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Lourning Resource Cen. Acharya Institute & Technology	CECS SCHEME			
USN	7.34	18BT71		

Seventh Semester B.E. Degree Examination, Feb./Mar. 2022 **Bioprocess Engineering**

	Tin	ne: 3	Max. Marks	: 100
ن		No	ote: Answer any FIVE full questions, choosing ONE full question from each module.	•
On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Any revealing of identification, appeal to evaluator and /or equations written eg, $42+8=50$, will be treated as malpractice.			Module-1	
mal	1	a.	Distinguish different types of feminentation.	Marks)
g as		b.	Analyze features of various modes fermentation. (10	Marks)
eate				
ses. be ti			OR	ulation
pag. will	2	a.	Correlate and analyze relationship between specific growth rate of a microbial pop	Marks)
lank 50, 1		.1	and the substrate concentration. Establish a strategy to design and develop fermentation relevant for bio-processing.	11111110)
d gr 8 =		b.	Establish a strategy to design and develop letine nation relevant for one process. (10	Marks)
ainii 42+				
rem eg,			Module-2	
the	3	a.	Develop a plan for optimizing secondary inclusions pro-	Marks) Marks)
s on s wri		b.	Analyze the factors affecting secondary metabolite production. (10	Marks)
line				
ross			OR had a decide and took had a may 2 (10)) Marks)
nal c	4	a.	How are the monocional antibodic production and pullburg with reference to the	
agor		b.) Marks)
w di			proteins.	
dra alua			Wadula 3	
nily o ev	_	5571	Why downstream processing is important in bioprocess industries? (10	0 Marks)
oulsc eal t	5	a. b.		0 Marks)
omp		υ.	what are the problems and require	
rs, c ion,			OR	
ıswe fical	6	2	Develop a strategy to cut the cost of bio-processing. (1)	0 Marks)
ır ar Ienti	U	b.	. Illustrate cell disruption method used for intracellular release. (1)	0 Marks)
you of id				
ting			Module-4	action in
nple	7	a.	. How knowledge of membrane-based separation theory can be used to product purific	0 Marks)
n col			pioprocess industry:	0 Marks)
. O.		b.	. Critically evaluate to protein precipitation techniques. (1	3000 50
2.1			OP	
Not			OR . How aqueous two phase extraction method is applied to purify proteins in bi	oprocess
tant	8	a.	in Justing?	lu Marks)
Important Note: 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. 2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be		b	11 V 1 -1-22 diagram to congrete proteins using supercritical fluids.	10 Marks)
In		U	, module at the part of the pa	

18BT71

Module-5

How following chromate graphic principles are exploited to purify proteins from the biological source:

a. Affinity chromatography

(05 Marks)

b. Affinity elution chromatography

(05 Marks)

c. Hydrophobic interaction chromatography

(05 Marks)

d. Ion exchange chromatography

(05 Marks)

OR

10 a. Distinguish different electrophoretic techniques.

(10 Marks)

b. Analyze the analytical and preparative perspectives of high performance chromatography.

(10 Marks)