**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

**OR**

   (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

**OR**

   (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. $B_{12}$. 4

**OR**

   (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

**OR**

   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

**OR**

   (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

**OR**

   Discuss in detail the Tricarboxylic Acid Cycle (TCA). 12