

# Test Bank for Understanding Food Principles and Preparation 5th Edition by Amy Christine Brown

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## Chapter 2: Food Evaluation

Key to question information: ANS = correct answer; DIF = question difficulty; REF = page reference

### Multiple Choice

1. Subjective evaluation is
  - a. evaluation of food quality that relies on numbers generated by laboratory instruments.
  - b. evaluation or sensory tests that rely on the opinions of individuals.
  - c. tests used to detail the specific tastes of individual foods.
  - d. a sequence of tests that document the characteristics of food preparation.

ANS: b      DIF: Knowledge-based      REF: 23

2. In objective evaluations
  - a. instruments rather than humans are used to measure the characteristics of foods qualitatively.
  - b. humans rather than instruments are used to measure the characteristics of foods quantitatively.
  - c. laboratory instruments instead of humans are used to measure the characteristics of foods quantitatively.
  - d. a sequence of tests are used to document the characteristics of food preparation using humans as taste testers.

ANS: c      DIF: Knowledge-based      REF: 23|26

3. Objective analysis measures
  - a. the responses of people to food products as perceived by sight.
  - b. the responses of people to food products as perceived by taste.
  - c. the responses of people to food products as perceived by touch.
  - d. the responses of people to food products as perceived by smell.
  - e. all of the above answers are correct
  - f. none of the above answers is correct

ANS: f      DIF: Knowledge-based      REF: 23

4. Hedonic testing relates to
  - a. pleasure.
  - b. selecting the preferred sample.
  - c. paired preference testing.
  - d. all of the above answers are correct

ANS: a      DIF: Knowledge-based      REF: 24

5. A 9-point scale ranging from “Like Extremely” to “Dislike Extremely” best describes
  - a. discriminative tests.

- b. descriptive tests.
- c. analytical tests.
- d. none of the above answers is correct

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<sup>1</sup> By Dr. Joan Aronson of New York University. A ready-to-use test (the same questions reformatted for printing out as a test) is provided at the end of this document.

ANS: d     DIF: Knowledge-based     REF: 24|25

6. A(n)\_\_\_\_\_test usually uses words like “weak,” “moderate,” and “strong” to describe samples that differ in magnitude of an attribute.
- ranking
  - duo-trio
  - ordinal
  - paired comparison

ANS: c     DIF: Knowledge-based     REF: 24

7. Which of the following would be used to test for sensitivity?
- triangle
  - duo-trio
  - threshold
  - all of the above answers are correct

ANS: c     DIF: Knowledge-based     REF: 24

8. A\_\_\_\_\_test is used to find the minimal detectable level of a substance.
- hedonic
  - dilution
  - difference
  - none of the above answers are correct

ANS: b     DIF: Knowledge-based     REF: 24

9. \_\_\_\_\_tests rely on a trained panel to document differences in a product’s sensory characteristics.
- Discriminative
  - Descriptive
  - Affective
  - None of the above answers is correct

ANS: b     DIF: Knowledge-based     REF: 24|25

10. General taste panels usually consist of at least\_\_\_\_\_individuals.
- 2
  - 5
  - 7
  - 10
  - 13

ANS: b     DIF: Knowledge-based     REF: 25

11. Which of the following is not a criterion for a general taste panel?
- chew no gum immediately before testing
  - have not ingested other food for at least 4 hours before testing
  - are nonsmokers
  - are of an equal distribution in gender
  - all of the above answers are criteria for a general taste panel

ANS: b     DIF: Knowledge-based     REF: 25

12. Which statement is incorrect regarding food samples?
- There must be only enough food for one bite.
  - Samples must be taken from the same portion of the food.
  - Food is usually placed in clear or white containers.
  - Lighting in the room is uniform and the temperature is comfortable.
  - all of the above statements are correct regarding food samples

ANS: a      DIF: Knowledge-based      REF: 26

13. The best time for taste panels to sample food is
- early morning before breakfast.
  - mid-morning or mid-afternoon.
  - when panelists are hungry.
  - when panelists are full.

ANS: b      DIF: Knowledge-based      REF: 26

14. The penetrometer, the Warner-Bratzler shear, and the shortometer are all used to perform physical tests for
- visual evaluation.
  - weight/volume measurements.
  - texture measurements.
  - viscosity measurements.
  - concentration measurements.

ANS: c      DIF: Knowledge-based      REF: 27

15. Rheology is
- the study of the flow of and deformation of matter.
  - a measure of three-dimensional space that is often used to measure liquids.
  - the concentration of matter measured by the amount of mass per unit volume.
  - a type of bioactive compound (nutrient or non-nutrient) that has health benefits.
  - none of the above answers is correct

ANS: a      DIF: Knowledge-based      REF: 26

16. The viscosity of fluids can determine all of the following except
- how easily guacamole dip is deposited on tortilla chips.
  - how smoothly mayonnaise spreads onto a slice of bread.
  - how long a tomato will hold its shape.
  - how tender a pie pastry feels to the teeth.

ANS: d      DIF: Knowledge-based      REF: 26

17. Which of the following chemical tests measures the degree of unsaturation in fats?
- pH test
  - iodine value test
  - peroxide value test
  - chromatography
  - fuchsin test

ANS: b      DIF: Knowledge-based      REF: 28

18. Which instrument or test would be used to observe microorganisms in food?

- a. microscope
- b. atomic absorption
- c. shortometer
- d. viscometer (or viscosimeter)

ANS: a      DIF: Knowledge-based      REF: 27

19. Which of the following are not measured by physical testing?

- a. size and shape
- b. weight, volume, and density
- c. moisture, texture, and viscosity
- d. nutrient and nonnutrient substances

ANS: d      DIF: Knowledge-based      REF: 26

20. Descriptive testing used to detail the specific flavors or textures of a food or beverage would use

- a. hedonic tests.
- b. threshold and dilution tests.
- c. flavor and texture profiles.
- d. personal preference tests.

ANS: c      DIF: Knowledge-based      REF: 24

### True/False

1. Objective tests conducted for research and development (R&D) rely on the opinions of highly trained individuals.

ANS: F      DIF: Knowledge-based      REF: 23|26

2. Human taste panels are required to evaluate products using various types of established scientific objective tests.

ANS: F      DIF: Knowledge-based      REF: 23

3. Regarding sensory testing, affective tests are used to detect “differences.”

ANS: F      DIF: Knowledge-based      REF: 23-25

4. In regards to subjective testing, effective tests are used to detect “individual preferences.”

ANS: F      DIF: Knowledge-based      REF: 24|25

5. When scoring/evaluating for consumer testing with children, “smiley” or “frowny” faces can be used for scoring in lieu of the hedonic scale.

ANS: T      DIF: Knowledge-based      REF: 24

6. Males can usually detect sweetness better than females.

ANS: F      DIF: Knowledge-based      REF: 25

7. Whether or not a person prefers a certain aspect of a food is a focus of effective testing.

ANS: F      DIF: Knowledge-based      REF: 25

8. Objective analytical tests are usually conducted by an untrained panel that evaluates food products through either discriminative or descriptive testing.

ANS: F      DIF: Knowledge-based      REF: 25

9. The Association of Official Analytical Chemists (AOAC) International publishes a book on chemical tests.

ANS: T      DIF: Knowledge-based      REF: 27

10. The nature, concentration, and temperature of a liquid all affect its viscosity.

ANS: T      DIF: Knowledge-based      REF: 26

### Matching: Physical Tests for Food Evaluation

#### Definition choices:

- a. used to measure mineral content
- b. measures the concentration of various organic compounds, especially sugar
- c. measures the consistency of batters and other viscous foods
- d. measures color by detecting the amount and wavelength of light transmitted through a solution
- e. measures tenderness by determining the resistance of baked goods such as cookies, pastries, and crackers to breakage

1. polarimeter
2. shortometer
3. atomic absorption
4. spectrophotometer
5. line-spread test

#### Key:

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|-----------|----------------------|---------|
| 1. ANS: b | DIF: Knowledge-based | REF: 27 |
| 2. ANS: e | DIF: Knowledge-based | REF: 27 |
| 3. ANS: a | DIF: Knowledge-based | REF: 27 |
| 4. ANS: d | DIF: Knowledge-based | REF: 27 |
| 5. ANS: c | DIF: Knowledge-based | REF: 27 |

### Discussion

1. Define objective and subjective evaluation of foods. Give several examples of tests of each type, explaining the differences between them.

ANS: See pp. 23-28.

DIF: Application-based      REF: 23-28

2. Design a product score sheet to be used by both adults and children for the pecan brownies that you plan to sell and distribute to Whole Foods grocery stores. You will use the results of this affective testing to prove to Whole Foods that your product belongs in their stores.

ANS: See pp. 23-25.

DIF: Application-based

REF: 23-25

3. You have been asked by the manager of your school cafeteria to design and conduct a taste panel for their new macaroni and cheese recipe. Describe the general guidelines that you are going to follow when setting up and conducting this taste panel. Consider seating arrangements, room temperature and lighting, time of tastings, portion sizes and containers, potential additional water and food needed, etc. Include discussion of any problems or issues that you might anticipate.

ANS: See pp. 25-26.

DIF: Application-based

REF: 25-26

4. Suppose that you are hired as a consultant by a new start-up bakery that is owned by a friend of yours. He would like you to conduct physical testing for the following new food items that he would like to introduce to the public in the near future: chocolate chip cookies, vanilla pudding, cheddar cheese crackers, carrot cake cupcakes with cream cheese frosting, and banana protein shakes. For each of these food items, please state which physical test(s) you would plan to conduct and explain the reasoning behind why the tests that you selected are needed.

ANS: See pp. 26-27.

DIF: Application-based

REF: 26-27

5. Suppose that you are interested in interviewing for a job that you saw offered on your school's job website. It is for a commercial laboratory that conducts chemical tests for food evaluation. Before the interview, you want to familiarize yourself with the variety of chemical tests. Describe several examples of chemical tests, explain what they measure and how, and discuss where and in what context they would be used.

ANS: See pp. 27-28.

DIF: Application-based

REF: 27-28

