

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

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

Subject Code: **BOC106 (Cell Biology & Plant Biochemistry)**

Subject Name: **Botany-DSC**

Total Marks: **80**

Duration: **2 Hours**

Total No. of Pages: **02**

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 four of the following: (4 x 4 marks = 16)

- i) State the significance of meiosis.
- ii) Explain the principle and applications of Photomicroscopy.
- iii) Differentiate between integral proteins and peripheral proteins of the cell membrane. (2 points)
- iv) Describe the structure of tRNA.
- v) List the properties and functions of vitamin D.
- vi) Mention the properties of lipids.

Q 2. Write short notes on any four of the following: (4 x 4 marks = 16)

- a) Functions of endoplasmic reticulum.
- b) Plasmodesmata.
- c) Nucleoplasm.
- d) Post-transcriptional changes in eukaryotes.
- e) Structure of amylopectin.
- f) Properties and functions of terpenoids.

Q 3. A. Describe the phases of cell cycle. (6)

OR

A. Describe the structure of microtubules. (6)

B. State the functions of lysosomes. (6)

Q 4. A. Describe the structure of the cell wall. (6)

OR

A. Explain the ultra-structure of chloroplast with a neat labelled diagram. (6)

B. Give an account on the comparison of prokaryotic and eukaryotic ribosomes. (6)

Q 5. A. Mention the levels of protein organization. Describe the secondary structures in proteins. (6)

OR

A. Explain the process of initiation of protein synthesis. (6)

B. Explain the process of starch synthesis. (6)

Q. 6. A. Mention the properties and deficiency symptoms of Vitamin C. (6)

OR

A. Describe the alternate forms of DNA. (6)

B. Write a note on classification of lipids. (6)
