

# 國立成功大學

## 112學年度碩士班招生考試試題

編 號： 325

系 所： 食品安全衛生暨風險管理研究所

科 目： 食品科學

日 期： 0207

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. What is the reason that protein has the least water solubility at PI? (5)
2. What is the mechanism that protein can contribute the steam egg texture? (5)
3. What are the two enzymes make climacteric fruit become softer and sweeter after harvest? (5)
4. Please describe the similarity and difference between cellulose and chitosan? (5)
5. What is the mechanism that make red velvet cake show red color? (5)
6. What does the HLB number mean for emulsifiers? (5)
7. Please name five food-borne pathogens. (5)
8. What are the two functional group ends of fatty acid? (4) Which end is omega? (1)
9. What is the reason that fast freezing can provide better quality of frozen food than slow freezing? (5)
10. How is the ripening progress controlled in climacteric fruits? (5)
11. What is the key amino acid to produce acrylamide? (5)
12. What is the toxic chemical produced by mold in food? (5)
13. When a food sample in a sealed container comes to equilibrium with the water vapor in the surrounding of the container, the water activity in the food sample can be equated to the \_\_\_\_\_ of the surrounding air of the container. (5)
14. What are the two monosaccharides after digesting lactose? (5)
15. What is the difference between alpha amylase and beta amylase? (5)
16. What are the three mechanisms of non-enzymatic browning reactions? (6)
17. What is the major pigment for the red color of tuna meat? (4)
18. What are the two key cooking conditions for starch gelatinization? (5)
19. What is the major reaction in food that antioxidants inhibit? (5)
20. Please draw a figure to show the initial velocity for enzyme kinetics. (5)