

**CARMEL COLLEGE OF ARTS, SCIENCE AND COMMERCE FOR
WOMEN, NUVEM-GOA**

B.Sc. CBCS Semester V (Regular) Examination, January 2022

Subject Code: Botany DSC BOC105

Subject name: Classical Taxonomy & Phylogeny

Total Marks: 80

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** indicates maximum marks to the questions or sub-questions.
4) Draw appropriate labelled diagrams **wherever** necessary.

Q.1. Answer **any four** of the following in brief: 16

- i) Describe different types of underground stem.
- ii) What is vernalization? Describe different types.
- iii) Describe Cyathium and Hypanthodium inflorescence.
- iv) List the distinguishing characters of family Annonaceae and mention any two economically important plants.
- v) Write briefly on Phylogenetic tree.
- vi) List the major characters of following primitive living angiosperms:
a) Amborellaceae and b) Magnoliaceae.

Q.2. Write short note on **any four** of the following: 16

- a) Types of leaf margin with an example for each.
- b) Phyllotaxy: types and significance.
- c) Androecium and gynoecium of family Capparidaceae.
- d) Systematic position of family Papilionaceae, giving reason.
- e) Important species of family Tiliaceae and Rutaceae.
- f) Importance of family Cucurbitaceae.

Q.3. A) What are adventitious roots? Briefly describe different modifications with an example for each. 6

OR

A) Describe different types of dry fruits.

B) Define inflorescence. Describe different types of racemose inflorescence. 6

Q.4. A) Describe the floral characters of family Rubiaceae. 6

OR

A) Describe the floral characters of family Myrtaceae.

B) Describe vegetative and floral characters of family Brassicaceae. 6

Q.5. A) Describe the vegetative characters of family Arecaceae and mention the systematic position. 6

OR

A) Describe the floral characters of family Orchidaceae. Mention the diagnostic characters.

B) Describe the vegetative characters of family Musaceae. Mention the systematic position and any two species. 6

Q.6. A) Describe the evolution of angiosperms with respect to Gnetalian theory. 6

OR

A) Describe co-evolution of flower and insects with examples.

B) Describe: a) Monophyly b) Paraphyly and c) Polyphyly. 6

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