

**VEER SURENDRA SAI UNIVERSITY OF TECHNOLOGY, BURLA****Lesson plan****Semester: 5<sup>th</sup>****Subject: Fundamental of Biochemical Processes**

Lecture	Module	Topic
1	1	Introduction to microbiology
2	1	Structure of cells
3	1	Types of cells
4	1	Introduction to biochemical process industries
5	1	Alcohols industries
6	1	Antibiotics
7	1	Vitamins
8	1	Enzyme kinetics
9	1	Parameter estimation
10	1	Enzyme inhibition
11	1	Factors affecting enzyme activity
12	1	Problems on Enzyme kinetics
13	1	Single cell process
14	1	Class test, Discussions
15	2	Fermentation mechanisms
16	2	Fermentation mechanisms kinetics
17	2	Kinetic of microbial growth
18	2	Kinetic of product formation
19	2	Problems on Kinetics
20	2	Fermentation types
21	2	Batch Fermentation
22	2	Continuous Fermentation
23	2	Bio-reactors- Introduction
24	2	Bio-reactors-Types
25	2	Bio-reactors- Design
26	2	Problems on reactors
27	3	Sterilization- Introduction
28	3	Sterilization of media
29	3	Sterilization of air
30	3	Sterilization equipments
31	3	Batch sterilizer design
32	3	Continuous sterilizer design
33	4	Biochemical product separation and recovery
34	4	Membrane separation processes

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35	4	Chromatographic method
36	4	Application of biochemical processes to waste water treatment
37	4	Activated sludge process
38	4	Aerobic process
39	4	Anaerobic process
40	4	Problems Discussion

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Date:

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