rhynia*.
- ii. Differentiate between eusporangiate and leptosporangiate type of sporangial development.
- iii. List the characters of class Cycadophyta.
- iv. What is polyxylic wood?
- v. What is typification?
- vi. List any four major botanical gardens of India.
- vii. What are keys? List any two commonly used keys in floras.
- viii. Define classification.

Q. 2. Answer **any five** of the following:

(5 x 4 marks = 20)

- a. Write a short note on stelar evolution in pteridophytes.
- b. Describe the reproductive structure in *Equisetum*.
- c. Outline gymnosperm classification up to the level of order.
- d. Why are gymnosperms not considered as successful as angiosperms?
- e. Justify the statement “Herbaria are an important asset”.
- f. What are the three systems of plant classification? Briefly comment on any one.
- g. Describe the utilization of palynological evidences in taxonomy by giving suitable examples.

Q. 3. A. Describe the various types of protostele using a neat labelled diagram. (6)

OR

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

B. Give an account of the various reproductive structures in pteridophytes. (6)

Q. 4. A. Describe the reproductive structures in *Gnetum*. (6)

OR

A. Elaborate on the morphological features of *Cycas*. (6)

B. Compare the features of gymnosperms with pteridophytes. (6)

Q. 5. A. Write about the important principles of nomenclature. (6)

OR

A. Describe different types of documentation of flora giving example. (6)

B. What are herbaria? Explain their functions. (6)

Q. 6. A. What is author citation? Briefly describe the rules of author citation. (6)

OR

A. Give the outline of Bentham and Hooker's system of classification up to the level of series. (6)

B. How are non-protein amino acids and alkaloids utilized as phytochemical evidences supporting taxonomy? (6)
