

[This question paper contains 2 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 6550

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Unique Paper Code : 2534001001 (GE)

Name of the Paper : Food Fermentation and Preservation Techniques

Name of the Course : **Microbiology**

Semester : Part-I, Semester-II

Duration : 2 Hours

Maximum Marks : 60

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt any **five** questions. **All** questions carry equal marks.

Q1. (a) Discuss the mode of action of the following preservatives (**any three**): 3 x 3 = 9

- (i) Nitrate
- (ii) Wood smoke
- (iii) Nisin
- (iv) Sugar

(b) Classify the foods on the basis of ease of spoilage. 3

Q2. Write short notes on the following (**any three**): 4 x 3 = 12

- (a) *Aspergillus* and its role in food microbiology
- (b) Canning
- (c) Oriental and indigenous food
- (d) Preservation by radiation

Q3. Differentiate between the following (**any three**): 4 x 3 = 12

- (a) Quick and Slow freezing
- (b) Wine and Beer
- (c) Preservation by added preservatives and developed preservatives.
- (d) Lyophilization and refrigeration

P.T.O.

Q4. Define the following terms:

2 x 6 = 12

- (a) MA storage
- (b) Water-activity
- (c) Sterilisation
- (d) UHT
- (e) Prebiotics
- (f) Solid state fermentation

Q5. (a) Write the name of the microorganisms and the production process involved in formation of Tempeh through a flow chart.

6

(b) What are fermented foods? Give their health benefits.

4

(c) Expand the following terms: GRAS, FDA

2

Q6. (a) What are extrinsic factors? How does temperature affect the growth of microorganisms?

2 + 4 = 6

(b) Give the substrate(s) and the microorganism(s) involved in the production of the following fermented food products:

2 x 3 = 6

- (i) Dahi
- (ii) Kanji
- (iii) Soya Sauce