

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

SEMESTER END EXAMINATION (ONLINE MODE), AUGUST 2020

Semester: **VI B.Sc.** Course name & Code: **BOTANY (BOC 108: Cytogenetics & Plant Breeding)**

Max. marks: **30** Date: **03/08/2020** Duration: **2 Hours** No. of pages: **01**

Instructions: 1) **All questions are compulsory**, however internal choice is available.
2) **Figures to the right** indicate maximum marks.
3) **Draw labelled diagrams wherever necessary.**

Q 1. Answer any five of the following in brief: **(5 x 2 marks = 10)**

- a) Why did Mendel choose pea plant for his study?
- b) Explain the phenomenon of co-dominance with an example.
- c) List any four characteristics of cytoplasmic inheritance.
- d) What is complete linkage? Explain with an example.
- e) Giving two examples, explain sex-limited characters.
- f) What is heterogametes?
- g) List the merits and demerits of 'Plant Introduction'. (2 points each)
- h) What is pureline selection?

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

- i) Explain recessive epistasis with a suitable example.
- ii) Self-incompatibility in plants is a result of multiple allelism. Explain.
- iii) Discuss the role of maternal inheritance in shell coiling of snails.
- iv) With the help of a diagram, describe various types of duplications in chromosome.
- v) Classify aneuploids. Add a note on effects of monosomy.
- vi) Explain male haploidy and haplodiploidy mechanism of sex determination.
