

Roll No. ....

**Subject Code—2109**

**P. G. Diploma EXAMINATION**

**BAKERY SCIENCE & TECHNOLOGY**

**PGDBST-02**

**Functionality of Wheat Flour Components and  
Bakery Ingredients**

*Time : 3 Hours*

*Maximum Marks : 100*

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

1. Define dough improvers/conditioners. Discuss how oxidizing and reducing agents help to improve the quality of bakery products.
2. Discuss the importance of protein composition for wheat quality. High molecular weight glutenin polypeptides are quantitatively minor component of gluten proteins, but they are functionally important polypeptides of gluten. Justify this statement.

3. Discuss manufacturing techniques, uses and functionality of wheat gluten.
4. Describe the role of water, yeast, salt, shortening and sweeteners in the bread, biscuits and cookie.
5. Classify wheat lipids. Explain functionality of defatted flour. Explain how polar lipids play positive role, while non-polar fractions depress bread quality. Discuss the role of lipids in bread and biscuits quality.
6. Discuss the functions of milk and milk products, malt surfactants and anti-microbial agents in bakery products.
7. Differentiate between Osborne and Shewry classification of wheat proteins. Wheat gluten proteins have very low charge density. How this property of gluten proteins is important to end-use quality of bakery products ?
8. Discuss the importance of water, starch damage and shortening in bakery products.