

NORTH CAROLINA FFA ASSOCIATION
2005 FOOD SCIENCE & TECHNOLOGY CAREER DEVELOPMENT EVENT
Written Test

Multiple Choice: Circle the best answer to complete the statements.

1. Meat, fruits, and vegetables contain between 70 to 90 percent _____.
 - A. carbohydrates
 - B. protein
 - C. fat
 - D. water

2. Pudding that is prepared by cooking thickens as it cools due to the use of _____.
 - A. milk
 - B. starch
 - C. sugar
 - D. vanilla

3. Using a process called _____, liquid vegetable oils are changed to shortening and margarine.
 - A. hydrogenation
 - B. oxidation
 - C. saturation
 - D. aeration

4. _____ is an elastic, stretchy protein found in wheat.
 - A. Myosin
 - B. Casein
 - C. Gluten
 - D. Albumin

5. Processed food products such as cereals and orange juice may be fortified with _____ to enhance their nutritional content.
 - A. stabilizers
 - B. chelators
 - C. antioxidants
 - D. vitamins and minerals

6. When fruits such as pears, apples, or bananas are cut or bruised, _____ causes the cut surface to become discolored.
 - A. the maillard reaction
 - B. enzymatic browning
 - C. exposure to light
 - D. catabolism

7. Since oil and water normally separate because they are immiscible, an _____ can be used to keep these liquids mixed together in solution.
- A. invertase
 - B. antimicrobial
 - C. caking agent
 - D. emulsifier
8. Chemical leavening agents such as baking soda and baking powder produce _____ during baking to lighten or aerate baked goods.
- A. carbon monoxide
 - B. carbon dioxide
 - C. sodium bicarbonate
 - D. steam
9. _____ is scientifically evaluating a new food product such as Pop-Tarts Yogurt Blasts for appearance, odor, taste, and mouthfeel.
- A. proximate analysis
 - B. food chemistry
 - C. market analysis
 - D. sensory evaluation
10. Food heats up in a microwave oven primarily due to vibration of _____ molecules.
- A. water
 - B. fat
 - C. protein
 - D. carbohydrate
11. Egg whites, which tend to be basic, have an approximate pH of _____.
- A. 8.0
 - B. 5.9
 - C. 2.3
 - D. 6.7
12. The development of vanilla coke to be sold alongside of other coke products would be considered a _____.
- A. product rollout
 - B. market channel
 - C. product line extension
 - D. regional promotion
13. The fat soluble vitamins are _____.
- A. A, B, C, and D
 - B. A, D, E, and K
 - C. B, C, D, and K
 - D. A, C, D, and K

14. The brown color of oxidized ground beef is due to _____.
- A. deoxymyoglobin
 - B. oxymyoglobin
 - C. deoxymetmyoglobin
 - D. metmyoglobin
15. A food contains 7 grams of protein and 3 grams of fat. That would be equivalent to _____ calories.
- A. 40
 - B. 55
 - C. 75
 - D. 90
16. A bag of potato chips has a use-by date stamped on the package because the fat in the chips can develop off-flavors as a result of _____ if the chips are stored too long.
- A. antioxidants
 - B. hydrogenation
 - C. oxidative rancidity
 - D. esterification
17. A person who is trained to understand the theory of food systems, including the chemistry, physics, and biology of food and food components is a _____.
- A. food scientist
 - B. dietician
 - C. nutritionist
 - D. food service manager
18. _____ is a system for monitoring compliance with health, safety, and product standards.
- A. HACCP
 - B. Food Safety
 - C. Quality assurance
 - D. Sensory evaluation
19. A tomato will soften over time when held at room temperature due to _____.
- A. liquification
 - B. protein denaturation
 - C. lyophilization
 - D. enzymatic action
20. The Food Guide Pyramid indicates that the _____ group is where you should obtain the greatest number of daily servings.
- A. milk, yogurt and cheese
 - B. fats, oils and sweets
 - C. fruit
 - D. bread, cereal, rice and pasta

21. The _____ is the length of time required at a specific temperature to destroy 90% of the microorganisms present.
- A. D-value
 - B. F-value
 - C. L-value
 - D. Z-value
22. Meat products that have been irradiated bear _____ on the product label at retail.
- A. a radura
 - B. no symbol or term indicating the product has been irradiated
 - C. the term electronically pasteurized
 - D. the term electronically sterilized
23. A food that would be rich in omega-3 fatty acids would be _____.
- A. lard
 - B. fatty fish
 - C. olive oil
 - D. butter
24. Cheese curd is primarily composed of coagulated _____.
- A. carbohydrate
 - B. fat
 - C. protein
 - D. lactose
25. All the essential amino acids would most likely be found in one serving of _____.
- A. peanuts
 - B. legumes
 - C. bran cereal
 - D. beef