(i) Printed Pages : **4**] Roll No. .....

(ii) Questions : **9**] **Sub. Code :** 0 9 6 8

Exam. Code : 0 0 3 8

B.Sc. (Hons.) 6th Semester Examination

1047

BIOTECHNOLOGY
(Food Technology)
Paper : BIOT-Sem-VI-III-T

Time : 3 Hours] **[Max. Marks : 67**

Note :– Attempt *five* questions in all, selecting at least *one* question from each Section. Question No. **1** is compulsory.

Unit–I

1. Answer the following briefly :

   (i) What for lipases are used in food industries ?

   (ii) What are Surfactants ?

   (iii) Name the chemical preservative used for bread.

   (iv) Define ropiness.

(v) Name the microbe used for SCP production.

(vi) Define D-value.

(vii) Name any test for bacterial toxins in food.

(viii) What are the characteristic of pomato ?

(ix) Which bacterial contamination is usually found in meat products ?

(x) Name any food borne disease and give its causative agent. 1.5×10=15

Section–I

2. (a) What are the characteristics which make food as a good substrate for microorganisms

(b) Discuss the quantitative methods for microbial enumeration. 6.5+6.5=13

3. (a) Which enzymes are used in food industries ? Discuss with suitable examples.

(b) How microbial growth can be controlled in foods ? Explain with reference to various factors affecting the growth 6.5+6.5=13

Section–II

4. (a) Give a detailed account of various physical and chemical methods of preservation.

   (b) Which microbes contaminate beverages ? How these can be preserved ? 6.5+6.5=13

5. (a) Explain common physical methods of preservation of fish products.

   (b) Discuss the microbiology of spoilage of beer and wine. 6.5+6.5=13

Section–III

6. (a) What is the difference between food adulterants and food additives ? Give examples of both and the assay methods of adulterants.

   (b) How fungal single cell proteins can be produced commercially ? Discuss the stepwise protocol. 6.5+6.5=13

7. Write notes on the following :

   (i) Probiotics and functional foods

   (ii) Production of Bread 6.5+6.5=13

Section–IV

8. (a) Discuss the water borne diseases, their symptoms and control measures.

   (b) Differentiate exotoxins and endotoxins and discuss their mechanism of action as well. 6.5+6.5=13

9. (a) Discuss the food borne intoxication due to *Clostridium botulinum*, its symptoms and prevention.

   (b) What do you know about salmonellosis, its occurrence and affects ? 6.5+6.5=13