

200

Roll No. ....

Subject Code—2111

**P.G. Diploma EXAMINATION**

BAKERY SCIENCE AND 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 how proteins and starch damage affect water absorption capacity and dynamic rheological properties of flour ?
2. Define the term 'Empirical testing'. Differentiate between empirical and fundamental testing. Discuss the importance of empirical and fundamental dough testing.

(3-10-6-09)

P.T.O.

3. 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 ?
4. What do you understand by oscillatory measurement ? Enlist oscillatory parameters. Discuss importance of rheological parameters.
5. Describe the procedure of mixograph in dough testing. How proteins influence the mixing characteristics of Wheat flours ?
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 :

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