

**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.

B.Sc.END SEMESTER EXAMINATION APRIL/NOV - 2021

SEMESTER - III

20UPBCT3005 - Cell Biology and Molecular Biology

Total Duration : 3 Hrs	Total Marks : 75
MCQ : 30 Mins	MCQ : 15
Descriptive : 2 Hrs.30 Mins	Descriptive : 60

Section B

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

1. Write notes on significance of autoregulation in eukaryotes.
2. Distinguish between cilia and flagella highlighting their functions.
3. What type of inhibition is feedback inhibition? How does it regulate enzymes?
4. Draw ultrastructure of power house of the cell and write its functions.
5. Why are lysosomes called suicidal bags? Explain its function in the cell.
6. Differentiate between rough and smooth endoplasmic reticulum.
7. What is the extra chromosomal DNA called as? Describe its use in genetic recombination.
8. Summarize the importance and types of non living cell inclusions.

Section C

Answer any **THREE** questions ($3 \times 10 = 30$ Marks)

9. Distinguish between eukaryotes and prokaryotes. Support your answer with labelled diagrams.
10. Discuss gene regulation in prokaryotes with the help of lac operon.
11. Describe the techniques used in gene manipulation.
12. Illustrate the ultrastructure and functions of cell wall.
13. Explain the ultrastructure of plasma membrane with the help of fluid mosaic model.