

**B.Sc. (Part—III) Semester—VI Examination**  
**6S : MICROBIOLOGY**

**(Industrial Fermentations Food Microbiology and Metabolism)**

Time : Three Hours]

[Maximum Marks : 80

**Note :—**(1) All questions are compulsory.

(2) Draw neat and labelled diagrams wherever necessary.

1. (a) Fill in the blanks :

(i) \_\_\_\_\_ invented the process of Pasteurization.

(ii) Full form of WSL \_\_\_\_\_.

(iii) EMP Pathway is also known as \_\_\_\_\_.

(iv) Cheddar Cheese is a \_\_\_\_\_ type of cheese. 2

(b) Choose the correct alternative :

(i) What is meant by SCP ?

(a) Social Cell Programme

(b) Single Cell Protein

(c) Standard Cuid Procedure

(d) None of these

(ii) The temperature for HTST method is :

(a) 62.8°C

(b) 71.5°C

(c) 71.1°C

(d) 50.4°C

(iii) Test performed for examination of milk :

(a) MBRT

(b) CRT

(c) Coagulase

(d) Ames Test

(iv) The end product of glycolysis is :

(a) Lactic acid

(b) Citric acid

(c) Pyruvic acid

(d) Acetic acid 2

(c) Answer the following in **one** sentence each :

(i) Define Fermentation

(ii) Define Molasses

(iii) Define antifoaming Agent

(iv) Define Canning. 4

2.	(a) Define Industrial Microbiology and write its scope.	4
	(b) Describe in brief Secondary Screening.	4
	(c) What are ideal characteristics of production strain ?	4
	<b>OR</b>	
	(d) Draw well labelled diagram of fermentor.	4
	(e) Describe inoculum build up.	4
	(f) Explain sterilization of fermentation medium.	4
3.	(a) Explain the working of Fringe generator.	4
	(b) Give some important industrial uses of citric acid.	4
	(c) What is malt ? How it is prepared ?	4
	<b>OR</b>	
	(d) Draw a flow-sheet diagram for industrial production of ethyl alcohol from Molasses.	4
	(e) Give various types of Vinegar.	4
	(f) Explain various defects of Wine.	4
4.	(a) Draw flow-sheet diagram for Penicillin production.	4
	(b) Define active dry yeast. How does it differ from compressed yeast ?	4
	(c) Explain in brief Microbial production of Vit. B <sub>12</sub> .	4
	<b>OR</b>	
	(d) Give any six applications of amylase.	4
	(e) Explain in brief recovery and purification of Penicillin.	4
	(f) Describe in brief bacterial single cell protein.	4
5.	Explain in detail the manufacturing process of Milk Powder.	12
	<b>OR</b>	
	What is Pasteurization ? Describe in detail methods of Pasteurization process.	12
6.	(a) Describe in brief food intoxication.	4
	(b) Describe in brief Sauerkraut Production.	4
	(c) Describe in brief preservation of foods by radiation.	4
	<b>OR</b>	
	(d) What is botulism ? Describe in brief.	4
	(e) Describe in brief production of Idli.	4
	(f) Discuss in brief sources of food contamination.	4
7.	Describe in detail classification of enzymes by IUB system.	12
	<b>OR</b>	
	Discuss in detail the Tricarboxylic Acid Cycle (TCA).	12