2006

SOUTH DAKOTA STATE FFA

MEAT EVALUATION AND TECHNOLOGY

CAREER DEVELOPMENT EVENT

WRITTEN TEST

Directions: Choose the best response to each of the following statements or questions. In all

cases, there will be only one best answer. Blacken the letter on your answer sheet beside the

corresponding number which represents your choice. Be sure to use the correct portion of your

answer sheet to answer the questions.

1. Most ground beef and hamburger is ground and packaged on premises at food stores, but it

also cannot contain more than \_\_\_\_\_\_\_\_\_\_\_\_percent fat.

 A. 20

 B. 25

 C. 30

 D. 35

2. All cattle start out eating grass, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_of them are “finished” in feedlots, where

they are fed specially formulated feed based on corn or other grains.

 A. 10%

 B. 20%

 C. 50%

 D. 75%

3. In a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_oven, the heated air is circulated around the meat. The hot air

touches all the surfaces simultaneously so that the meat cooks evenly and in less time.

 A. microwave

 B. convection

 C. rotisserie

 D. broiling

4. To what internal temperature should pork be cooked?

 A. 120º F

 B. 140º F

 C. 160º F

 D. 185º F

5. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a sterol (waxy alcohol, not a fat) found in all animal tissue. It is used by

the body to synthesize vitamin D, hormones, and bile salts to aid in the digestion of fats.

A. Iron

B. Sodium

C. Cholesterol

D. Lipoprotein 6. “\_\_\_\_\_\_\_\_\_\_\_\_\_\_” is a pork leg that has not been cured or smoked.

 A. Fresh ham

 B. Pork round

 C. Country style ham

 D. Picnic

7. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_refers to the yield of lean meat in a carcass.

 A. Cutability

 B. Gradeability

 C. Wholesomeness

 D. Quality

8. How can consumers learn the contents of processed meat?

 A. Ask the store manager

 B. Purchase a copy of the Meat Guide for Consumers published by the

 United Meat Processors Society

 C. Check with the local County Extension Office

 D. Read the label

9. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_was one of the earliest “food additives”. The term “food additives” is

used collectively to identify edible substances that may, by legal approval, be added to foods

for flavoring, coloring, preserving, extending and/or for improving or maintaining the food’s

natural appeal.

 A. Iron

 B. Salt

 C. Charcoal

 D. Bull meat

10. Cuts from which section of the carcass generally have less fat?

A. Hindquarter

B. Forequarter

C. There is the same amount of fat in both the hindquarter and the forequarter.

11. On September 21, 1992, the USDA approved a rule to permit irradiation of raw, packaged

poultry. The new rule requires packages of irradiated poultry to carry the \_\_\_\_\_\_\_\_\_\_\_\_,

international radiation logo as well as the words “Treated with Radiation” or “Treated by

Irradiation.”

 A. red

 B. green

 C. black

 D. orange 12. A(n) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_is a minute amount of antibiotic, drug, hormone, insecticide,

pesticide, or environmental contaminant remaining in the meat and poultry after slaughter.

 A. Amino Acid

 B. Antioxidant

 C. Residue

 D. Spoilage

13. Which of the following is a process designed to destroy bacteria on food?

A. Irradiation

B. Processing

C. Aging

D. Fabrication

14. \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_separated beef, pork and poultry are fresh meats and poultry that have

been removed from the bones by machine rather than by hand.

 A. Mechanically

 B. Marinated and sliced

 C. Machete

 D. Mignon

15. Who are most vulnerable to foodborne bacteria?

 A. Senior Citizens

 B. Pregnant Women

 C. Very Young Children

 D. All of the Above 2006

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SECTION A - PART 1

PROBLEM SOLVING

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.

“Dakota Beef Boning Company” Policy on Ground Beef

 1. All government regulations will be followed.

 2. All fresh products must be stored at temperatures not to exceed 36°F.

 3. No product over 14 days old may be used.

 4. Least cost determined shall be performed on acceptable ingredients to select the

 lowest cost product which meets all ground beef guidelines.

You have received an order with the following specifications:

- Desired fat content = 20%

- Batch size = 2000 pounds

- To be manufactured April 24, 2006

BONELESS MEAT INGREDIENTS AVAILABLE

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

 Package

Material Date Temp “F” Fat Content $ Price

Cow top rounds (denuded) April 7 33°F 3% $ 1.91

Cow trim (90% lean) April 12 30°F 10% $ 1.44

80% Beef trim April 21 33°F 20% $ 1.35

70% Beef trim April 21 31°F 30% $ 1.02

50% Beef trim April 17 33°F 50% $ .48

Beef hearts April 18 34°F 11% $ .27

Beef cheek meat April 14 39°F 22% $ 1.08 ANSWER THE FOLLOWING QUESTIONS:

16. The correct formulation of the ground beef order is the combination of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

 A. Cow top rounds (denuded) and beef cheek meat

 B. Cow trim (90% lean) and 70% beef trim

 C. Cow trim (90% lean) and 50% beef trim

 D. 80% beef trim

17. What is the price per pound of the finished least cost product?

 A. $ 1.20

 B. $ 1.23

 C. $ 1.29

 D. $ 1.35

18. How many pounds of the final product is cow trim (90% lean)?

 A. 0

 B. 500

 C. 1000

 D. 1500

19. Which of the following did not meet USDA regulations for ground beef?

 A. Cow top rounds (denuded)

 B. Cow trim (90% lean)

 C. 50% Beef lean trim

 D. Beef hearts

20. Which of the following did not meet the company’s freshness requirements?

 A. Cow top rounds (denuded)

 B. Cow trim (90% lean)

 C. 70% Beef lean trim

 D. 50% Beef lean trim ANSWERS

1. C

2. D

3. B

4. C

5. C

6. A

7. A

8. D

9. B

10. A

11. B

12. C

13. A

14. A

15. D

16. C

17. A

18. D

19. D

20. A