

BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI  
(END SEMESTER EXAMINATION)

CLASS: I MSc.  
BRANCH: FOOD TECHNOLOGY.

SEMESTER : VII  
SESSION : MO/19

SUBJECT: SAF1007 ADVANCED FOOD PROCESSING

TIME:3:00 HOURS

FULL MARKS: 60

**INSTRUCTIONS:**

1. The question paper contains 7 questions each of 12 marks and total 84 marks.
  2. Candidates may attempt any 5 questions maximum of 60 marks.
  3. The missing data, if any, may be assumed suitably.
  4. Before attempting the question paper, be sure that you have got the correct question paper.
  5. Tables/Data hand book/Graph paper etc. to be supplied to the candidates in the examination hall.
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- Q.1(a) What do you mean by Processing and Preservation? Write about the factors those are responsible for Changes in Food Science Technology? [6]
- Q.1(b) Describe the term Radiation. Write about its sources and types of radiation process. [6]
- Q.2(a) What are the effects of blanching on overall quality of food? Explain the methods of heat transfer. What are their advantages and limitations? [6]
- Q.2(b) Describe the Pasteurization processes for Milk, Cream and Egg pasteurization and effects of pasteurization on food? [6]
- Q.3(a) What are the different categories of chilled foods? Describe the application of refrigeration in Food processing, preservation and distribution. [6]
- Q.3(b) What are the positive and negative effects of freezing on tissues and microorganisms? [6]
- Q.4(a) If you have 175.2 grams of yellow pepper slices containing 160.5 grams of water, calculate the wet basis moisture content and the percentage of solids by weight of the pepper. [6]
- Q.4(b) Write down the name of 15 Drying Techniques; make a complete diagram of Calandria and write down the applications of Calandria. [6]
- Q.5(a) What do you mean by Plasma? Give the classification of Plasma and write down the microbial inactivation mechanism of Plasma. [6]
- Q.5(b) Describe the term HPP and make a clean schematic diagram of a HPP system. [6]
- Q.6(a) What do you mean by Enzymes and Alcoholic beverages? Make a flow chart of Alcoholic fermentation. [6]
- Q.6(b) Explain the effects of fermentation on nutritional qualities and sensory characteristics of foods. [6]
- Q.7(a) Give the classification of food additives; write about food additives classified as Anti-oxidants and Chelating agents. [6]
- Q.7(b) What do you mean by Emulsions and Emulsifiers? Explain the mechanism of action of Emulsifiers. [6]

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