

**FFA 2005**

**Future Food Scientists of America  
Food Science and Technology CDE  
Food Science Knowledge Test**

Fill in your name on the scantron sheet.

Choose the selection that is most correct. Use the Scantron to reflect your choice.

1. Perishable foods should be kept below 40°F. The reason is:
  - a. bacteria grow slowly at this temperature.
  - b. produce ripens slower at this temperature.
  - c. decay is slowed.
  - d. all of the above.
  
2. Who is **most at risk** for food borne illness?
  - a. 1 year old child
  - b. 17 year old FFA student
  - c. 34 year old woman
  - d. college student.
  
3. HACCP principles are designed to:
  - a. identify and control feces in animal products.
  - b. control how people wash their hands.
  - c. identify and control potential contaminants in foods.
  - d. identify and manipulate nutrients in foods.
  
4. Hazards in foods include:
  - a. physical.
  - b. chemical.
  - c. biological.
  - d. all of the above.
  
5. A critical control point in the food processing flow is:
  - a. a point that can be controlled to make sure a food is safe to eat.
  - b. a point that if it is not controlled the food will be out of specifications.
  - c. a point that if not controlled will result in an unsafe food.
  - d. all of the above.
  
6. A hazard analysis determines:
  - a. where hazards could occur.
  - b. assesses their severity and human health risk.
  - c. determine a preventative measure.
  - d. what a critical control point does.
  
7. An example of a critical limit:
  - a. hand washing
  - b. cooking time and final temperature
  - c. hairnets
  - d. all are critical limits.

8. An important consideration in controlling bacterial growth from farm to table:
- keeping food at room temperature
  - keeping food cold
  - keeping food fresh
  - keeping food cooked.
9. GAPs with respect to food are:
- Good Agricultural Practices.
  - Good Animal Practices.
  - Good And Pure.
  - A store where cool clothes are found.
10. The importance of GAPs is:
- they make sure that cultivars are correct.
  - they provide guidance on safe food production.
  - they provide guidance on which animals are best to use.
  - they provide guidance on safe farm management.
11. Which of these is not one of the 4 C's of food safety?
- Cross contaminate.
  - Clean.
  - Cook.
  - Chill.
12. How much fat is in 2% milk?
- there is not any fat in 2% milk.
  - 1.0%
  - 2.0%
  - 3.25%
13. On a nutritional label, Daily Reference Values refer to:
- The amount of calories.
  - The amount of vitamins.
  - The amount of vitamins based on a 2000 calorie diet.
  - The amount of fat, carbs, protein, cholesterol, and sodium based on a 2000 calorie diet.
  - The amount of vitamins C, A, calcium and iron based on a 2000 calorie diet.

Questions 14 – 18 use the following for responses. They are sections of the Food Guide Pyramid.

- |                                      |  |
|--------------------------------------|--|
| A. <i>Fats, oils,</i>                | B. <i>Meats, poultry, eg protein foods</i> |
| C. <i>Fruits</i>                     | D. <i>Vegetables</i>                       |
| E. <i>Grains, bread, cereals etc</i> |  |

14. This section of the Food Guide Pyramid contains the foods that should be consumed in the largest amounts.
15. This section contains foods that should be eaten the least.
16. This section contains foods that can be high in fat and protein.
17. This section contains foods that are high in fiber and are sweet.
18. This section contains foods that are high in vitamins and fiber.

The following questions refer to the nutrition label below.

Nutrition Facts	
Serving Size 1/2 cup (114g)	
Servings Per Container 4	
Amount Per Serving	
<b>Calories 90</b>	Calories from Fat 30
% Daily Value*	
<b>Total Fat 3g</b>	5%
Saturated Fat 0g	0%
<b>Cholesterol 0mg</b>	0%
<b>Sodium 300mg</b>	13%
<b>Total Carbohydrate 13g</b>	4%
Dietary Fiber 3g	12%
Sugars 3g	
<b>Protein 3g</b>	
Vitamin A 60%	Vitamin C 60%
Calcium 4%	Iron 4%
Percent Daily Values are based on a diet of 2,000 calories. Your daily values may be higher or lower depending on your eating needs.	
	Calories 2,000 2,500
Total Fat	Less than 35g 60g
Sat Fat	Less than 20g 25g
Cholesterol	Less than 275mg 300mg
Sodium	Less than 2,400mg 2,400mg
Total Carbohydrate	300g 375g
Dietary Fiber	25g 30g
Calories per gram	
Fat 9 • Carbohydrate 4 • Protein 4	

19. There are how many servings in this package?

- a. 1.
- b. 2.
- c. 3.
- d. 4.

20. If you were to eat the entire package, how many calories would you obtain?

- a. 30.
- b. 90.
- c. 180.
- d. 360.

21. About what percentage of calories does fat contribute in this product?

- a. 20%
- b. 33%
- c. 50%
- d. 66%

22. Based upon a 2000 calorie diet, this product contributes about what percentage of the Percent Daily Value for fat?

- a. 5%
- b. 33%
- c. 50%
- d. 66%

23. This product can be called a "good source" of at least one nutrient. Which is not one of the nutrients?

- a. Vitamin A.
- b. Vitamin C.
- c. Dietary Fiber
- d. Sodium.

24. This product would NOT be considered "low" in:

- a. fat.
- b. sodium.
- c. cholesterol.
- d. none of these.

25. Could this product be called "Light"?

- a. Yes, it is light in cholesterol.
- b. No, we do not know what to compare it to.

26. How many calories are in 10 grams of a food that is 20% fat, 20% protein, and 60% carbohydrate?

- a. 10 calories.
- b. 18.
- c. 26.
- d. 50.

27. Which nutrient provides the highest density in calories?

- a. carbohydrates
- b. fat
- c. protein

28. Food additives are added for a variety of reasons. Which of these is not one of them?
- to keep it flowing as in salt from a shaker.
  - to keep it colorful.
  - to keep it fresh.
  - to keep it wholesome.
  - all are reasons.
29. Who regulates food additives?
- USDA
  - FDA
  - State of Iowa
  - No one.
30. GRAS stands for:
- Generally recognized as salty.
  - Generally recognized as safe.
  - Generally recognized as secure.
  - Generally recognized as sure to cause cancer.
31. Salt, sugar, spices, and other additives are considered:
- okay to use in foods in unlimited amounts.
  - GRAS.
  - big contributors to calories
  - unsafe as additives.
32. A difference between spoilage bacteria and pathogenic bacteria is:
- one can make you sick.
  - one produces gases.
  - one is introduced to the food unnaturally.
  - one occurs in the food naturally.
33. Bacteria reproduce in a manner called:
- indeterminant growth.
  - binary fission.
  - non exponential
  - sexually.
34. Which is not used for food preservation?
- drying.
  - canning.
  - freezing.
  - irradiation.
  - all are ways to preserve foods.
35. When food deteriorates it is typically caused by?
- enzymes.
  - pathogenic bacteria.
  - bad air.
  - poor handling.
36. Canned food such as green beans often have a set of weird numbers and letters stamped on the container. What is this called?
- sell by date
  - use by date
  - closed date labeling
  - xenophobia.

37. If you find a product in the grocery that says "sell by date" and it is a week beyond this date, what should you do as a responsible citizen?

- a. buy the product it is probably on sale.
- b. tell a store employee that it is beyond code date.
- c. choose another product with a more current date.
- d. walk away and shop elsewhere.

38. The mechanism of freezing and refrigeration in preserving food is:

- a. refrigeration kills microorganisms.
- b. freezing kills all microbes.
- c. cold slows the growth of most microorganisms.
- d. cold food tastes better.

39. Fast food is:

- a. always unhealthy.
- b. high in fat.
- c. high in cholesterol.
- d. all of these.
- e. may be high in some of these or may not be high in these.

40. The two nutrients that should be consumed in the least for a healthy diet are:

- a. carbs and sugars.
- b. cholesterol and saturated fats.
- c. carbs and fats.
- d. proteins and carbs.

**Written Exam 2005**

1	d
2	a
3	c
4	d
5	c
6	a
7	b
8	b
9	a
10	b
11	a
12	c
13	d
14	e
15	a
16	b
17	c
18	d
19	d
20	d
21	b
22	a
23	a
24	c
25	b
26	d
27	b
28	d
29	b
30	b
31	b
32	a
33	b
34	e
35	a
36	c
37	b
38	c
39	e
40	b

**Aroma Identification Key**

A	21
B	27
C	29
D	1
E	13
F	31
G	25
H	12
I	7
J	10

**Choices**

1	Cinnamon
2	Peanut Butter
3	Chocolate
4	Maple
5	Oregano
6	Basil
7	Lemon
8	Lime
9	Orange
10	Vanilla
11	Almond
12	Smoke (Liquid)
13	Cherry
14	Pine
15	Onion
16	Butter
17	Menthol
18	Grape
19	Garlic
20	Peppermint
21	Clove
22	Nutmeg
23	Ginger
24	Molasses
25	Wintergreen
26	Banana
27	Coconut
28	Lilac
29	Raspberry
30	Strawberry
31	Licorice (anise)