

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

Paper ID : 182408

Roll No.

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B.TECH.

Theory Examination (Semester-IV) 2015-16

FOOD ADDITIVES

Time : 3 Hours

Max. Marks : 100

Note: Attempt questions from each section as per directions.

Section-A

Q1. Attempt all parts of this question: (2×10=20)

- (a) Discuss the use of sodium benzoate as a preservative in fruits & vegetable products.
- (b) Differentiate between food additives and adulterants.
- (c) Differentiate Intentional and Non-Intentional Additives.
- (d) What are GRAS Substances?
- (e) What is the importance of tracers in food industry?

- (f) What is chemical leavening system?
- (g) Give the function of bases as food additives.
- (h) What are masticatory substances?
- (i) Explain the uses of EDTA as a chelating agent?
- (j) What is maximum limit of SO_2 used as preservative in beer?

Section-B

2. **Attempt any three parts of this question:** (10×5=50)

- (a) Define Food Additive according to Food Safety and Standard Act, 2006. Also discuss the desirable and undesirable uses of food additives.
- (b) Discuss the functions of Acids used in foods. Give the name of acids used in food industry with the maximum level of use.
- (c) Write a precise technical note on the use of Polyols in the Food Applications.
- (d) What do you understand by Emulsifying Agents? Discuss the HLB system for selecting emulsifiers.

- (e) What do you understand by Flavoring Agents? Differentiate between Natural & Nature identical flavoring agents.
- (f) What do you understand by Firming Agents? Discuss the role of pectic substances and pectin methylesterase enzyme as firming agents in fruits and vegetables.
- (g) Discuss in detail the importance of Clarifying Agents in fruit processing industries with suitable examples.
- (h) Differentiate between Class I and Class II Preservatives. Also discuss the mechanism of action of Sugar, Salt as preservatives.

Section-C

Attempt any two questions from this section: (15×2=30)

- Q3. Write a technical note on Flour Bleaching agents and Bread Improvers along with their examples and mode of action.
- Q4. Comment on "Utility of Inert gases in Food Industry". Discuss the utility of Ethylene and Ethylene oxide in Food Industry.

Q5. What do you understand by Low Calorie and Non Nutritive Sweeteners? Name various low calorie and non nutritive sweeteners used in food industry and discuss the properties of any two of them.

