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Seat No.:	Enrolment No.

## **GUJARAT TECHNOLOGICAL UNIVERSITY**

**BE - SEMESTER-VI • EXAMINATION - SUMMER • 2014** 

Sul	bject	Code: 160402 Date: 21-05-2014	
Sul	bject	Name: Fundamentals of Industrial Biotechnology	
Tir	ne: 1	0.30 am - 01.00 pm Total Marks: 70	
Inst	tructio		
		Attempt all questions.	
		Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
	Э.	rigures to the right indicate run marks.	
Q.1	(a)	Enlist various raw material used for fermentation process. Explain any one in detail.	07
	<b>(b)</b>	Define the term preservation. Explain the methodology used for preservation of industrially important microorganisms.	07
Q.2	(a)	Define and differentiate between primary and secondary metabolites with suitable explanation and example	07
	<b>(b)</b>	Write a detail account on solid state fermentation.	07
		OR	
	<b>(b)</b>	Define the term monoclonal antibody. Discuss about production of it.	07
Q.3	(a)	What do you understand by single cell protein? Explain about it in detail.	07
	<b>(b)</b>	How primary metabolite aspartic acid is produced by fermentation mode, explain in detail?	07
		OR	
Q.3	(a) (b)	Discuss in brief about role of bioprocess engineer in biotechnology industry. Media formulation is essential step for product formation. Justify with suitable explanation.	07 07
Q.4	(a)	Explain about various types of medium for fermentation process.	10
<b>~··</b>	(b)	Give brief outline about basic fermentation process.	04
	,	OR	
<b>Q.4</b>	(a)	What do you mean by cell cultures? Discuss about animal cell culture.	07
	<b>(b)</b>	Give short note on biofertilizer.	07
Q.5	(a)	Describe in detail about fermentative production of acetic acid.	07
	<b>(b)</b>	Write in detail about the process of cephalosporin by fermentation.  OR	07
Q.5	(a)	Define the term single cell protein. Discuss about it in detail.	07
-	(b)	Explain in detail about vaccine production by fermentation process.	07

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