

DCI-003-2016011]

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B. Sc. (Sem. VI) Examination

July - 2022

Microbiology: MB-601

(Fermentation Technology-2019) (Theory)

(New Course)

Faculty Code: 003

Subject Code: 2016011

Tin	ne : 2	[Total Marks:	70		
1	(A)) Objective type of questions. (1 mark each)		4	
		(1)	Originally, the term 'fermentation' was d	erived from the	
			Latin word		
		(2)	Full form of ATCC is		
		(3)	procedure has a great application improvement.	cation in strain	
		(4)	Shiio and Sano (1969) investigated	d the use of	
		, ,	prototrophic revertants of		
	(D)	A ~	production.		2
	(B)	•		2	
		(1)			
		(2)	What is objective of primary screening in	n microbiology?	
	(C)	Ans	wer in Detail: (any one out of two)		3
		(1)	Give brief account on IMTECH and	NCYC culture	
			collection center.		
		(2)	Write short note on induced mutation for	or improvement	
		` ′	of industrial important microbes.	•	
	(D)	Wri	te a note on: (any one out of two)		5
		(1)	Enlist the various range of fermenta	tion processes.	
		` ′	Write note on microbial biomass in o	-	
		(2)			
		(2)	in developing a successful economically	•	

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2	(A)	Objective type of questions. (1 mark each)	
		(1) Define term: Media.	
		(2) Enlist the any four name of minerals.	
		(3) What is role of antifoam agents in media?	
		(4) Define the term: Production medium.	
	(B)	Answer in brief: (any one out of two)	
		(1) What are molasses and Bagasse?	
		(2) Write short note on ethylene diamine teraacetic acid	
		(EDTA).	
	(C)	Answer in Detail: (any one out of two)	
		(1) Define term: Media optimization.	
		(2) What are antifoam agents?	
	(D)	Write a note on: (any one out of two)	
		(1) Briefly discuss the process of medium formulation.	
		(2) Write short note on Inoculum Preparation procedures.	
3	(A)	Objective type of questions. (1 mark each)	4
		(1) Name the device used for aeration in a fermenter.	
		(2) Define term: Del factor.	
		(3) What is batch fermentation?	
		(4) Define term: Sterilization.	
	(B)	Answer in brief: (any one out of two)	
		(1) Define term: Containment.	
		(2) Define term: Agitation and Aeration.	
	(C)	Answer in Detail: (any one out of two)	
		(1) Define term: Bioreactors.	
		(2) Draw and label fermenter with one multi-bladed impeller.	

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	(D)	Writ	te a note on: (any one out of two)	
		(1)	Briefly discuss about continuous fermentation process	
			along with its advantages and disadvantages.	
		(2)	Write short note on the mechanisms of media	
			sterilization.	
4	(A)	Objective type of questions. (1 mark each)		
		(1)	Enlist the two methods of non-mechanical methods.	
		(2)	What is flocculation?	
		(3)	How the detergent can work as desruption method?	
		(4)	Define term: Filtration.	
	(B)	Answer in brief: (any one out of two)		
		(1)	Define term: Centrifugation.	
		(2)	Define term: Sedimentation.	
	(C)	Ans	wer in Detail: (any one out of two)	3
		(1)	Discuss in brief factors influencing the choice of	
			filtration system.	
		(2)	Short note on bioassay of fermentations products.	
((D)	Write a note on: (any one out of two)		5
		(1)	Briefly discuss about solvent recovery method for	
			product recovery.	
		(2)	Write about any two techniques of cell disruption.	
5	(A)	Obje	ective type of questions. (1 mark each)	4
		(1)	What is used for production of L-lysine?	
		(2)	Enlist the name of microorganisms are used for	
			amylases production by fermentation process.	
		(3)	Enlist the name of microorganisms produce citric acid	
			through fermentation.	
		(4)	What type of fermentation is lysine fermentation?	

- (B) Answer in brief: (any one out of two)
 - (1) Advantages of immobilized enzymes.
 - (2) Mention the significance of yeast in ethyl alcohol production by fermentation processes.
- (C) Answer in Detail: (any one out of two)
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- (1) Enlist various application of riboflavin production by fermentation process.
- (2) Discuss the various factors affecting citric acid production by fermentation process.
- (D) Write a note on: (any one out of two)

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- (1) Briefly discuss the methods for immobilization of whole cells.
- (2) Give note on production on penicillin fermentation.

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