

[This question paper contains 4 printed pages.]

Sr. No. of Question Paper : 1141 E Your Roll No.....

Unique Paper Code : 253603

Name of the Course : B.Sc. (H) Microbiology

Name of the Paper : Food and Dairy Microbiology [MIHT-612]

Semester : VI

Duration : 3 Hours

Maximum Marks : 75

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Attempt **Five** questions in all.
3. Attempt all parts of the questions together.
4. **All** questions carry equal marks.

1. (a) Name the spoilage agent and write the characteristics of the following food spoilages (**any three**) :

(i) Ropiness of bread

(ii) TA spoilage

(iii) Black rot of eggs

(iv) Stormy fermentation of milk (4×3=12)

- (b) Comment on the role of thermotolerant organisms in food spoilage. (3)

2. (a) Explain the effect of pH **OR** gaseous atmosphere on the growth of microorganisms. (3)

P.T.O.

- (b) Differentiate between the following (**any three**) :
- (i) Pasteurization and Appertization
 - (ii) Quick and Slow Freezing
 - (iii) Kefir and Kumiss
 - (iv) Commercial and Home Canning (4×3=12)
3. (a) Discuss the mode of action of the following (**any two**) :
- (i) Sorbic acid
 - (ii) Ethylene oxide
 - (iii) Antibiotics (2.5×2=5)
- (b) Define the following terms (**any five**) :
- (i) Radicidation
 - (ii) Critical limit
 - (iii) Blanching
 - (iv) Lyophilization
 - (v) Aseptic Packaging
 - (vi) Probiotics (2×5=10)
4. (a) Write the symptoms, foods involved and preventive measures of the following food borne diseases/pathogens (**any two**) :
- (i) *Clostridium botulinum*

(ii) Shigellosis

(iii) *Bacillus cereus* (5×2=10)

(b) Name the organisms involved in the production of following food products (any five) :

(i) Yoghurt

(ii) Soya sauce

(iii) Tampeh

(iv) Swiss Cheese

(v) Dosa

(vi) Acidophilus Milk (1×5=5)

5. (a) What are indicator organisms ? Why coliforms are used as indicator organisms in assessing the water quality ? (5)

(b) Define mycotoxin and discuss any one studied by you. (1+4=5)

(c) How egg is naturally preserved ? (3)

(d) Name the methods for the treatment of water to make it potable. (2)

6. (a) Write the name of the organism/s and the production process involved in the formation of sauerkraut through a flow chart. (5)

(b) Expand the following terms (any five) :

(i) HACCP

(ii) UHT

- (iii) SPC
 - (iv) GRAS
 - (v) SOP
 - (vi) FDA (1×5=5)
- (c) Enlist the general principles of food preservation. (5)