

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

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

Subject Code: **BOC107 (Microbiology and Plant Pathology)**

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) Classify culture media on the basis of their functional use.
- ii) Write briefly on Culture Collection Centres.
- iii) Explain the method of preparation of bread.
- iv) Classify plant diseases based on the extent of their occurrence.
- v) State Koch's postulates for identification of plant diseases.
- vi) Explain briefly how the disinfestation of warehouses can be carried out using chemicals.

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

- a) Steam under pressure as a method of sterilization.
- b) Methods of purification of water (any 2).
- c) Role of microorganisms in decomposition of plant residues.
- d) Phytoalexins as post-infection biochemical defence mechanism in plants.
- e) Cultural methods used for plant disease control (any 2).
- f) Use of remote sensing and image analysis in plant pathology.

Q 3. A. Explain any two methods of isolating pure cultures. (6)

OR

A. Write a brief account on biosafety levels in the laboratory. (6)

B. Draw a labelled sketch of the bacterial growth curve and explain the various phases. (6)

Q 4. A. Explain the role of microorganisms in bioremediation. (6)

OR

A. Explain how a given water sample can be tested to determine if it is potable. (6)

B. Write a brief account on production of biogas. (6)

Q 5. A. Explain any three types of post-infection structural defence mechanisms in plants. (6)

OR

A. Give an account on monocyclic and polycyclic plant diseases. (6)

B. Elaborate on the disease triangle. (6)

Q.6. A. Explain in brief the molecular techniques used for the detection of plant diseases. (6)

OR

A. Write briefly on the use of computer simulation programs for disease forecasting. (6)

B. Write an account on biopesticides. (6)
