**Chapter 2**

**Basic Professional Skills: Bakeshop Math and Food Safety**

**TEST QUESTIONS**

**Multiple Choice**

1. Which of the following is not a unit of weight?

a. Pound

b. Centigram

c. Ounce

d. Deciliter

2. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ may be measured by volume in the bakeshop.

a. Flour, sugar, and water

b. Flour, water, milk, and eggs

c. Water, milk, and honey

d. Water, milk, and eggs

3. One half pint of water weighs\_\_\_\_\_\_\_\_\_\_\_\_.

a. 8 oz

b. 1 lb

c. 1 kg

d. b and c

4. A(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a microorganism that can cause disease.

a. chemical hazard

b. physical hazard

c. pathogen

d. allergen

5. Which of the following does not provide a good condition for bacterial growth?

a. Lukewarm temperature

b. Low pH

c. Moisture

d. Protein foods

6. The Food Danger Zone is a range of temperatures from \_\_\_\_\_\_\_\_ to \_\_\_\_\_\_\_\_.

a. 41°F to 135°F (5°C to 57°C)

b. 35°F to 141°F (2°C to 61°C)

c. 32°F to 212°F (0°C to 100°C)

d. 40°F to 145°F (4°C to 63°C)

7. In the HACCP system, hazards are divided into three categories: contamination, growth of pathogens, and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

a. lag phase

b. critical control points

c. flow of food

d. survival of pathogens

8. Which of the following can become contaminated by disease-causing organisms?

a. Cream fillings

b. Crisp, dry cookies

c. Fruit pies

d. All of the above

9. The term *lag phase* refers to \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

a. one of the categories of hazards in the HACCP system

b. a slow period in the flow of food

c. a period during which bacteria become adjusted to their surroundings before starting to grow

d. a condition in which bacteria grow without the presence of moisture

10. Bacteria that need air in order to grow are called \_\_\_\_\_\_\_\_\_\_\_.

a. aerobic

b. anaerobic

c. facultative

d. none of the above

11. Which of the following is not a biological hazard?

a. Allergen

b. Antimony

c. Fungus

d. Virus

12. Baker’s percentages are based on the weight of \_\_\_\_\_\_\_\_\_ at 100%.

a. water

b. sugar

c. flour

d. fat

13. Which of the following statements about AP weights and EP weights is false?

a. EP weight is always greater than AP weight.

b. Calculating EP weights is a necessary part of calculating recipe costs.

c. AP weight of fresh fruit is the weight that you pay for.

d. If you know the weight of peeled, sliced apples you need for a pie and want to know how many pounds of fresh apples to buy, change the yield percentage of apples to a decimal number and divide the EP weight by this number.

14. A bread formula requires two kinds of flour: white bread flour and whole wheat flour. The quantity of white bread flour indicated in the formula is 73%. The quantity of whole wheat flour needed is \_\_\_\_\_\_\_.

a. 23%

b. 27%

c. 73%

d. It is impossible to tell from the information given in the question.

For each of the following abbreviations, write out the full name of the unit of measurement in column A. In column B, indicate whether it is a unit of weight, volume, or length.

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Column A | Column B |
| 15. | qt | \_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 16. | g | \_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 17. | lb | \_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 18. | mL | \_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 19. | cm | \_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 20. | tsp | \_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 21. | L | \_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 22. | kg | \_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_ |
| 23. | pt | \_\_\_\_\_\_\_\_\_\_\_\_\_ | \_\_\_\_\_\_\_\_\_\_\_\_\_ |

Fill in the blanks by making the correct conversion.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 24. | 4 tbsp | = | \_\_\_\_\_\_\_\_\_\_\_\_ | fl oz |
| 25. | ¼ cup | = | \_\_\_\_\_\_\_\_\_\_\_\_ | tsp |
| 26. | 10 pt | = | \_\_\_\_\_\_\_\_\_\_\_\_ | gal |
| 27. | 4500 g | = | \_\_\_\_\_\_\_\_\_\_\_\_ | kg |
| 28. | 3 L | = | \_\_\_\_\_\_\_\_\_\_\_\_ | cL |
| 29. | 2¼ lb | = | \_\_\_\_\_\_\_\_\_\_\_\_ | oz |
| 30. | 4¼ qt | = | \_\_\_\_\_\_\_\_\_\_\_\_ | pt |
| 31. | 0.09 kg | = | \_\_\_\_\_\_\_\_\_\_\_\_ | g |
| 32. | 52 oz | = | \_\_\_\_\_\_\_\_\_\_\_\_ | lb |

33. Use the percentages given to calculate the quantities needed in the following cake formula. Fill in the blanks with your answers.

|  |  |  |
| --- | --- | --- |
| Butter |  | 40% |
| Sugar | \_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 100% |
| Salt | \_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 1.5% |
| Eggs | \_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 60% |
| Cake flour | 2 lb 8 oz | 100% |
| Baking powder | \_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 5% |
| Milk | \_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 90% |
| Vanilla | \_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 3.5% |

34. In the above formula, the percentages total 400%. Suppose you want to make 15 lb of this cake batter. Calculate the quantities of all ingredients needed to get this yield.

**ANSWERS TO TEST QUESTIONS**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1. | d | 6. | a | 11. | b |
| 2. | d | 7. | d | 12. | c |
| 3. | a | 8. | d | 13. | a |
| 4. | c | 9. | c | 14. | b |
| 5. | b | 10. | a |  |  |

|  |  |  |
| --- | --- | --- |
|  | Column A | Column B |
| 15. | quart | volume |
| 16. | gram | weight |
| 17. | pound | weight |
| 18. | milliliter | volume |
| 19. | centimeter | length |
| 20. | teaspoon | volume |
| 21. | liter | volume |
| 22. | kilogram | weight |
| 23. | pint | volume |

24. 2 fl oz

25. 12 tsp

26. 1¼ gal

27. 4.5 kg

28. 300 cL

29. 36 oz

30. 8½ pt

31. 90 g

32. 3¼ lb

|  |  |  |  |
| --- | --- | --- | --- |
| 33. | Butter | 1 lb |  |
|  | Sugar | 2 lb | 8 oz |
|  | Salt |  | 0.6 oz |
|  | Eggs | 1 lb | 8 oz |
|  | Cake flour | 2 lb | 8 oz |
|  | Baking powder |  | 2 oz |
|  | Milk | 2 lb | 4 oz |
|  | Vanilla |  | 1.4 oz |

34. First calculate flour quantity by dividing desired yield by total percentage (in decimal form):

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 15 lb ÷ 4.00 | = 3 lb | 12 oz | | or | 60 oz |
| Butter | 1 lb | | 8 oz |
| Sugar | 3 lb | | 12 oz |
| Salt |  | | 0.9 oz |
| Eggs | 2 1b | | 4 oz |
| Cake flour | 3 lb | | 12 oz |
| Baking powder |  | | 3 oz |
| Milk | 3 lb | | 6 oz |
| Vanilla |  | | 2 oz |