B.E. (Chemical) (Sem. VII)(R)DEC'08.
Sub'. Food Process Engg.

5724-08. 29/12/08 (REVISED COURSE)

(124)

RC-7362

(3 Hours) [Total Marks : 100

N.B. : (1) Question No. 1 is **compulsory**.
(2) Attempt any **four** questions out of remaining **six** questions.
(3) Assume **suitable data** if **necessary**.

1. (a) What are the sensory characteristics of food ? How sensory characteristics affects demand of processed food ?   5
   (b) Explain the process of peeling in detail.   5
   (c) Define forming and explain construction and working of Bread Moulder.   5
   (d) What are the types of packaging material ?   5

2. (a) What are the different types of food fermentations ? Give examples of each type.   10
   (b) Explain the purpose of coating or compound coatings in food industry. How compound coating process in confectionery manufacturing ?   10

3. (a) Explain how size reduction of dry food is carried out. Also explain the effect of size reduction on dry food.   10
   (b) Define frying. What are the factors which affects the time taken for frying ? Also differentiate between deep frying and shallow frying.   10

4. (a) Calculate the ratio of the rate of sterilisation and rate of quality loss at 120°C and 140°C assuming –   8

   E_a (C. botulinum) $= 300$ kJ/mol
   E_a (Loss of quality in food) $= 125$ kJ/mol
   E_a is activation energy.

   (b) Discuss pasteurization vs. sterilisation. What are the advantages of UHT over In-container sterilization ?   12

5. (a) What are the various applications of enzymes in food industry ? Give atleast four examples.   10
   (b) Discuss the method of cheese manufacture with the help of flowchart.   10

6. (a) Discuss the manufacture of biscuit. Give the nutritional and sensory properties of the product.   10
   (b) Explain the role of enzyme in food processing also give applications of following enzymes :–   10
   (i) Carbohydrates
   (ii) Pectic enzyme
   (iii) Proteases.

7. Write short notes on (any **four**) :–   20
   (a) Vitamins in food
   (b) Food additives
   (c) Water activity
   (d) Baking and roasting
   (e) Freeze concentration.

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