B. Tech.

(SEM. VIII) EXAMINATION, 2007

RHEOLOGICAL & SENSORY ASSESSMENT OF FOODS

Time : 3 Hours] [Total Marks : 100

Note : Attempt all questions.

1. Attempt any two parts of the following:
   (a) What do you understand by Rheology? What are its application in food quality measurement?
   (b) What do you understand by Newtonian and non-Newtonian liquid foods? Explain with the help of suitable examples. How kinematic viscosity is measured?
   (c) What do you understand by visco-elastic materials? Explain these with the help of RELAXATION and CREEP curves.

2. Attempt any two parts of the following:
   (a) What is the effect of microstructure on the textural quality of food products? How shape and size of solid particles influence the quality of chocolate?
   (b) What is the relation among chemical composition, physical forces, microstructure and texture of a food? Explain with a suitable example.
3 Attempt any two parts of the following:
(a) Write a descriptive note on the comparison of instrumental results and sensory results of the quality.
(b) Classify various textural measurements giving their definitions in detail.
(c) How will you determine the following with the help of a typical Texture Profile Curve?
   (i) Cohesiveness
   (ii) Adhesiveness
   (iii) Springiness
   (iv) Gumminess.

4 Attempt any two parts of the following:
(a) What is the utility of the following in the bakery industry:
   (i) Amylograph
   (ii) Extensograph.
(b) How will you determine the quality of a dairy product? Explain clearly. You can take any product for answering it.
(c) On what factors, the quality of meat depends? Describe one instrument to measure the texture of meat.

5 Attempt any two parts of the following:
(a) What are sensory attributes? How kinesthetic characteristics are determined in quality evaluation of a food product?
(b) How will you determine the Rheological properties of bakery products?
(c) Write a technical note on ‘Textural characteristics of food emulsions’.