

Culinary Science Fundamentals

Culinary Arts · Practice Test · 20 Questions

1. What is the primary gas responsible for the leavening of bread dough during fermentation?

- A) Oxygen
- B) Nitrogen
- C) Carbon dioxide
- D) Hydrogen

2. At what temperature does water boil at standard sea-level atmospheric pressure?

- A) 80°C
- B) 90°C
- C) 100°C
- D) 110°C

3. Which protein in flour is essential for the formation of gluten when mixed with water?

- A) Gliadin
- B) Albumin
- C) Casein
- D) Myosin

4. What is the chemical process called when sugar is heated until it browns and develops a complex flavor?

- A) Oxidation
- B) Caramelization
- C) Fermentation
- D) Emulsification

5. Which type of heat transfer occurs through direct contact between surfaces?

- A) Convection
- B) Radiation
- C) Conduction
- D) Induction

6. Which specific substance acts as an emulsifier in egg yolks to help blend oil and water?

- A) Lecithin
- B) Collagen
- C) Casein
- D) Glucose

7. What is the scientific name for the browning reaction between amino acids and reducing sugars in food?

- A) Maillard reaction
- B) Saponification
- C) Denaturation
- D) Coagulation

8. Which acid is primarily found in lemons and limes?

- A) Acetic acid
- B) Citric acid
- C) Lactic acid
- D) Tartaric acid

9. What happens to proteins when they are exposed to high heat or acids?

- A) They liquefy
- B) They evaporate
- C) They denature
- D) They crystallize

10. Which ingredient acts as a base in a chemical leavening reaction when combined with an acid?

- A) Baking soda
- B) Salt
- C) Cornstarch
- D) Sugar

11. What is the main component of common table salt?

- A) Calcium carbonate
- B) Sodium chloride
- C) Potassium nitrate
- D) Magnesium sulfate

12. Which process turns liquid cream into solid butter by agitating the fat globules?

- A) Pasteurization
- B) Homogenization
- C) Churning
- D) Fermentation

13. What is the primary purpose of adding yeast to bread dough?

- A) To add color
- B) To provide flavor
- C) To produce gas for leavening
- D) To thicken the mixture

14. Which fruit contains the enzyme bromelain, which can break down proteins?

- A) Apple
- B) Pineapple
- C) Banana
- D) Orange

15. What is the process of heating a liquid to a specific temperature to kill harmful bacteria called?

- A) Pasteurization
- B) Distillation
- C) Crystallization
- D) Clarification

16. What type of fat is typically solid at room temperature?

- A) Saturated fat
- B) Unsaturated fat
- C) Polyunsaturated fat
- D) Monounsaturated fat

17. Which chemical element is a central component of the chlorophyll molecule in green vegetables?

- A) Iron
- B) Calcium
- C) Magnesium
- D) Zinc

18. What is the freezing point of pure water at sea level?

- A) 0°C
- B) 4°C
- C) -2°C
- D) 10°C

19. Which substance is produced when milk is fermented by bacteria like Lactobacillus?

- A) Ethanol
- B) Lactic acid
- C) Acetic acid
- D) Citric acid

20. What is the primary gas found in the atmosphere that causes fats to become rancid over time?

- A) Nitrogen
- B) Argon
- C) Oxygen
- D) Helium