LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

M.Sc. DEGREE EXAMINATION – **FOOD CHEMISTRY AND FOOD PROCESSING**

THIRD SEMESTER – **NOVEMBER 2023**

PFP 3301 – FOOD BIOTECHNOLOGY

Date: 09-11-2023 Dept. No. Max. : 100 Marks

Time: 01:00 PM - 04:00 PM

	PART – A		**(10 x 3 = 30 Marks)**
Q. No	**Answer ALL questions**		
1	Define fermentation.		
2	Differentiate solid state fermentation and submerged fermentation.		
3	Comment on algae as a nutraceutical agent.		
4	Write any two nutritional benefits of Single Cell Protein.		
5	What are mycotoxins?		
6	What is meant by Biofortification?		
7	Describe the cis genic products with suitable examples.		
8	What are biogenic amines?		
9	List the significance of bioreactor in the fermentation process.		
10	Enumerate the nutritional value of micro and macro algae.		
	PART – B		**(5 x 8= 40 Marks)**
	Answer ALL the questions		
11	(a)	Explain the types of bioreactors. **(OR)**	(8)
	(b)	Explain the production process of chlorella and spirulina.	(8)
12	(a)	Describe the production of aromatic compounds through Solid state fermentation Technique. **(OR)**	(8)
	(b)	Discuss the algal transgenics.	(8)
13	(a)	Enumerate the biotechnological applications of pre and probiotics. **(OR)**	(8)
	(b)	Comment on mushroom cultivation.	(8)

14	(a)	Explain the role of enzymes in dairy industry. **(OR)**	(8)
	(b)	Write a detailed note on sewage and waste treatment disposal.	(8)
15	(a)	Explain the role of enzymes as anti-staling agent. **(OR)**	(8)
	(b)	Discuss the following: i) Phytoestrogens in food crops (4) ii) Marine phycotoxins (4)	(8)
		PART – C	**(2 x 15 = 30 Marks)**
		Answer any TWO questions	
16		Discuss the following in detail: i) Lactic acid fermentation (7.5) ii) Alcoholic fermentation (7.5)	(15)
17		Write in detail on HACCP and GMP.	(15)
18		Explain the applications of microbial biopolymers.	(15)
19		Elaborate the role of fungal enzymes in food industry.	(15)

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