Name : .....

Roll No. : .....

Invigilator's Signature : .....

CS/B.TECH/BT/SEM-7/BT-702/2012-13

2012

FOOD BIOTECHNOLOGY

Time Allotted : 3 Hours Full Marks : 70

The figures in the margin indicate full marks.

Candidates are required to give their answers in their own words as far as practicable.

GROUP – A

(Multiple Choice Type Questions)

1. Choose the correct alternatives for the following : 10 × 1 = 10

   i) Beer haze is removed by

      a) Lipooxygenase b) Lipase

      c) Amylase d) Papaine.

   ii) Radappertization is

      a) radiation pasteurization at low dose treatment

      b) radiation pasteurization at high dose treatment

      c) radiation sterilization at low dose treatment

      d) radiation sterilization at high dose treatment.

iii) Alpha-lactoglobulin is present in

a) fruit juice b) fruit pulp

c) whey protein d) beer.

iv) Genetically modified food can be analyzed by

a) PCR

b) Potentiometric technique

c) Thermal sensors

d) Titration.

v) Mycotoxins are

a) primary metabolites of fungi

b) secondary metabolites of fungi

c) primary metabolites of bacteria

d) secondary metabolites of bacteria.

vi) Bromelain is

a) a lipolytic enzyme b) a proteolytic enzyme

c) an amylolytic enzyme d) none of these.

vii) Stale fishy odour is due to

a) Histamine b) Spermidine

c) Trimethylamine d) Trimethyl oxide.

viii) Swiss cheese is

a) red cheese

b) blue cheese

c) hard cheese with large holes

d) mold ripened chese.

ix) Sauerkraut is fermented by

a) propionic acid bacteria

b) lactic acid bacteria

c) acetic acid bacteria

d) all of these.

x) Cassava root is processed to remove toxin called

a) Cyanogenic glucoside

b) Phytic acid

c) Ferulic acid

d) none of these.

GROUP – B

(Short Answer Type Questions)

Answer any *three* of the following. 3 × 5 = 15

2. Describe the use of different enzymes for the improvement of qualities of bread.

3. Explain the importance of salting in Sauerkrant fermentation.

4. Show the schematic chemical changes of meat myoglobin during its processing and curing ?

5. What are natural food colours ? How does colour loss take place during processing of vegetables ? 2 + 3

6. What is the role of expopeptidases in quality development of biscuits ? How is gluton modified in biscuits ? 2 + 3

GROUP – C

(Long Answer Type Questions)

Answer any *three* of the following. 3 × 15 = 45

7. What are Cold point temperature, Decimal reduction time and TDT curve ?

   What is the most fatal food poisoning ? Describe its molecular mechanism. What is the importance of SCP as food and feed ? 2 + 2 + 2 + 1 + 4 + 4

8. What do you mean by alcoholic beverage ? How many types of beverages are available in the market ? How are they classified ? Write the steps of Beer and wine production with the uses of enzymes in different steps of production.

   1 + 2 + 2 + 5 + 5

9. Which kind of enzymes are used in fruit juice production ? Show the schematic flow diagram of fruit juice production ?

   3 + 12

10. What is wort ? What are the ingredients that are supplemented with wort for imparting typical bitterness and flavour to the beer ? Briefly describe the manufacturing process of yogurt. 4 + 6 + 5

11. Write short notes on any *three* of the following : 3 × 5

    a) HACCP

    b) Aflatoxin

    c) Ropiness in milk

    d) Monosodium glutamate

    e) Valuable ingredients of whey.