

January 2007

Subject Code—5847-X

**P.G.D.B.S.T. EXAMINATION**

(Re-appear)

PGDBST-04

**RHEOLOGY AND CHEMISTRY OF DOUGH**

*Time : 3 Hours*

*Maximum Marks : 100*

**Note :** Attempt any *Five* questions. All questions carry equal marks.

1. Define oscillatory measurement. Enlist oscillatory parameters. Discuss importance of rheological parameters.
2. Discuss the procedure of Mixograph in dough testing. How gluten polypeptides influence the mixing characteristics of wheat flours ?

3. Discuss the effect of proteins and starch damage on water absorption capacity and dynamic rheological properties of flour.
4. Explain the term 'Empirical Testing'. Differentiate between empirical and fundamental testing. Discuss the importance of empirical and fundamental dough testing.
5. Discuss the importance of wheat gluten viscoelasticity in gas retention and bread making. How is dough transformed from foam structure to sponge structure during bread baking ?
6. Explain the role of the following in dough rheology :
  - (a) Water
  - (b) Redox agents
  - (c) Sugars
  - (d) Emulsifiers.

7. Discuss the influence of amylases and proteases enzymes and mixing time on the rheological behaviour of the dough.
8. Write short notes on the following terms :
  - (a) Dough rheology
  - (b) Viscometry
  - (c) Creep and recovery
  - (d) Stress relaxation.