

Roll No.

Subject Code—6843

P. G. Diploma EXAMINATION

(Main/Re-appear)

BAKERY SCIENCE & TECHNOLOGY

PGDBST-04

Rheology and Chemistry of Dough

Time : 3 Hours

Maximum Marks : 100

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

1. Discuss the effects of water and starch on the rheological behaviour of the wheat dough.
2. Explain the term oscillatory measurement and discuss the importance of rheological parameters.

3. Discuss the effects of wheat proteins and starch damage on water absorption capacity and dynamic rheological properties of flour.
4. What do you understand by the term 'Empirical testing'? Differentiate between empirical and fundamental testing and discuss the importance of empirical and fundamental dough testing.
5. Discuss how gluten proteins influence the mixing characteristics of wheat flours.
6. Explain the importance of wheat gluten viscoelasticity in gas retention and bread making. Also explain how dough is transformed from foam structure to sponge structure during bread baking?
7. Give a brief account of the role of the following in dough rheology :
 - (a) Enzymes
 - (b) Redox agents
 - (c) Emulsifiers.

8. Write short notes on the following terms :

- (a) Dough rheology
- (b) Viscometry
- (c) Creep and recovery
- (d) Stress relaxation.