

M.Sc. (Part-II) Semester-III (CBCS) Examination

MICROBIOLOGY

FERMENTATION TECHNOLOGY

Paper-XI

Time : Three Hours]

[Maximum Marks : 80

N.B.:— (1) All questions are compulsory and carry equal marks.

(2) Draw well labelled diagrams wherever necessary.

1. Explain design and types of fermenters. Add a note on unit operation and techniques.

16

OR

Write short notes on the following :

- (a) Batch and continuous fermentation 8
(b) Significance of biokinetic constants. 8
2. Take a detailed account of production of anti-cancer drugs. 16

OR

Describe the industrial production of penicillin. Add a note on its recovery and applications.

16

3. (a) Differentiate between yoghurt and dehi. 8
(b) Compare between Beer and Wine. 8

OR

- (c) What are mycoproteins ? And how are those produced ? 8
(d) How Koji is produced ? 8
4. Write notes on production and preservation of following fermented foods :
(a) Sauerkraut 8
(b) Baker's yeast. 8

OR

What is the importance of following bacteria in food borne infection and intoxication ?

- (a) *Clostridium* (b) *Shiegella*
(c) *Compylobacter* (d) *Listeria* 16
5. Describe the biomass production of *Acinetobacter ceriticans* and *Candida utilis* from hydrocarbon. 16

OR

Write notes on :

- (a) Desirable characteristics of probiotic organisms. 8
(b) Benefits of probiotics consumption. 8

