			Reg. No	.:										
	<b>Question Paper Code: U4D03</b>													
		<b>B</b> .E. /	B.Tech. DEGREI	Е ЕУ	KAM	IINA	TIO	N, A	PRI	L 201	24			
			Fou	ırth	Sem	ester		-						
			Bi	otec	hnol	ogy								
		21UB	T403-BASIC INI (Reg	DUS Julat	TRL ions	AL E 202	BIOT I)	TECH	INO	LOG	ïΥ			
Dura	ation:	Three hours								М	axin	num:	100	Marks
			Answe	r AI	LL Q	uest	ions							
			PART A -	(10	x 2 =	= 20	Mar	ks)						
1.	Define Fermentation.							CO1- U						
2.	Compare aerobic and anaerobic fermentation.									CO1- U				
3.	List 4 raw materials for the production of bioethanol.									CO1- U				
4.	Illustrate the production of lactic acid with proper representations								CO2- App					
5.	Define an antibiotic.								CO1- U					
6	Classify secondary metabolites.							CO2- App						
7	Mention the significance of lipases.								CO1- U					
8	Differentiate bio pesticides and bio fertilizers.							CO1- U						
9	What are immunoglobulins? Give example.							CO1- U						
10	Mention the advantages of recombinant insulin.								CO1- U					
			PART -	- B (	5 x 1	16=	80 M	larks	)					
11.	(a)	Explain in deproduction with	tail the various son neat schematic re O	stage epres Pr	es in senta	volv tion	ved : s	in b	io pi	rodu	ct (	CO1	- U	(1
	(b) Write a detailed note on various media components to be present CO in microbial media formulation									201	<b>-</b> U	(1		
12.	(a)	Sketch the pro efficient produc	cess flow sheet an ction of any one of O	nd a rgan Pr	naly: ic ac	ze tł id	ne st	rateg	ies f	or th	ne (	02	- Ap	p (1

- (b) Explain in detail the industrial production of citric acid with CO2 App (16) related diagrammatic representations.
- 13. (a) Explain the upstream and downstream processing of penicillin CO1 U (16) with the help of a flow sheet.

Or

- (b) Explain in detail the upstream and downstream production of CO1 U (16) Greiseofulvin by drawing a process flow sheet.
- 14. (a) Professor Dumbledore is identified with diabetics and is found to CO2 App (16) be more obese. He tried many diet plans and physical work outs, but nothing worked out. Only mixed pure proteins of various organisms helped him. So he has planned to produce such protein. You has his junior, help him in determining the strategies for production and recovery of such proteins.

Or

- (b) A, B and C are friends belonging to the same class studying CO2 App (16) B.Tech Biotechnology. A and B are foodie while C is health conscious. They all are hungry and fought each other to have food from hotel or house. The health conscious C demanded other people to have food from home itself. Since they are Biotechnology students, they were curious to know the microbes in household products. So they have decided to prepare a chart of various microbes involving in the preparation of household products. Explain the application of microbes in household products including curd, yogurt, paneer, cheese, cakes, Idly, dosa.
- 15. (a) Monoclonal antibodies have become the predominant class of CO1 U (16) new drugs developed in recent years. Justify and explain the experimental procedure for its production.

Or

(b) Insulin is a recombinant protein that is generated using the GE CO1 - U (16) organism *E. coli* and it has got various applications. Explain its production.