

B.Sc. (Part—III) Semester—VI Examination

MICROBIOLOGY

(Industrial Fermentations Food Microbiology and Metabolism)

Time : Three Hours]

[Maximum Marks : 80

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

(2) Draw well labelled diagram wherever necessary.

1. (A) Fill in the blanks : 2
- (i) Cheddar cheese is _____ type of cheese.
 - (ii) Full form of SCP is _____.
 - (iii) Salmonellosis is caused by ingestion of _____ bacteria.
 - (iv) Antifoam agents control _____.
- (B) Choose the correct option : 2
- (i) In cheese formation which part of the milk is coagulated ?
 - (a) Water
 - (b) Vitamin A
 - (c) Lactose
 - (d) Casein
 - (ii) Detection and isolation of antibiotic producer is done by :
 - (a) Crowded plate technique
 - (b) Auxanography
 - (c) Use of an indicator dye
 - (d) Enrichment by cellulose.
 - (iii) Food preservation by thermal process in hermetically sealed cans is known as :
 - (a) Blanching
 - (b) Canning
 - (c) Chilling
 - (d) Dehydration
 - (iv) For industrial wine production which yeast species is used as production strain.
 - (a) *Candida albicans*
 - (b) *Torula sp*
 - (c) *Koivereomyces sp*
 - (d) *Saccharomyces cerevisiae*

- (C) Answer the following in **one** sentence : 4
- (a) Define enzyme
 - (b) Antifoam agent
 - (c) Food infection
 - (d) Define wine.
2. (a) What is molasses ? Give its uses. 4
- (b) Draw well labelled diagram of fermentor. 4
- (c) What is primary screening ? Describe in brief indicator dye technique. 4
- OR**
- (d) Describe process of inoculum build up. 4
- (e) Give definition and scale up process and explain its significance. 4
- (f) Differentiate between aerobic and anaerobic fermentation. 4
3. Describe in detail production of Vinegar by Fring's generator process. 12
- OR**
- Describe in detail production of Acetone-Butenol from corn. 12
4. (a) Give the various uses of amylases. 4
- (b) Define SCP and give its applications. 4
- (c) Draw flow sheet diagram of Bakers Yeast production. 4
- OR**
- (d) Draw well labelled flow sheet diagram of Amylase production. 4
- (e) Describe fermentation medium required for production of penicillin antibiotic. 4
- (f) Define Baker's Yeast. Describe in brief production of Baker's yeast. 4

5. What is cheese ? Describe in detail production of cheddar cheese. 12

OR

What is pasteurization ? Describe in detail HTST pasteurization with flow sheet diagram. 12

6. (a) Explain production of Sauerkraut. 4
(b) Give preservation of food by dehydration. 4
(c) Explain Salmonellosis. 4

OR

- (d) Enlist different steps in canning process. 4
(e) Explain production of Idli. 4
(f) Describe any two sources of contamination of fresh food. 4
7. (a) Describe isoenzyme. 4
(b) Describe enzyme active site. 4
(c) Immobilised enzyme. 4

OR

- (d) Draw Kreb's cycle with all enzymes. 4
(e) Describe in brief Electron Transport chain. 4
(f) Give diagrammatic sketch of EMP pathway. 4

