	<u>Unean</u>
Name :	A
Roll No.:	A Agent Williams and Exclusion
Inviailator's Sianature :	

CS/B. Tech (BT)/SEM-7/BT-702/2011-12

2011 FOOD BIOTECHNOLOGY

Time Allotted: 3 Hours Full Marks: 70

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

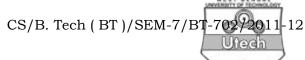
GROUP - A (Multiple Choice Type Questions)

- 1. Choose the correct alternatives of the following : $10 \times 1 = 10$
 - i) β -amylase cleaves
 - a) α , 1, 4 glucosidic linkage
 - b) β ,1,6 glucosidic linkage
 - c) β, 1,4 glucosidic linkage
 - d) none of these.
 - ii) Putrefaction results due to
 - a) aerobic decomposition of milk
 - b) anaerobic decomposition of vegetables
 - c) aerobic decomposition of meat
 - d) anaerobic decomposition of meat.

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iii)	The form of aflatoxin secreted in milk is				
	a)	B1	b)	M1 (* Annual (V Kanadalar End Explored	
	c)	B2	d)	none of these.	
iv)	Vin	egar is a/an			
	a)	Nutrient	b)	Condiment	
	c)	Adjunct	d)	Supplement.	
v)	Pectin of fruit juice is hydrolysed by				
	a)	Cellulase	b)	Arabinoxylanase	
	c)	Polygalacturanase	d)	β-lactamase.	
vi)	ri) Natural colour of vegetables can be preserved				
	food	d processing by			
	a)	nitrate solution			
	b)	brine			
	c)	sulphuration			
	d)	sodium monoglutama	ate.		
vii)) Botulism is a result of				
	a)	food spoilage	b)	food infection	
	c)	food preservation	d)	food poisoning.	
viii)	Swi	iss cheese is			
	a)	red cheese	b)	black cheese	
	c)	blue cheese	d)	none of these.	
ix)	Golden rice replenishes the deficiency of				
	a)	Vitamin A	b)	Vitamin D	
	c)	Vitamin B ₁	d)	Vitamin B ₅ .	
x)	Genetically modified food can be analyzed by				
	a) PCR				
	b) Potentiometric technique				
	c)	Thermal sensors			
	d)	Titration.			



GROUP - B

(Short Answer Type Questions)

Answer any three of the following.

 $3 \times 5 = 15$

- 2. What are the advantages of production of single cell protein?

 Write some commonly used microorganisms and corresponding substrates for the production of SCP. 2 + 3
- 3. Explain the importance of salting in Sauerkraut fermentation.
- 4. What is HACCP? Briefly describe its essential principles.

2 + 3

- 5. Name an enzyme which is used as a meat tenderized. Explain the role of amylases in the production of high fructose corn syrup. Name two important enzymes used in cheese production. 1 + 2 + 2
- 6. What are different factors on which the bacterial efficacy of a given dose of radiation of food depends on?

GROUP - C

(Long Answer Type Questions)

Answer any *three* of the following. $3 \times 15 = 45$

- 7. Explain the effect of amylases, proteases, lipases for the quality improvement of bread. 5 + 5 + 5
- 8. What are the environmental conditions which favours aflatoxin production in food? Which type of food is involved in its production? How is the production of aflatoxin prevented? What are the toxicity symptoms of aflatoxin? Mention two aflatoxin producing stains. 3 + 2+ 3 + 5 + 2

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- 9. What are food additives? Write the role of any vitamin as a colouring agent. Mention some of the flavouring agents obtained from microbial species. Describe the microbial production of any one of such flavouring agents. 3 + 3 + 4 + 5
- 10. a) Discuss about different types of mushrooms and explain the nutritional importance of mushroom. Explain schematically the production of mushrooms.
 - b) Describe the production of wine and briefly explain how the process of ageing changes the characteristics of wine. 4 + 3 + 3 + 5

 3×5

- 11. Write short notes on any *three* of the following:
 - a) Maillard reaction
 - b) Botulism
 - c) D value and Z value
 - d) Chemical poisoning.

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