

University of Mosul  
College of Veterinary Medicine  
Dept.: Vet. Public Health  
Class: Master  
Subject: Vet. Public Health Exam



Competitive Exam

Time: 3 Hours

Date: 30 / 6 / 2025

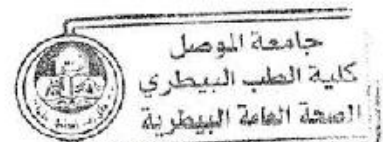
Lecturer: Dr. Raad Alsanjary, Dr. Muntha G. Hassan,  
Dr. Dhyas M. T., Dr. Thamer A. Ezzulddin, Dr. Omar H.  
Sheet, Dr. Omar A. Almahmood, Dr. Hiba Salahudeen,

Code: VMHE25F5693

**Note: Answer all the following question:**

**Q1: Choose the correct answer to the following questions: (100 Marks)**

- The proper meat inspection in slaughterhouse consists of:
  - Examination of live animal in Lairage.
  - Examination of viscera and offal in sticking hall.
  - Examination of animal in the farm.
  - Examination of animal carcass in Lairage.
- To avoid phenomena of DFD in meat:
  - The glycogen levels in the muscles of the slaughtered carcass are as high as possible
  - It must be necessary for animals free from stress and injury prior to slaughter.
  - It is also important for animals to be not exhausted before slaughter.
  - It must be necessary for animals' free fracture and injury prior to slaughter.
- To ensure that the transport of animals is good we must apply:
  - Malnutrition of animals.
  - Bad Climate (sunstroke and chilling)
  - Avoid transport of pregnant females and sick animals.
  - Transport stress animal to abattoir.
- Trimming or condemnation of carcass may involve:
  - Any portion of a carcass is normal or healthy.
  - Any portion of a carcass affected with a condition no risk to human health.
  - Any portion of a carcass that may be repulsive to the consumer.
  - Any portion of a carcass is abnormal or healthy.
- Ante mortem inspection should be carried out:
  - carried in un adequate lighting
  - carried in adequate sun lighting
  - where the animals can be observed collectively only
  - check at motion in Lairage.
- The ante mortem care of the food animals is:
  - resting the animal
  - exsanguinations
  - transportation of animal
  - emergency slaughtering.
- During journey, all animals transported to slaughter will suffer:
  - some loss of live weight at least 1-2 %.
  - some loss of live weight at least 3-5 %
  - some loss of live weight at least 6-7 %
  - some loss of live weight at least 10 %.



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8. Meat hygiene is study of:
  - a. animal tissues only.
  - b. all facts of the meat industry beginning from stable to table.
  - c. all facts of the meat industry.
  - d. all organs in animal carcass.
9. One of the following organs affected with rigor mortis early usually within an hour of slaughter
  - a. Spleen
  - b. Heart
  - c. Kidney
  - d. Liver
10. The formation of slime layer and offensive odor in chilled poultry meat is due to growth of:
  - a. *Pseudomonas spp.*
  - b. *Campylobacter spp.*
  - c. *Clostridium spp.*
  - d. *Salmonella spp.*
11. Spoilage index of meat is accounted when the bacterial count in meat is:
  - a. 2 log cfu/g.
  - b. 3 log cfu/g.
  - c. 5 log cfu/g.
  - d. 7 log cfu/g.
12. One of the following is the main chemical changes occur in stored meat
  - a. Sweating
  - b. Loss of bloom
  - c. Denaturation of protein
  - d. Shortening
13. Neurotoxin present in canned meat indicate the presence of:
  - a. *Pseudomonas fluorescens*
  - b. *E. coli O157:H7*.
  - c. *Campylobacter jejuni*
  - d. *Clostridium botulinum*
14. Rigor mortis in meat occurs when the cross bridges is formed between the thin and thick filaments represented by:
  - a. troponin and tropomyosin
  - b. actin and myosin
  - c. cathapsin and collagen
  - d. myoglobin and albumin

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15. The carcass with tuberculosis is approved if inactive lesions are observed in organs with:
- no generalization in lymph nodes of carcass.
  - Pigmentation
  - jaundice
  - splenomegally
16. In glycolysis after animal slaughtering the oxidative phosphorylation process produce:
- 3 ATP molecules
  - 2 ATP molecules
  - 12 ATP molecules
  - 36 ATP molecules
17. The Bioluminescence technique to assess meat quality measuring bacterial:
- Ag.
  - ATP.
  - DNA
  - RNA
18. The carcass will be kept at refrigerator for 24 hours before giving final judgment if there is:
- toxemia
  - septicemia
  - jaundice
  - abscess
19. One of the following is the main cured salts used to preserve meat
- H<sub>2</sub>S
  - Sodium nitrate
  - Formaldehyde
  - Nitrosamine
20. The presence of potential faecal contamination in meat indicated the presence of :
- Coliform
  - Listeria
  - Clostridium
  - Campylobacter
21. Bacterial pathogens are the major cause of ----- problems in terms of occurrence and number of individuals affected.
- food quality
  - food safety
  - food management
  - quality assurance

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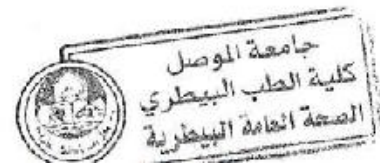
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22. ----- system is the systematic application of good practice to the prevention of food safety problems and thus producing safe food. Prevention has two key elements
- GMP
  - SOP
  - HACCP
  - SSOP
23. Carcass infested with hydatid disease and showing emaciation, edema and muscular involvement is -----.
- destroyed
  - condemned and destroyed
  - approved
  - condemned
24. Food defense focuses on protecting the food supply from----- contamination, with a variety of chemicals, biological agents or other harmful substances.
- intentional
  - unintentional
  - unideological
  - ideological
25. Awkward food safety practices and inadequate education and training of food workers are common sources of foodborne diseases.
- vector borne diseases.
  - foodborne diseases.
  - waterborne diseases.
  - air-born diseases.
26. ----- residues may occur in food as a result of industrial exposure, air or water pollution.
- Aflatoxin.
  - Heavy metal.
  - Microbial.
  - Physical contaminants.
27. The minimum and maximum temperatures for growth normally represent for an organism depend on:
- pH only
  - water activity only
  - O<sub>2</sub> only
  - pH and water activity.
28. The optimum temperatures for staphylococcal food poisoning organisms:
- 35 °C
  - 36 °C
  - 37 °C
  - 40 °C



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29. The ways in which water can become available for growth are:
- The water contains dissolved solutes such as sugars or salts.
  - The water is dehydration.
  - The water is present as water of crystallization.
  - The water is hydration.
30. Osmotic damage and cell death can be caused by:
- loss of turgor pressure which not essential for cell growth and division.
  - damage to cell membranes.
  - damage to membrane-bound DNA
  - damage in the cell cytoplasm and organelles.
31. The Obligate anaerobes microorganism includes:
- Pseudomonas spp.*
  - Campylobacter spp.*
  - Clostridium botulinum*
  - Salmonella spp.*
32. The food becomes slimy and is considered to be spoiled when numbers of bacteria are:
- 10,000,000 per gram of food.
  - 1,000,000 per gram of food.
  - 5,000,000 per gram of food.
  - 2,000,000 per gram of food.
33. Non-pathogenic microorganisms in foods:
- cause disease or illness in human.
  - can be used to produce desirable changes in food.
  - can not be used to produce desirable changes in food.
  - usually change the odor or flavor of food.
34. In raw food, spoilage bacteria are usually:
- present in much higher numbers than pathogens bacteria.
  - able to grow less rapidly than pathogenic
  - not inhibiting the growth of many bacteria
  - do not compete with pathogenic bacteria for nutrients.
35. Which type of bacteria can grow in vacuum-packed meat?
- Aerobes
  - Facultative anaerobes
  - Anaerobic psychrotrophs
  - Thermophiles



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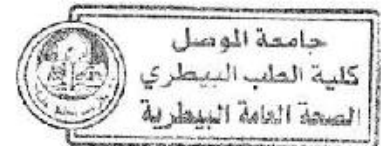
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36. Which is considered a critical control point in meat processing?
- Labeling
  - Storage temperature
  - Transportation time
  - Meat flavoring
37. Which organ is most suitable for detecting chemical residues in animals?
- Muscle
  - Kidney
  - Liver
  - Brain
38. What toxin does *Staphylococcus aureus* produce in contaminated meat?
- Endotoxin
  - Mycotoxin
  - Enterotoxin
  - Neurotoxin
39. *E. coli* O157:H7 is particularly dangerous because it can cause:
- Heart attack
  - Hemolytic Uremic Syndrome (HUS)
  - Respiratory infection
  - Muscle cramps
40. What is the main risk from eating spoiled meat without visible signs?
- Weight gain
  - Nutritional loss
  - Toxin-mediated food poisoning
  - Vitamin deficiency
41. Which symptom is NOT typically associated with meat-related food poisoning?
- Nausea
  - Diarrhea
  - Muscle stiffness
  - Rash
42. Which population is most vulnerable to food poisoning from meat?
- Healthy adults
  - Athletes
  - Children and immunocompromised individuals
  - Farmers



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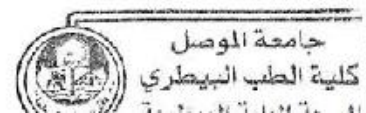
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43. Milk obtained by the complete milking of one or more healthy cows, which contains not less than ..... of milk solids-not-fat.
- 6.25%
  - 7.25%
  - 8.25%
  - 9.25%
44. The unit which is responsible for the synthesis of milk, and it has the secretory tissue is the:
- alveoli
  - lobes
  - small milk ducts
  - teat canal
45. The cow has the ability to produce every day 30 kg of milk =
- 1 kg fat
  - 1.2 kg fat
  - 1.4 kg fat
  - 1.6 kg fat
46. Bovine milk contains about ..... lactose, which is lower than that found in human milk of about 7%.
- 4.6 - 4.8%
  - 5.6 - 5.8%
  - 6.6 - 6.8%
  - 7.6 - 8.8%
47. Lactose is usually hydrolyzed by the ..... to galactose and glucose.
- lactate dehydrogenase
  - enzyme  $\beta$ -galactosidase
  - lactoperoxidase
  - lysozyme
48. .... is a complex chemical nature. It is an emulsion of fat in a watery solution of sugar, mineral salts, and with protein in the colloidal dispersion divided particles 1-100 millimicron in diameter.
- Biological definition
  - Chemical definition
  - Legal definition
  - Physical definition
49. Milk supplies hormones essential for the ..... of the neonate.
- growth
  - digestion
  - respiration
  - absorption



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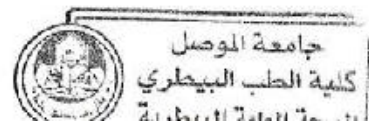
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50. .... must be released into the cow's bloodstream in order to start the emptying of the udder. This hormone is secreted and stored in the pituitary gland.
- Androgen
  - Oxytocin
  - Estrogen
  - Testosterone
51. A careful, visual check of this first milk enables the .....to detect changes that may indicate that the cow is ill.
- worker
  - milker
  - veterinarian
  - students
52. .... is an emulsion of water in oil.
- Butter
  - Milk
  - Cheese
  - Cream
53. Colostrum having twice the level of total solids (.....) and a very lower level of protein (5%) due to the low level of antibodies present.
- 5%
  - 15%
  - 25%
  - 35%
54. The importance of the .....is to prevent milk from leaking out of the teat and to prevent the entry of bacteria and other harmful microbes.
- Teat orifice
  - Alveoli
  - Lobules
  - Sphincter muscle
55. Chemical contaminants constitute ..... of milk contaminants.
- 14.57%
  - 85.43%
  - 50%
  - 26.57%
56. Some heavy metals, such as ....., are not essential to living organisms.
- iron
  - zinc
  - cobalt
  - cadmium



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57. .... is one of the side tests and can be used for determining the presence of clinical mastitis through the detection of visible particles in milk.
- California mastitis test
  - Strip cup test
  - Wisconsin mastitis test
  - Electrical conductivity test
58. The remaining fraction of ..... is absorbed in the digestive tract and hydroxylated in the liver to AFM1.
- Aflatoxicol
  - Aflatoxin G1
  - Aflatoxin B1
  - Aflatoxin B2
59. The pH of normal milk ranges from .....
- 6.5 to 6.7
  - 7.0 to 7.2
  - 5.7 to 5.9
  - 7.5 to 7.8
60. Molds commonly isolated from raw milk include .....
- Cryptococcus
  - Kluyveromyces
  - Toxoplasma
  - Fusarium
61. .... is the main cause of mastitis.
- Lactobacillus bulgaricus*
  - Streptococcus thermophilus*
  - Mycobacterium tuberculosis*
  - Staphylococcus aureus*
62. .... has become the gold standard for diagnosing mastitis in the last few years due to its simplicity, sensitivity, flexibility, and ability to produce millions of copies of the target DNA.
- ELISA
  - Electrical conductivity test
  - PCR
  - pH test
63. The most prevalent mycotoxin in milk and dairy products is .....
- aflatoxin M1
  - HT-2 toxin
  - T-2 toxin
  - Citrinin





64. .... residues in milk have been linked to Hodgkin's lymphoma (HL) and non-Hodgkin's lymphoma (NHL).
- Pesticide
  - Hormonal
  - Mycotoxin
  - Zearalenone
65. Yeasts found in raw milk may include:
- Aspergillus
  - Giardia
  - Candida
  - Leuconostoc
66. .... mastitis is characterized by the presence of obvious signs of infection, including abnormal milk, abnormal mammary gland, and changes in the animal's condition, body temperature, appetite, and hydration level.
- Chronic
  - Subclinical
  - Clinical
  - Subacute
67. One of the major products of silage fermentation is the:
- lactic acid.
  - acetic acid.
  - butyric acid.
  - propionic acid.
68. \_\_\_\_\_ defined as the amount of feed in Kg necessary to produce one Kg of weight gain.
- Feed conversion efficiency
  - Feed conversion ratio
  - Total mixed ration
  - Starch equivalent
69. One of the following gases produced after carbohydrates fermentations in ruminants.
- $NH_3$
  - $CH_4$
  - $H_2S$
  - $Cl_2$
70. The free access to water and feed by the animals known as:
- Ad libitum
  - Bloat
  - Mastication
  - Rumination

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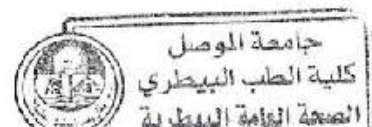
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71. The nitrogen content of the food is expressed as crude protein using the factor:
- 6.25
  - 2.25
  - 1
  - 4
72. The time spent by grazing cattle in rumination per day reach about:
- 2 hours.
  - 8 hours.
  - 4 hours.
  - 1 hour
73. Vitamin E considered as a biological antioxidant in association with the selenium-containing:
- Amylase.
  - Glutathione peroxidase
  - Lipase
  - Maltase
74. The water requirements of dairy cattle is about ----- liter /day
- 0.5
  - 4-15
  - 25-30
  - 38-110
75. The Digestible energy minus the energy lost in urine and methan can be expressed as:
- Gross energy.
  - Metabolizable energy.
  - Net energy.
  - Digestible energy
76. Some non protein nitrogenous compounds added to animal ration as a source of protein such as:
- Molasses
  - Soybean
  - Urea
  - Corn
77. The avoidable stress factors in poultry farm are -----,
- egg storage, breeder nutrition.
  - overcrowding, poor feed quality
  - high temperature, True infertility
  - transport, vaccination
78. Best disinfectant for the hatcheries is -----
- Quaternary ammonia compounds
  - Formalin
  - kmno<sub>4</sub>
  - Phenyl.



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79. Winter stress is severe on poultry when the house temperature goes below-----
- 15°C
  - 10°C
  - 5°C
  - 0°C.
80. Layer chickens typically receive ----- of feed throughout their life.
- one type
  - two types
  - three types
  - four types
81. Do not store poultry feed for more than----- days.
- 10
  - 45
  - 25
  - 14
82. -----which contains windows and holes in the side walls, used for ventilation, cooling and lighting.
- Open house.
  - Close house.
  - Large house.
  - brooder house
83. The best hatching results are obtained with normal atmospheric air, which usually contains-----.
- 15 % oxygen.
  - 20 % oxygen.
  - 22% oxygen.
  - 24% oxygen
84. Broiler grower feed is generally fed for -----days following the starter.
- 7-10
  - 14-16
  - 17-19
  - 20-22
85. One of the major causes of egg failing to hatch is -----.
- Dirty egg.
  - Poor shell.
  - Incubation faults
  - small egg
86. The percentage of crude protein in the starter feed for broiler chickens is ----- .
- 25
  - 23
  - 20
  - 18

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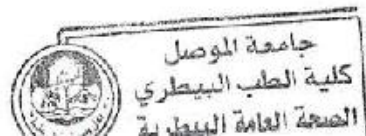
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87. Usually, ..... are clinically examined in their stables after adequate rest.
- goat
  - sheep
  - horses
  - cattle
88. Examination of animal joints is carried out by ..... of tendons. Joints should not contain fluid (edema) or swelling.
- palpation
  - naked eye
  - microscope
  - necropsy
89. The drugs given through the ..... includes drops, vapours, inhalation and volatile.
- mouth
  - nose
  - vagina
  - rectum
90. To ensure dairy cattle have good health condition and not being exposed to .....
- vaccination
  - parasitic infection
  - infectious abortion or mastitis
  - nutritional deficiency
91. Hook notch in horse teeth appears at ..... years and disappears at ..... years and reappears at ..... years then re-disappears at ..... years
- |    |    |    |    |    |
|----|----|----|----|----|
| a. | 7  | 8  | 13 | 14 |
| b. | 8  | 10 | 15 | 20 |
| c. | 10 | 15 | 20 | 25 |
| d. | 15 | 20 | 25 | 30 |
92. .... Present in modern animal farms include age, sex, and animal description
- Records
  - Medical list
  - Dentition
  - Certificate
93. In ..... canine and molar teeth erupt permanent only.
- Goat
  - Horse
  - Ewe
  - Boffalo
94. The placenta generally expels within:
- 2-4 hours
  - 5-6 hours
  - 6-7 hours
  - 7-8 hours



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95. The basic principle of cattle examination is to ensure that cattle are free of .....
- parasitic diseases
  - bacterial diseases
  - genetic defects
  - deformities
96. It is necessary to rest animal before slaughter keeping quality of the meat due to complete development of acidity of the muscles to prevent ..... growth
- putrefactive bacteria
  - lactic acid bacteria
  - viruses
  - parasites
97. Fresh meat must be chilled immediately after the post-mortem inspection and kept at a constant temperature of not more than .....
- 4°C for carcasses and cuts or 7C for offal.
  - 3°C for carcasses and cuts or 7C for offal.
  - 7°C for carcasses and cuts or 3C for offal.
  - 5°C for carcasses and cuts or 3C for offal.
98. .... the process of passing the slaughtered birds through a water bath with a temperature ranging from 45-57°C to facilitate the feather removal process.
- Chilling
  - Defeathering
  - Waterbath Stunning
  - Scalding
99. For the best poultry quality, the live birds should not be ..... prior to slaughter.
- feeding
  - watering
  - hold
  - stressed
100. one of the most important points to evaluate the efficiency of the slaughterhouse must be .....
- safety of workers
  - sufficient site
  - sufficient size
  - near markets

Best wishes

