

15.7 JUN 2006  
Subject Code—4329

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

(New Scheme)

June, 2006

PGDBST-04

**RHEOLOGY AND CHEMISTRY OF DOUGH**

*Time : 3 Hours*

*Maximum Marks : 100*

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

1. Write short notes on the following terms :
  - (a) Dough Rheology
  - (b) Shear Stress and Strain
  - (c) Hooke's Law
  - (d) Newton's Law
  - (e) Creep Recovery
  - (f) Stress Relaxation.
2. What do you understand by Oscillatory Measurement ? Which are the oscillatory parameters ? Explain importance of these parameters.

**P.T.O.**

3. Explain the term 'Empirical testing'. How is empirical testing different from fundamental testing of dough ?
4. How is dough strength assessed using miograph ? Explain the effects of gliadin and glutenin subunits on mixing characteristics of dough.
5. Explain the basis of wheat gluten viscoelasticity ? Discuss its importance in gas retention and bread making.
6. Discuss the effect of reducing agents, sugars and emulsifiers on rheology of dough.
7. How do proteins affect water absorption and dynamic rheological properties of flour ? Discuss the influence of gluten concentration on dough rheology.
8. Explain the role of amylases, proteases enzymes and mixing time on the behaviour of the dough.