

January - 2008

Subject Code—5845-X

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

(Re-appear)

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. Explain the importance of protein composition in end-use quality of wheats. High molecular weight glutenin polypeptides are quantitatively minor component of gluten proteins, but they are functionally important polypeptides of gluten. Justify this statement.

2. Why strong flour is recommended for bread making and weak flour is recommended for biscuit making ? Discuss manufacturing techniques, uses and functionality of wheat gluten.
3. 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 ?
4. Describe the role of water, yeast, salt, shortening and sweeteners in the bread, biscuits and cookie.
5. Define dough improvers/conditioners. Discuss how oxidizing and reducing agents help to improve the quality of bakery products.
6. Classify wheat lipids. Explain functionality of defatted flour. Polar lipids play positive role, while non-polar fractions depress bread quality. Explain how ? Discuss the role of lipids in bread and biscuits quality.

7. Discuss the functions of milk and milk products, malt, surfactants and antimicrobial agents in bakery products.
8. Discuss the importance of water, starch damage and shortening in bakery products.