

Western National Roundup
Meat Evaluation and Technology Career Development Event
FFA Written Exam (2 pts each; 100 pts Total)
January 10, 2026

Instructions: Select the best answer for each question and bubble your response in the "Written Exam" portion of the provided answer sheet.

1. When was the first meat inspection act?
 - a. 1904
 - b. 1906
 - c. 1921
 - d. 1958
 - e. None of the above

2. What act requires Federal, USDA, or state inspection marks?
 - a. Packers and Stockyards Act, 1921
 - b. Humane Slaughter Act, 1958
 - c. Wholesome Meat Act, 1967
 - d. Humane Methods of Slaughter Act, 1978
 - e. None of the above

3. What is the maximum fat content established for frankfurters?
 - a. 10%
 - b. 20%
 - c. 30%
 - d. 40%

4. Who authored the book "The Jungle"?
 - a. Dr. Phil Bass
 - b. Upton Sinclair
 - c. Dry/Moist Cookery
 - d. Best Cookery
 - e. None of the above

5. Which of the following are NOT required on a nutritional label?
 - a. Number of calories from total fat and saturated fat
 - b. of calories from total sugar
 - c. Number of calories per serving
 - d. Serving size
 - e. All of the above are required

6. What ways can antibiotics be used in livestock production?
 - a. administered in therapeutic doses to treat illness
 - b. administered in preventative doses through feed and water
 - c. Both A and B
 - d. Neither A or B

7. Which of the following are examples of good animal handling procedures?
 - a. designing working facilities to minimize stress and injury
 - b. properly using sorting sticks to prevent bruising and lesions
 - c. not shipping horned cattle in confined spaces to prevent bruising
 - d. avoiding short-term stress in swine immediately prior to slaughter to prevent meat quality issues
 - e. All are examples of good animal handling procedures

8. When consuming lean meat, the daily recommended serving size is:
 - a. 3.0 ounces
 - b. 3.5 ounces
 - c. 4.0 ounces
 - d. 43 ounces
 - e. 5.0 ounces

9. What is the smallest contractile unit of a muscle cell?
 - a. Muscle Fiber
 - b. Muscle Bundle
 - c. Sarcomere
 - d. Muscle Tissue

10. Which of the following are the smallest cuts made from a carcass?
 - a. Retail Cuts
 - b. Primal Cuts
 - c. Sub Primal Cuts
 - d. Carcass quarters

11. Which of the following is NOT a primal cut of a pork carcass?
 - a. Shoulder
 - b. Sirloin
 - c. Side/Belly
 - d. Loin
 - e. Ham/Leg

12. True or False: Food infection is when pathogenic bacteria grew in the food, produced a toxin and made the consumer sick after eating
- True
 - False
13. What are the main advantage(s) of vacuum packaging meat products?
- Causes meat to appear bright and cherry red while packaged
 - Increases shelf-life
 - Decreases shrinkage of meat due to moisture loss
 - a & b
 - b & c
14. Which of the following are required by FSIS to be on the product label?
- Ingredient List
 - Net Weight Statement
 - Inspection Legend
 - Product Name
 - All of the above
 -
15. Which of the following enzymes is not a plant enzyme that can be added to meat before cooking?
- Papain
 - Bromelain
 - Calpain
 - None of the above
16. Which of the following factors are combined to determine the quality grading of a beef carcass:
- Physiological Age
 - Ribeye Size
 - Marbling Amount
 - A & C
 - All of the above
17. A moderate degree of marbling for an 'A' maturity carcass would be what quality grade?
- Low Prime
 - High Choice
 - Average Choice
 - Low Choice
 - High Select

18. Which of the following is a method of moist heat cookery?
- a. Roasting
 - b. Broiling
 - c. Braising
 - d. Pan frying
19. True or false: Safe handling instructions are required by the USDA on all labels of raw meat and poultry products?
- a. True
 - b. False
20. When measuring the temperature of a cooked piece of meat, where should the end of the probe be located?
- a. Center
 - b. Just under the surface
 - c. At the surface
 - d. Anywhere is fine
21. *Trichinella spiralis* is a parasite of concern in which species?
- a. Beef
 - b. Lamb
 - c. Pork
 - d. Chicken
 - e. Duck
22. Which of the following food borne pathogens can be found in canned meats and seafood, has a 10% fatality rate and is commonly controlled using sodium nitrate/nitrite?
- a. Salmonella spp.
 - b. Escherichia coli 0157:H7
 - c. Listeria monocytogenes
 - d. Clostridium botulinum
 - e. None of the above
23. How many principles of HACCP are there?
- a. 5
 - b. 7
 - c. 9
 - d. 11
 - e. 20

24. Which is NOT a way to minimize foodborne bacteria?
- a. Freezing
 - b. Irradiation
 - c. Wet Aging
 - d. Cooking
 - e. Pasteurization
25. Which is a result of exposing meat to ionizing energy?
- a. destruction of pathogenic and spoilage bacteria
 - b. altered chemical composition
 - c. radioactive meat
 - d. altered taste of the meat
26. What is one of the main uses for Growth Promoting implants?
- a. Reduce disease in animals
 - b. Increase Feed Efficiency
 - c. Increased methane production
 - d. Reduce stress in animal
27. "Downer" cattle cannot be harvested for animal or human consumption due to what disease
- a. High Altitude Disease
 - b. Brucellosis
 - c. Bovine Spongiform Encephalopathy
 - d. None of the above
28. What food source is most readily absorbed from natural sources such as meat and is responsible for body structure and chemical reactions essential to life?
- a. Protein
 - b. Fat
 - c. Water
 - d. Vitamins
 - e. Minerals
29. What term do we use for the dehydration of surface tissues when meat is frozen?
- a. Dark Cutting
 - b. Cold Shortening
 - c. Freezer Burn
 - d. None of the above

30. What are residue levels?
- a. Amount of antibiotics given to an animal at the time of treatment
 - b. period of time the meat animal must not have received the compound or drug immediately preceding harvest
 - c. Amount of hormones found in an 'all natural' marketed steer at time of harvest.
 - d. Amount of a drug, antibiotic or hormone left behind in a product after the withdrawal period has passed
 - e. None of the above
31. Where are growth promoting implants placed in animals?
- a. Tongue
 - b. Hip
 - c. Ear
 - d. Front shoulder
 - e. Given orally
32. Which of the following are recommended way(s) to defrost meat?
- a. Submerged in cold water
 - b. Clean, cool countertop
 - c. Microwave
 - d. a and c
 - e. all of the above
33. When was HACCP implemented?
- a. 1930's
 - b. 1940's
 - c. 1950's
 - d. 1960's
 - e. None of the above
34. Which of the following is an example of a synthetic hormone used in beef production?
- a. Estradiol
 - b. Testosterone
 - c. Zeranol
 - d. Progesterone

35. How many hours are feed and feedstuffs withheld from an animal prior to slaughter to aid in evisceration and microbial contamination?
- a. 3
 - b. 6
 - c. 12
 - d. 18
 - e. 24
36. True or False - Meat does NOT contain essential amino acids?
- a. True
 - b. False
37. Cholesterol is used in the body to do which of the following:
- a. Create red blood cells
 - b. Synthesize Vitamin D
 - c. Help remove bile salts
 - d. Break down proteins in the intestines
38. What is the main goal of Uniform Retail Meat Identity Standards?
- a. To standardize the way meat is fabricated and cut
 - b. To standardize the way meat is cooked before eating
 - c. To standardize the way meat tastes
 - d. To standardize the way meat is raised
39. What primal is used in confirmation scoring of lamb carcasses
- a. Leg
 - b. Loin
 - c. Rack
 - d. Shoulder
40. What are the correct quality grades for beef carcasses, from HIGHEST to LOWEST:
- a. Prime, Choice, Good, Utility
 - b. Prime, Choice, Select, Standard
 - c. Prime, Standard, Select, Choice
 - d. Choice, Prime, Select, Standard
 - e. Choice, Select, Standard, Prime

41. What is the recommended refrigerated storage time of whole smoked ham?
- a. 3-5 days
 - b. 1 week
 - c. 10 days
 - d. 2 weeks
 - e. 1 month
42. What is the following definition describing: "any substance with the intended use of which results or may reasonably be expected to result — directly or indirectly — in it becoming a component or otherwise affecting the characteristics of any food"
- a. Food Ingredient
 - b. Food Additive
 - c. Curing ingredient
 - d. Seasoning
 - e. Flavoring
43. What are benefits of adding Antioxidants?
- a. Stabilize texture
 - b. Decreases pH
 - c. Inhibit the growth of *Clostridium botulinum*
 - d. None of the above
 - e. All of the above
44. Hamburger may not contain more than what percent fat?
- a. 20%
 - b. 25%
 - c. 30%
 - d. 35%
 - e. 40%
45. What form of retail packaging is usually done at retail establishments?
- a. Overwrap
 - b. Modified Atmospheric Packaging
 - c. Vacuum Packaging
 - d. Ziploc bag
46. Which of the following is defined by "Denotes the date by which product should be used and still be considered safe"?
- a. Best if used by
 - b. Use By
 - c. Sell by date
 - d. Eat by date

47. What was one of the first food additives used for millenniums to change the taste of and preserve foods?
- a. Nitrates
 - b. Salt
 - c. Smoking
 - d. Antioxidants
 - e. Potassium Sorbate
48. Regarding leftovers you should
- a. Divide the food into small, shallow containers
 - b. maintain free air circulation around containers in refrigerators
 - c. avoid placing large containers of food in refrigerators
 - d. All of the above
49. Starter cultures can be added to meat for the purpose of
- a. Creating flavor
 - b. Increasing WHC
 - c. Decreasing pH
 - d. All of the above
 - e. Only answer a and c
50. With respect to impact of foodborne illnesses, what group of people are considered vulnerable?
- a. senior citizens
 - b. pregnant women
 - c. young children
 - d. individuals with compromised immune systems
 - e. all of the above