



2023 NATIONAL FFA MEAT EVALUATION CDE

WRITTEN EXAMINATION

Please mark all answers on the scan sheet.

1. The Humane Slaughter Act was originally passed in 1958 to ensure the proper treatment and humane handling of animals; which of the following animals were not included? (slide 15)
 - A. Swine
 - B. Sheep
 - C. Horses
 - D. Cattle
 - E. Chickens

2. Meat is a complete source of protein, and contains how many essential amino acids? (slide 45)
 - A. 1
 - B. 3
 - C. 7
 - D. 9
 - E. 11

3. What is the minimum safe internal temperature of whole muscle beef products recommended by USDA? (slide 129)
 - A. 125°F
 - B. 130°F
 - C. 145°F
 - D. 160°F
 - E. 165°F

4. True/False: Fat found in beef, pork and veal is typically greater than 50% saturated fats. (slide 51)
 - A. True
 - B. False

5. What are synthetic chemicals which shift nutrients away from fat production to the promotion of lean muscle growth? (slide 32)
 - A. Beta-Agonists
 - B. Synthetic hormones
 - C. Implants
 - D. Antibiotics
 - E. Vitamins
6. True/False: The Wholesome Meat Act requires a federal USDA or state inspection mark, which is an indicator of meat quality. (slide 16 & 17)
 - A. True
 - B. False
7. What compound aids in the repair and maintenance of body cells, and is responsible for body structure and chemical reactions essential to life? (slide 47)
 - A. Protein
 - B. Water
 - C. Fat
 - D. Carbohydrates
 - E. Vitamins
8. What is the term for an amino acid that cannot be synthesized by the body, therefore they must be consumed from dietary sources? (slide 48)
 - A. Synthetic
 - B. Supplement
 - C. Essential
 - D. Non-Essential
 - E. Hormone
9. Which act paved the way for creation of the Food and Drug Administration (FDA)? (slide 13)
 - A. Meat Inspection Act
 - B. Pure Food and Drug Act
 - C. Packers and Stockyards Act
 - D. Wholesome Meat Act
 - E. Human Methods of Slaughter Act

10. Where are growth-promoting implants placed in swine? (slide 31)
 - A. Intravenous
 - B. Neck
 - C. Ear
 - D. Hind Leg
 - E. Implants are not approved for usage in swine
11. True/False: Cholesterol can be produced by the body or can be obtained from dietary sources? (slide 53)
 - A. True
 - B. False
12. Which government agency approves antibiotics for the use in livestock and sets the withdrawal periods? (Slide 34)
 - A. FSIS
 - B. FDA
 - C. USDA
 - D. AMS
13. How long prior to harvest should feed be withheld from an animal to aid in evisceration? (slide 38)
 - A. 1 hour
 - B. 12 hours
 - C. 24 hours
 - D. 48 hours
 - E. Feed should not be withheld
14. Which of the following hormones used in growth-promoting implants is not a natural hormone? (slide 30)
 - A. Estradiol
 - B. Progesterone
 - C. Testosterone
 - D. Trenbolone Acetate

15. Triglycerides that contain no double bonds would be classified as a ____ fat. (slide 50)
- A. Monounsaturated
 - B. Polyunsaturated
 - C. Saturated
 - D. Polysaturated
16. What is Vitamin B₃ also commonly known as? (slide 54)
- A. Niacin
 - B. Biotin
 - C. Riboflavin
 - D. Thiamine
 - E. Folic Acid
17. A marbling score of Moderate⁵⁰ would result in what quality grade for a “A” maturity beef carcass? (Slide 94)
- A. Low Prime
 - B. High Choice
 - C. Average Choice
 - D. Low Choice
 - E. High Select
18. Which of the following is NOT a USDA Quality Grade for lamb? (slide 99)
- A. Good
 - B. Select
 - C. Choice
 - D. Prime
 - E. Cull
19. True/False: Re-Freezing meat causes no deterioration of quality as long as it is done correctly. (slide 113)
- A. True
 - B. False

20. Which of the following organisms would be most likely to cause a food intoxication? (slide 185)
- A. Salmonella Newport
 - B. Clostridium botulinum
 - C. E. coli O157
 - D. Listeria monocytogenes
21. USDA Yield Grades are a predictor of what valuable carcass attribute? (slide 89)
- A. Palatability
 - B. Quality
 - C. Weight
 - D. Cutability
 - E. Tenderness
22. Which of the following is NOT a primal cut of lamb? (slide 65)
- A. Shoulder
 - B. Breast
 - C. Rack
 - D. Loin
 - E. Round
23. The total weight of a food product, minus the weight of any packaging material, is commonly referred to which of the following? (slide 75)
- A. Total weight
 - B. Pay weight
 - C. Gross weight
 - D. Net Weight
 - E. Package Weight
24. What method of ritual slaughter follows Jewish dietary laws? (slide 20)
- A. Halal
 - B. Organic
 - C. Kosher
 - D. Gluten Free
 - E. Paleo

25. Deep fat frying would be considered what type of cookery method? (slide 133)
- A. Moist
 - B. Dry
 - C. Dry/Moist
26. The following represents the characteristics of meat labeled as “Natural”. (slide 85)
- A. Not administered antibiotics
 - B. Grass fed
 - C. Organic
 - D. Minimally Processed, No artificial ingredients
 - E. GMO free
27. All of the following are plant enzymes used to tenderize meat EXCEPT? (Slide 169)
- A. Bromelain
 - B. Ficin
 - C. Neotame
 - D. Papain
28. What is used to retard mold growth on the outside of dried sausages? (slide 170)
- A. Phosphates
 - B. Di-Glycerides
 - C. Isolated Soy Proteins
 - D. Lecithin
 - E. Potassium Sorbate
29. True/False: Over 12,000 species of Salmonella cause illness when ingested. (slide 190)
- A. True
 - B. False
30. True/False: Trichinella spiralis is a nematode worm. (slide 192)
- A. True
 - B. False
31. The “Brisket” primal comes from which species? (slide 63)
- A. Beef
 - B. Lamb
 - C. Pork
 - D. Poultry

32. Which of the following is a correct statement regarding the labeling of processed meats? (slide 154)
- A. All ingredients must be listed by level of protein.
 - B. All ingredients must be listed in order of decreasing weight
 - C. All ingredients do not have to be approved by FSIS
 - D. All ingredients must be listed in order of increasing weight
33. Which of the following is not one of the seven principles of HACCP? (slide 177)
- A. Conduct a hazard analysis
 - B. Identify critical control points
 - C. Recognize potential failures
 - D. Establish corrective actions
 - E. Establish record keeping procedures
34. After a power outage, meat in the refrigerator is safe for 6 to 8 hours, unless meat temperature rises above _____ for more than 2 hours. (slide 112)
- A. 0°F
 - B. 10°F
 - C. 20°F
 - D. 30°F
 - E. 40°F
35. Which of the following is not a fat-soluble vitamin? (slide 50)
- A. Vitamin A
 - B. Vitamin B
 - C. Vitamin D
 - D. Vitamin E
 - E. Vitamin K
36. PFF is used in regulatory standards of hams, what does PFF stand for? (Slide 69)
- A. Percent Fat-Free
 - B. Protein Fat-Free
 - C. Pure Fat-Free
 - D. Percent For Free
 - E. Partially Fat-Free

37. What is another term for Cold Cuts? (slide 155)
- A. Cured meats
 - B. Luncheon meats
 - C. Meat by-products
 - D. Variety meats
 - E. Frozen Meat
38. When smoking meats, two thermometers are recommended. One thermometer is used to measure the internal temperature of the meat. What should the other thermometer measure? (slide 143)
- A. The air temperature of the smoker
 - B. The surface temperature of the meat
 - C. The internal temperature of the meat taken at a second location
 - D. The temperature outside of the smoker
39. Which of the following is the most common cause of foodborne illness? (slide 183)
- A. Mishandling food
 - B. Misidentifying meats
 - C. Misreading labels
 - D. Mistreating animals
40. All of the following are true about water in the meat industry EXCEPT? (slide 37)
- A. Water aids in evisceration
 - B. Water is essential to all life processes
 - C. Water makes hide removal more difficult
 - D. Water must be provided to livestock through the life cycle until the point of harvest
41. Which type of meat cookery uses heated air circulated around the meat by a fan? (slide 136)
- A. Convection Oven
 - B. Grilling
 - C. Microwave Oven
 - D. Smoking
 - E. Roasting

42. Which of the following is the correct recommended refrigerated storage time? (slides 104-105)
- A. Fresh, Uncooked Beef, steaks = 6-8 days
 - B. Frankfurters = 2-3 weeks
 - C. Fresh, Uncooked Ground meats = 4-6 days
 - D. Smoked Sausage = 1 week
 - E. Bacon = 1-2 weeks
43. Which nutrient is used to synthesize Vitamin D, and form bile salts to aid in digestion of fats? (slide 52)
- A. Carbohydrate
 - B. Fat
 - C. Protein
 - D. Water
 - E. Cholesterol
44. True/False: Improperly cooked beef products have been commonly associated with Trichinosis. (slide 130)
- A. True
 - B. False
45. True/False: If an antibiotic has been used to treat a disease, the animal will lose its organic status. (slide 83)
- A. True
 - B. False
46. Which of the following was NOT a main impact of the Meat Inspection Act on the meat industry? (slide 12)
- A. Required state inspection of processing facilities to equal or exceed federal inspection standards
 - B. Antemortem inspection of all livestock before slaughter
 - C. Authorized the United States Department of Agriculture (USDA) to monitor and inspect all harvesting and processing operations
 - D. Sanitary conditions in all meat processing facilities
 - E. Postmortem inspection of every carcass

47. Muscles are comprised of thousands of basic muscle contractile units known as what? (slide 60)
- A. Myosin
 - B. Actin
 - C. Bundles
 - D. Sarcomeres
 - E. Primals
48. True/False: Ground Beef may contain added beef fat, up to 30% of the total. (slide 68)
- A. True
 - B. False
49. What common meat packaging method removes almost all the air from the package? (slide 73)
- A. Modified Atmosphere Packaging
 - B. Vacuum Packaging
 - C. Overwrap
 - D. Dry Aging
50. What compounds are used to prevent rancidity as they reduce or prevent oxidation in food? (slide 161)
- A. Flavoring
 - B. Tenderizers
 - C. Phosphates
 - D. Antioxidants
 - E. Curing Agents