

SHRIMATHI DEVKUNVAR NANALAL BHATT VAISHNAV COLLEGE FOR WOMEN  
(AUTONOMOUS)

(Affiliated to the University of Madras and Re-accredited with 'A+' Grade by NAAC)  
Chromepet, Chennai — 600 044.

M.Sc.(PBPBT) - END SEMESTER EXAMINATIONS APRIL - 2023

SEMESTER - IV

**20PPBCT4009 - Plant Biotechnology**

Total Duration : 2 Hrs. 30 Mins.

Total Marks : 60

### **Section B**

Answer any **SIX** questions ( $6 \times 5 = 30$  Marks)

1. Outline the construction features of bubble column reactor. Mention the advantages and disadvantages.
2. Highlight the mechanism of action and production procedure of penicillin.
3. Chart out the methods of microbial B12 production.
4. Enumerate with details on the therapeutic applications of microbial enzymes.
5. Summarize the isolation and purification of microbial enzymes in large scale.
6. Describe the lactic acid production in industrial scale.
7. Ascertain the process involved in citric acid production.
8. Discuss the industrial production of beer in large scale.

### **Section C**

I - Answer any **TWO** questions ( $2 \times 10 = 20$  Marks)

9. Design a basic industrial fermenter with details on the components.
10. Write an essay on immobilisation of enzymes and its various types.
11. Elaborate on ethanol production methods in industries.
12. Elucidate the large scale production of cheese.

II - Compulsory question ( $1 \times 10 = 10$  Marks)

13. Ascertain the recombinant insulin production and purification in large scale.

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