



V SEMESTER B.TECH. (CHEMICAL ENGINEERING)

MAKE UP EXAMINATIONS, DECEMBER 2017

SUBJECT: INTRODUCTION TO BIOCHEMICAL ENGINEERING

Program Elective –I [CHE 4018]

**REVISED CREDIT SYSTEM
(27/12/2017)**

Time: 3 Hours

MAX. MARKS: 50

Instructions to Candidates:

- ❖ Answer **ALL** the questions.
- ❖ Missing data may be suitably assumed.

1A.	Discuss about Whittaker's five kingdom of classification.	3
1B.	Explain about the protein synthesis process.	3
1C.	Write a short note on the classification of proteins based on their structure.	4
2A.	Derive an expression for Michealis-Menten equation. Also state the assumptions made.	8
2B.	Write a short note on allosteric regulations.	2
3A.	Derive an expression to study the effects of inhibitory substrates on enzyme kinetics	7
3B.	Write a short note on different types of inhibitors which affect the enzymatic actions.	3
4A.	Explain Krebs Cycle with a schematic representation.	8
4B.	Write a short note on hydrolysis of ATP molecules	2
5A.	Derive an expression for doubling time during exponential phase in a batch reactor.	3
5B.	Draw a neat sketch of an air lift bioreactor	2
5C.	Write a short note on receptor mediated endocytosis with a schematic representation	5
