

Printed Pages: 3

NBT - 031

(Following Paper ID and Roll No. to be filled in your Answer Books)

Paper ID : 2289556

Roll No. 

1	3	1	4	3	5	4	0	2	3
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**B.TECH.**

**Regular Theory Examination, (Odd Sem - VII) 2016-17**  
**FOOD BIOTECHNOLOGY**

*Time : 3 Hours*

*Max. Marks : 100*

**SECTION - A**

**Attempt all sections. All sections carries equal marks. (10×2=20)**

**Write answer of each section in short.**

1.
  - a) What are the indicators of food microbial quality?
  - b) Define the term radappertization and radurization.
  - c) Name the various microorganisms found in spoiled milk.
  - d) What do you understand by the term food adulteration?
  - e) What are leavening agents? Give some examples.
  - f) Name some antioxidants and curing agents used in food industries.
  - g) With the help of suitable diagram show the thermal death time curve.

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- h) List down the factors affecting the water quality requirement of microorganisms.
- i) Name few preservatives used in food packaging industries.
- j) Explain the term non-traditional proteins and aspepsis process.

#### SECTION - B

Attempt any **Three** questions from this section.

(3×10=30)

- 1. Show the effects of ionizing radiations on microorganisms.
- 2. How processing and preservation of seafood is conducted?
- 3. Narrate the reactions catalyzed by various sugar compounds.
- 4. What are mycotoxins? What are the harmful effects of mycotoxins on food?
- 5. "Food is more than nutrients." Justify the statement.

#### SECTION - C

Attempt all questions from this section. (5×10=50)

- 1. a) Keeping in mind about milk products. State the properties, composition and effects of heat on milk. What are the strategies for milk processing.

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- b) State the role and classification of lipids. State the types of fatty acids and its physical characteristics.
- 2. a) What is meat curing and tenderizing? What chemical changes to myoglobin muscles occur during meat processing and curing? Also state types of spoilages to meat products.
- b) How sensory evaluation of food quality is done?
- 3. a) What are preservation techniques and importance of preservatives in food packaging?
- b) List down the important microorganisms related to food processing with their characteristic features and importance.
- 4. Describe Synthesis and production of fermented beverages. Write in detail about the beer production.
- 5. What are the different components in the food processing & Biotechnology provide novel techniques in this field? Justify the statement.

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