

2011 North Dakota State Meat CDE Written Test

Do not write on this test, mark your answers on the Grade Master answer card. Make dark marks. Erase completely to change.

1. Which vitamin, important in the human diet, is obtained from beef and lamb?
 - A. Vitamin A
 - B. Vitamin E
 - C. Vitamin B12**
 - D. Vitamin D
2. From the following list, identify the wholesale cut of beef?
 - A. T-bone steak
 - B. Ground beef
 - C. Beef rib**
 - D. Ribeye steak
3. What is the lowest USDA grade of beef listed below?
 - A. Low Choice
 - B. Select
 - C. Prime
 - D. Standard**
4. Fresh meat is a good source of which of the following minerals?
 - A. Copper
 - B. Iron**
 - C. Lead
 - D. Sodium
5. How many ounces of cooked meat are considered a serving?
 - A. 5 oz
 - B. 8 oz
 - C. 3 oz**
 - D. 12 oz
6. What is the advantage to marinating meat?
 - A. Improve flavor and tenderness
 - B. Reduce nitrosamine formation (nitrosamines are possibly linked to cancer)
 - C. Both A and B**
 - D. None of the above
7. Aging is holding meat, especially beef, in an unfrozen state for a period of time. What positive affect is accomplished by aging meat?
 - A. Reducing the fat content
 - B. Reducing the number of bacteria found on the meat
 - C. Determining the age of cattle at the time of slaughter
 - D. Improving tenderness of meat**
8. What is the difference between USDA Inspection and USDA Grading?
 - A. Inspection = wholesomeness and Grading = quality**
 - B. Inspection = quality and Grading = quantity
 - C. Inspection = quantity and Grading = wholesomeness
 - D. Inspection = quality and Grading = wholesomeness
9. What ingredient added to processed meats gives the familiar pink color?
 - A. Salt
 - B. Sugar
 - C. Sodium Nitrite**
 - D. Spices

10. What is the maximum amount of fat allowed in fresh pork sausage?
A. **50%** B. 40% C. 30% D. 20%
11. How long may ground beef be kept in a refrigerator (32-36°F) without reducing quality?
A. **1-2 days**
B. 3-5 days
C. 5-7 days
D. 10-14 days
12. At which of the following temperatures will pork be frozen?
A. 0° F B. 17° F C. 25° F **D. All the above**
13. Meat cooked over high heat in a pan, sometimes with the addition of cooking oil is referred to as what?
A. **Fried**
B. Grilled
C. Braised
D. Broiled
14. Frozen meats should be stored at what maximum temperature (F)?
A. 36 B. 28 **C. 0** D. -20
15. What carcass quality defect results in trimming off portions of the carcass during slaughter?
A. Dark cutting
B. **Bruises**
C. Heavy carcass weights
D. Blood splashed lean
16. What condition found in pork is associated with undesirable color, tenderness, and water-holding capacity?
A. Trichinae
B. Blood splashed lean
C. Dark, red, and dry pork (DFD)
D. **Pale, soft, and exudative pork (PSE)**
17. What factor, listed below is not used to assign quality grades to beef?
A. Lean maturity
B. **Tenderness**
C. Carcass Maturity
D. Marbling
18. Which term is associated with the objectionable flavor of meat that has been cooked, chilled, and then reheated?
A. Marbling
B. Freezer burn
C. **Warmed-over flavor**
D. Smoked meat flavor
19. Which pathogen, of the ones listed below, is of greatest concern in ground beef?

A. botulism **B. E. coli 0157:H7** C. Listeria monocytogenes D.
Chicken Pox

20. Which of the following is one of the factors used to calculate USDA Yield Grade in beef carcasses?

- A. **Hot Carcass Weight**
- B. Live Weight
- C. Carcass thickness
- D. Breed of cattle

Key 2010 MEATS WRITTEN TEST

1. A
2. C
3. C
4. B
5. A
6. C
7. D
8. A
9. A
10. C
11. A
12. D
13. C
14. C
15. C
16. C
17. C
18. C
19. A
20. B

North Dakota FFA Association
2011 Meats Evaluation & Technology CDE
Meat Formulation Problem Solving

Today, June 9, you have the following meat ingredients at your disposal in order to formulate a 5000 pound batch of 80% lean/20% fat, ground beef. Determine the least cost formulation (without violating government regulations) and then answer the following questions.

<u>Available</u> <u>Ingredients</u> Product	Slaughter Date	Temp. “°F”	% Fat Content	\$ Price/lb.
Beef Heart	June 5	33°	4	.41
80% Trimmings	June 6	36°	20	1.40
75% Trimmings	June 7	34°	25	1.28
Beef Flank	June 4	33°	2	.91
Chuck Tender	June 7	33°	16	1.58
Pork Trimmings	June 8	34°	15	.86
Ribeye Roll	June 8	34°	12	2.12
Bull Product	June 6	34°	8	1.74

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

- A. 75% Trimmings and Beef Heart
- B. 75% Trimmings and Bull Product
- C. 75% Trimmings and Chuck Tender
- D. 75% Trimmings and Ribeye Roll

2. What was the total cost of the correct final batch?

- A. \$2,523.00
- B. \$4,544.00
- C. \$5,356.00
- D. \$7,050.00

3. What was the price per pound of the correct final batch?

- A. \$1.28
- B. \$1.41
- C. \$1.45
- D. \$1.74

4. What was the percentage of lean in the correct final batch?
- A. 17.0%
 - B. 20.0%
 - C. 80.0%
 - D. 71.0%
5. What percentage of the correct final batch was Chuck Tender?
- A. 0%
 - B. 16%
 - C. 29%
 - D. 56%
6. How much Bull Product was in the correct final batch?
- A. 0 lbs.
 - B. 1,450 lbs.
 - C. 2,523 lbs.
 - D. 3,550 lbs.
7. Which ingredient was excluded on the basis of temperature?
- A. 80% Trimmings
 - B. Beef Flank
 - C. Beef Hearts
 - D. Bull Product
8. How much fat was in the correct final batch?
- A. 0 lbs.
 - B. 1,000 lbs.
 - C. 2,000 lbs.
 - D. 4,000 lbs.
9. What percentage of the correct final batch was from 75% Trimmings?
- A. 0%
 - B. 29%
 - C. 71%
 - D. 75%
10. How many of the ingredients listed above are eligible to be used according to federal regulations?
- A. 4
 - B. 3
 - C. 6
 - D. 0

2011 ND FFA Processed Meat Formulation

Key

1. B
2. D
3. B
4. C
5. A
6. B
7. A
8. B
9. C
10. A