

Utah FFA Association
2010 State Meats Evaluation & Technology CDE
Written Exam

Contestant Name: _____

FFA Chapter: _____

Instructions: *Carefully read each item and possible answers. Select your choice to each item by circling the letter next to the correct answer.*

1. Can frozen meat be cooked without thawing?
 - A. No – Unless cooking time is decreased
 - B. No – We should always thaw before cooking
 - C. Yes – However, cooking time will be decreased
 - D. Yes – However, cooking time will be increased

2. Which of the following meats should NOT be frozen?
 - A. Meats from a butcher shop
 - B. Meats from the grocery store
 - C. Meats in cans
 - D. Meats in plastics

3. Which common food borne bacteria is normally found in animal intestines? It is destroyed by cooking to 160°F.
 - A. *Campylobacter botulinum*
 - B. *Clostridium perfringens*
 - C. *Escherichia coli*
 - D. *Staphylococcus aureus*

4. The following are the most widely used methods of aging EXCEPT
 - A. Broiling
 - B. Dry aging
 - C. Fast aging
 - D. Vacuum packaging

5. If the power goes off, how long is meat safe in the refrigerator if the door remains closed?
 - A. 2 days
 - B. 6 to 8 hours
 - C. Indefinitely
 - D. It is not safe as soon as the power goes off

6. Which is a natural hormone used in the beef industry?
 - A. Bovine cilantro
 - B. Testosterone
 - C. Trenbolone acetate
 - D. Zeronal

7. What effect does meat containing the papain have on the person who eats it?
 - A. Body odor
 - B. Nausea
 - C. Toxicity
 - D. No effect

8. How can one usually judge whether uncooked meat is spoiled?
 - A. A change in cutability
 - B. A change in quality
 - C. A change in skeletal girth
 - D. A change in yield

9. What is the difference between a half ham and a portion such as butt or shank portion?
 - A. A butt or shank portion has had no center slices removed.
 - B. A half ham has had no center slices removed.
 - C. A half ham is known as a Boston butt.
 - D. There is no difference between a half ham and a butt or shank portion.

10. Which of the following contains the most cholesterol?
 - A. Three ounces of cooked lean beef
 - B. Three ounces of cooked lean pork
 - C. Three ounces of cooked skinless chicken
 - D. Three ounces of shrimp

11. Which is generally true of cuts taken from the middle section of the carcass along the backbone?
 - A. They are more tender
 - B. They are of lower quality
 - C. They are tougher
 - D. They contain more shank bones

12. Why is meat cured?
 - A. Cutability
 - B. Infiltration
 - C. Preservation
 - D. Saturation

13. Most of the USDA graded beef in our supermarkets is ____ with some ____.
 - A. Choice with some Select
 - B. Commercial with some Utility
 - C. Prime with some Choice
 - D. Utility with some Canner

14. Which meat is NOT commonly cured?
- A. Bacon
 - B. Corned beef
 - C. Fresh side
 - D. Ham
15. Which of the following food group tends to be more digestible?
- A. Animal foods
 - B. Grain products
 - C. Legumes
 - D. Vegetables and fruits
16. Is USDA inspection a guide to quality?
- A. No – Except outside of the United States
 - B. No – The USDA inspection stamp is a guide to wholesomeness
 - C. Yes – The USDA inspection stamp indicates the quality grade
 - D. Yes – The USDA inspection stamp indicates the yield grade
17. Meat is one of our best food sources of iron in the form of ___ iron.
- A. Carne
 - B. Chemically produced
 - C. Heme
 - D. Vegan
18. Which of the following is a system that identifies critical points that must be controlled in production to prevent public health hazards from occurring?
- A. ASPA
 - B. HACCP
 - C. MSB
 - D. SICP
19. Which of the following is a B-vitamin found in meat?
- A. Calcium
 - B. Riboflavin
 - C. Sodium
 - D. Zinc
20. What is used to develop additional tenderness and a characteristic flavor in meat?
- A. Aging
 - B. Calcerating
 - C. Irradiating
 - D. Vacuum packaging

21. How has the nutrient density of meat changed in the past 20 years?

- A. It has decreased
- B. It has increased
- C. It has remained constant
- D. It has stayed the same

22. What is a common name for sodium chloride?

- A. Hot Pepper
- B. Sugar
- C. Table salt
- D. Vitamin C

23. Which legislation dictates strict animal handling, stunning, and slaughter guidelines?

- A. Animal Kill Act of 1983
- B. EPA Guidelines of 1942
- C. Humane Slaughter Act of 1978
- D. Kosher Kill Legislation from the 1930's

24. Which of the following is a sterol found in all animal tissue?

- A. Campesterol
- B. Cholesterol
- C. Ergosterol
- D. Phytosterol

25. What temperatures tend to toughen meat protein?

- A. High temperatures
- B. Low temperatures
- C. There are no proteins in meat
- D. There is no relationship between temperature and toughness

Utah FFA Association
2010 State Meats Evaluation & Technology CDE
Written Exam

KEY

<u>Page 1</u>	<u>Page 2</u>	<u>Page 3</u>	<u>Page 4</u>
1. D 2. C 3. C 4. A 5. B 6. B	7. D 8. B 9. B 10. D 11. A 12. C 13. A	14. C 15. A 16. B 17. C 18. B 19. B 20. A	21. B 22. C 23. C 24. B 25. A

3 points each

(Total score out of 75)

Utah FFA Association
2010 State Meats Evaluation & Technology CDE
Meat Formulation Problem

Name: _____

Chapter: _____

USDA REGULATIONS FOR GROUND BEEF:

GROUND BEEF: The terms “Ground Beef” and “Chopped Beef” are synonymous. Products so labeled must be made with fresh and/or frozen beef with or without seasoning and without the addition of fat as such, and shall contain no more than 30% fat. It may contain added water, binders or extenders. It may contain beef cheek meat not to exceed 25%. Heart meat and tongue meat are not acceptable ingredients. The Technical Requirements Schedule (TRS) – GB 2003 requires potential contracts to designate, in their technical proposal, a laboratory to conduct microbiological testing of boneless beef.

Specifications on ground beef for this activity:

1. No variety meats may be used.
2. No product more than four days old may be used.
3. All fresh products must be stored at a temperature not to exceed 32° F.
4. Least cost determined should be performed on acceptable ingredients to select the lowest cost product that meets all ground beef guidelines.

You have received an order with the following specifications:

Desired fat content of finished product = 10%

Batch size = 1,500 lbs.

Manufacture date = Tuesday, April 20, 2010

Available Ingredients

Product	Slaughter Date	Temp. “°F”	Fat Content	\$ Price/lb.
70% Lean Trim	April 16	32°	30%	2.09
80% Lean Trim	April 17	31°	20%	2.20
Bull Meat	April 17	33°	23%	2.27
Pork Loins	April 16	32°	17%	1.76
Sirloins	April 15	31°	8%	3.14
Beef Hearts	April 18	32°	6%	.62
Scrap Bin	April 17	32°	9%	2.59

Instructions: Carefully read each item and possible answers. Mark the correct answer by circling the number or letter next to your choice.

Solution – Which of the following was the correct formulation for this problem?

1. 70% Lean Trim & Beef Hearts
 2. 70% Lean Trim & Scrap Bin
 3. 70% Lean Trim & Sirloins
 4. 80% Lean Trim & Scrap Bin
 5. 80% Lean Trim & Sirloins
 6. Bull Meat & 70% Lean Trim
 7. Bull Meat & 80% Lean Trim
 8. Bull Meat & Beef Hearts
 9. Bull Meat & Scrap Bin
 10. The correct answer is not listed
-
1. What was total cost of the correct final batch?
 - A. \$2,550.00
 - B. \$3,535.35
 - C. \$3,535.00
 - D. \$3,832.35
 - E. \$3,847.50
 2. What was price per pound of the correct final batch?
 - A. \$1.35
 - B. \$1.37
 - C. \$2.55
 - D. \$2.57
 - E. \$3.83
 3. How much fat was in the correct final batch?
 - A. 0 lbs.
 - B. 100 lbs.
 - C. 150 lbs.
 - D. 1,350 lbs.
 - E. 1,400 lbs.
-
4. How much of the correct final batch was from the Scrap Bin?
 - A. 0 lbs.
 - B. 9 lbs.
 - C. 91 lbs.
 - D. 135 lbs.
 - E. 1,365 lbs.
 5. What percent of the correct final batch was lean?
 - A. 0%
 - B. 9%
 - C. 10%
 - D. 90%
 - E. 91%
 6. How much of the correct final batch was 70% Lean Trim?
 - A. 0 lbs.
 - B. 75 lbs.
 - C. 135 lbs.
 - D. 1,425 lbs.
 - E. 1,365 lbs.
 7. Which ingredient was excluded from the correct final batch due to freshness?
 - A. 70% Lean Trim
 - B. Beef Hearts
 - C. Bull Meat
 - D. Sirloins
 - E. No ingredients were excluded due to freshness
 8. What is the worth of the 80% Lean Trim in the correct final batch?
 - A. \$0.00
 - B. \$135.00
 - C. \$156.00
 - D. \$297.00
 - E. \$3,535.35

Utah FFA Association
2010 State Meats Evaluation & Technology CDE
Meat Formulation Problem

<i>KEY</i>

<u>Item</u>	<u>Answer</u>	
Solution	4	(10 points)
1.	D	(5 points)
2.	C	
3.	C	
4.	E	
5.	D	
6.	A	
7.	D	
8.	D	
		(50 points)