

國立成功大學

111學年度碩士班招生考試試題

編 號：332

系 所：食品安全衛生暨風險管理研究所

科 目：食品科學

日 期：0220

節 次：第 3 節

備 註：不可使用計算機

※ 考生請注意：本試題不可使用計算機。請於答案卷(卡)作答，於本試題紙上作答者，不予計分。

1. How dose salt affect the protein water solubility? (5%)
2. How dose pH affect the protein water solubility? (5%)
3. Please explain how hydrophobic interaction affects protein globular structure.  
(5%)
4. What is the reason that heat can help protein gelation? (5%)
5. What is the mechanism of Maillard reaction (5%)
6. What is the target of  $\alpha$ -amylase? (5%)
7. What is the major fatty acid does olive oil have? (5%)
8. What are the structure differences between C16:0 and C20:5 fatty acid? (5%)
9. What are the essential fatty acids? (5%)
10. What is the alcohol of most lipids in food? (5%)
11. Please describe the difference between butter and milk in term of emulsification.  
(5%)
12. What is the structure difference between lactose and sucrose? (5%)
13. When the water activity of food is higher than the environment relative humidity,  
would the food get drier? (5%)
14. What is the structure difference between starch and cellulose? (5%)
15. What are the respiration rate and ethylene production differences between  
climacteric and non-climacteric fruits (10%)?
16. What is the mechanism of starch retrogradation? (5%)
17. How does pH affect Chlorophyll stability? (5%)
18. How does free radical affect lipid? (5%)
19. What is the color of anthocyanin? (5%)