

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

1. Answer the following :- 20
  - (a) What is water activity ?
  - (b) Discuss peeling operation.
  - (c) Explain the effects of frying on food.
  - (d) Which factor controls growth of micro-organisms in food fermentation ?
  
2. (a) What is emulsification ? Explain the function and application of following emulsifying agents :- 10
  - (i) Sodium stearyl-2-lactylates
  - (ii) Glyceryl mono stearate
  - (iii) Sorbitol esters of fatty acids.
- (b) Describe the process of dehydration and explain mechanism of drying in detail. 10
  
3. (a) Discuss various types of confectionary moulders. 10
- (b) Discuss the function of packaging. What are the factors considered for selection of packaging ? 10
  
4. (a) Describe oil seed processing with the help of flow chart. 10
- (b) Enlist the unit operations in processing of fruits ? What are the various products from a fruit processing unit ? 10
  
5. (a) Discuss in brief 'Blanching'. Give the names of different blanchers . Explain any one in detail. 10
- (b) Explain mixing and forming operation. Discuss the manufacture of biscuits. 10
  
6. (a) What do you understand by cryogenic chilling ? Describe its application in food industry. 10
- (b) What are the advantages of UHT sterilization as compared to in-container sterilisation which is used for flavoured milk. 10
  
7. Write a short note on (any four) :- 20
  - (a) Food enzymes
  - (b) Food fortification
  - (c) Bread moulders
  - (d) Vitamines