

25/10/13

Roll No. 

--	--	--	--	--	--	--	--	--	--	--

**B.E. / B.Tech. (Full Time) DEGREE ARREAR EXAMINATIONS, NOV / DEC 2013**

**AGRICULTURAL AND IRRIGATION ENGINEERING BRANCH**

8

Fourth Semester

**AI 9253 – FOOD SCIENCE AND NUTRITION TECHNOLOGY**

(Regulation 2008)

Time: 3 hours

Answer ALL Questions

Max Marks: 100

**Part – A (10 x 2 = 20 Marks)**

- 1) Expand – BIS, CFTRI, HACCP, BVO
- 2) List the various types of thermometers used in food industry.
- 3) Draw the structure of glucose and fructose.
- 4) State reasons for the following:-
  - a. Milk when added to acidic fruits curdles
  - b. A person loses weight when he/she suffers from fever
- 5) How are minerals classified?
- 6) What is hydrogenation?
- 7) What is the role of HTST process in extrusion of foods?
- 8) Differentiate a juice and squash.
- 9) What are the types of containers? Give examples.
- 10) Define packaging according to PII.

**Part – B (5 x 16 = 80 Marks)**

- 11) i) Explain in detail how the total energy requirement of the body is calculated. (8)  
ii) With examples, explain how carbohydrates are classified. Discuss the digestion, absorption and metabolism of the same. (8)
- 12) a) i) Discuss the weights and measures in the concept of food science. (5)  
ii) Describe various methods to find out adulteration in milk. (5)  
iii) Define food science and enumerate its objectives and applications. (6)

(or)

- b) i) Discuss the relation of nutrition to good health. (6)  
ii) Explain the various International Food standards. (10)

13) a) i) Write short notes on the importance of Iron and Copper to our body. (10)

ii) Briefly discuss weaning foods. (6)

(or)

b) i) How are fats classified? (8)

ii) What are the general functions of minerals and list out the various forms in which they are present in the body? (8)

14) a) i) Explain the process of preparation of pasta, noodles and macroni. (8)

ii) Explain the method of preparing a single fruit jam and a squash. (8)

(or)

b) i) Write short notes on baking. Explain the method of preparing bread. (8)

ii) Discuss a jelly in detail. (8)

15) a) i) What are the various packaging environments and explain the 12 grid system of representation? (8)

ii) What are the types of packaging? Discuss the various materials used for the same and their properties. (8)

(or)

b) i) Why is fermentation of food necessary? Explain the advantages of the same. (8)

ii) State the reasons for taking beverages. Write a short note on any one ready to serve beverage. (8)