

Reg.No.:																			
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VIVEKANANDHA COLLEGE OF ENGINEERING FOR WOMEN  
 [AUTONOMOUS INSTITUTION AFFILIATED TO ANNA UNIVERSITY, CHENNAI]  
 Elayampalayam – 637 205, Tiruchengode, Namakkal Dt., Tamil Nadu.

**Question Paper Code: 90016**

B.E. / B.Tech. DEGREE END-SEMESTER EXAMINATIONS – NOV. / DEC. 2025

Fifth Semester

Biotechnology

U23BTV31 – BASIC INDUSTRIAL BIOTECHNOLOGY

(Regulation 2023)

Time: Three Hours

Maximum: 100 Marks

Answer ALL the questions

Knowledge Levels (KL)	K1 – Remembering	K3 – Applying	K5 - Evaluating
	K2 – Understanding	K4 – Analyzing	K6 - Creating

**PART – A**

(10 x 2 = 20 Marks)

Q.No.	Questions	Marks	KL	CO
1.	Justify the role of industrial biotechnologists for the conversion of waste to valuable product.	2	K2	CO1
2.	Cite any two plant sources for enzyme production and its industrial applications.	2	K2	CO1
3.	Sketch the general process flowsheet of a fermentation process.	2	K2	CO2
4.	Infer why pilot plant facilities are essential in a fermentation process.	2	K2	CO2
5.	Illustrate and write short note on airlift reactor.	2	K2	CO3
6.	Mention the different methods of monitoring in bioprocess.	2	K2	CO3
7.	Give short note on ultrafiltration.	2	K2	CO4
8.	Comment on the steps involved in product formulation.	2	K2	CO4
9.	Express about cellulose-based bioplastics.	2	K2	CO5
10.	Comment on bioaugmentation.	2	K2	CO5

**PART – B**

(5 x 13 = 65 Marks)

Q.No.	Questions	Marks	KL	CO
11. a)	Elaborate the screening and isolation methods of industrially important microorganisms with its role in biopharmaceuticals.	13	K2	CO1

