# Kansas 4-H Sheep Quiz Bowl Manual

## Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Topic</th>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section A</td>
<td>Anatomy</td>
<td>48 Questions</td>
</tr>
<tr>
<td>Section B</td>
<td>Breeds and Associations</td>
<td>25 Questions</td>
</tr>
<tr>
<td>Section C</td>
<td>Breeding and Genetics</td>
<td>57 Questions</td>
</tr>
<tr>
<td>Section D</td>
<td>Evaluation</td>
<td>14 Questions</td>
</tr>
<tr>
<td>Section E</td>
<td>Health</td>
<td>122 Questions</td>
</tr>
<tr>
<td>Section F</td>
<td>Management</td>
<td>41 Questions</td>
</tr>
<tr>
<td>Section G</td>
<td>Meats</td>
<td>48 Questions</td>
</tr>
<tr>
<td>Section H</td>
<td>Nutrition</td>
<td>143 Questions</td>
</tr>
<tr>
<td>Section I</td>
<td>Parasites</td>
<td>18 Questions</td>
</tr>
<tr>
<td>Section J</td>
<td>Physiology and Endocrinology</td>
<td>38 Questions</td>
</tr>
<tr>
<td>Section K</td>
<td>Reproduction</td>
<td>113 Questions</td>
</tr>
<tr>
<td>Section L</td>
<td>Agronomy</td>
<td>23 Questions</td>
</tr>
<tr>
<td>Section M</td>
<td>Wool</td>
<td>17 Questions</td>
</tr>
<tr>
<td>Section N</td>
<td>Handling</td>
<td>10 Questions</td>
</tr>
<tr>
<td>Section O</td>
<td>Predator Control</td>
<td>8 Questions</td>
</tr>
<tr>
<td>Section P</td>
<td>Current Information</td>
<td>10 Questions</td>
</tr>
</tbody>
</table>
1. What are the nitrogen compounds called which make up proteins?
   \(A:\) \textit{Amino acids}

2. Which color blood cells play the biggest role in prevention of disease in an animal?
   \(A:\) \textit{White Blood Cells}

3. Substances produced from glands with no ducts that act as chemical messengers in the body are known as _____________.
   \(A:\) \textit{Hormones}

4. Blood consists of two major components. These are ___________ and _____________.
   \(A:\) \textit{Blood cells and plasma}

5. Body cells are made up primarily of _____________.
   \(A:\) \textit{Water}

6. When you study the structure of an animal you study its _____________.
   \(A:\) \textit{Anatomy}

7. The ____________ is the primary filtering point in an animal's body.
   \(A:\) \textit{Liver}

8. Name two parts of the central nervous system.
   \(A:\) \textit{Brain and spinal cord}

9. When discussing the nervous system, the letters "CNS" stand for _________________.
   \(A:\) \textit{Central Nervous System}

10. The structures that consist of strong fibrous bands that hold muscle and bone together are called _________________.
    \(A:\) \textit{Tendons}

11. Name the connective tissue that consists of strong fibrous bands that helps connect bone to bone at the joints.
    \(A:\) \textit{Ligaments}

12. The area of an animal that is completely encircled by the vertebral column on the top, by the ribs on the sides, and the sternum on the bottom is known as the _________________.
    \(A:\) \textit{Thorax or thoracic cavity}

13. Name two functions of skin.
    \(A:\) \textit{Temperature regulation, protection of the internal organs}

14. One function of bones is to act as a ________________ storage site for the body.
    \(A:\) \textit{Mineral}

15. Which tissue has the highest water content?
    \(A.\) \textit{Fat}
    \(\ast B.\) \textit{Lean}
    \(C.\) \textit{Bone}
16. Name the four compartments of a ruminant's stomach?
   A: Rumen, Reticulum, Omasum, Abomasum

17. In a sheep, what is commonly known as the "hardware compartment" in the digestive system?
   A: Reticulum

18. In a sheep, which compartment of the stomach has the greatest volume?
   A: Rumen

19. How many compartments are there is a lamb's stomach?
   A: Four (4)

20. Name the thin membrane that lines the wall of the abdominal cavity.
    A: Peritoneum

21. In a baby lamb, what is the name of the groove that allows milk to flow directly into the abomasum?
    A: Esophageal groove

22. Name the blood vessel that drains the stomach and intestines and carries blood to the liver.
    A: Portal vein

23. Bones grow in length from a cartilaginous area called the _____________.
    A: Epiphyseal plate

24. Name the vessel that carries blood to the lungs.
    A: Pulmonary artery

25. Name three divisions of the small intestine.
    A: Duodenum, Jejunum, Ileum

26. Where are the testes located in a cryptorchid ram?
    A: Abdominal cavity

27. What is the major function of the scrotum on a ram?
    A: To regulate the temperature of the gonad or testicle.

28. Where is the poll located on a sheep?
    A: On the top of the head

29. Which portion of a sheep's stomach is most similar to the human stomach?
    A: Abomasum (True stomach)

30. Name another term for the reticulum, one of the four compartments of the lamb's stomach?
    A: Honeycomb or Hardware collector

31. How many upper incisors does a ewe have?
    A: None (A ewe has an upper "pad", but no upper incisors)

32. What anatomical structure in the sheep is comparable to the human knee?
    A: Stifle joint

33. What vein in the neck does a veterinarian draw blood from or put in fluids?
    A: Jugular
34. The organ that makes urine is called a ______________.
   A: Kidney

35. The organ that receives the blood from the small intestine first is called the ______________.
   A: Liver

36. Name the enzyme and acid secreting portion of the ruminant stomach.
   A: Abomasum

37. Name the organ in which the embryo develops.
   A: Uterus

38. What is the esophagus?
   A: The tube from the mouth to the stomach

39. The honeycomb is another name for the ______________.
   A: Reticulum

40. How many mammary glands does a ewe have?
   A: 2

41. When does a ewe lamb usually get her first pair of permanent incisor teeth?
   A: 12-15 months of age

42. Where is the stifle?
   A: The joint nearest the body on the hind leg

43. The lining of the rumen is made up of what little projections?
   A: Papillae

44. Which compartment of the ruminant stomach is known as the fermentation vat?
   A: Rumen

45. What is the function of the omasum?
   A: Water removal

46. What does the bronchi connect?
   A: The lungs to the throat

47. What do we mean by cloven hoof?
   A: It is split in two parts

48. Where is a lamb's naval?
   A: Midline on the belly
BREEDS AND ASSOCIATIONS
SECTION B

1. What does the abbreviation K.L.A. stand for?
   A: Kansas Livestock Association

2. What do the initials U.S.D.A. stand for?
   A: United States Department of Agriculture

3. What do the initials F.D.A. stand for?
   A: Food and Drug Administration

4. What do the letters A.S.I. stand for?
   A: American Sheep Industry

5. What do the letters N.S.I.P. stand for?
   A: National Sheep Improvement Program

6. What was the first breed of sheep to originate in the United States?
   A: Columbia

7. Name four breeds of sheep that have originated in the United States.
   A: Columbia, Montadale, Polypay, Targhee, Debouillet, Katahdin, Navajo, Panama

8. Where did the Corriedale breed originate?
   A: New Zealand

   A: Dorset, Hampshire, Lincoln, Oxford, Shropshire, Southdown, Suffolk, Border Leicester, Clun Forest, Cotswald, Romney

10. Where did the Cheviot breed originate?
    A: Scotland

11. Where did the Finnsheep breed originate?
    A: Finland

12. What breeds were involved in the development of the Columbia breed?
    A: Lincoln and Rambouillet

13. What breeds were involved in the development of the Hampshire breed?
    A: Southdown, Wiltshire Horn and Berkshire Knot

14. What breeds were involved in the development of the Montadale breed?
    A: Cheviot and Columbia

15. What breeds were involved in the development of the Oxford breed?
    A: Hampshire and Cotswold

16. What breeds were involved in the development of the Polypay breed?
    A: Targhee, Dorset, Rambouillet and Finnsheep
17. What breeds were involved in the development of the Suffolk breed?
   A: Southdown and Norfolk

18. What breeds were involved in the development of the Targhee breed?
   A: Rambouillet, Columbia and Corriedale

19. This classification of sheep breeds includes generally the white-faced breeds of fine-wool type, the breeds primarily from crosses of fine-wool and long-wool types and highly prolific breeds:
   A. Ram breeds
   B. Dual purpose breeds
   *C. Ewe breeds

20. This classification of sheep breeds includes meat-type breeds used primarily as terminal sires for market lamb production.
   *A. Ram breeds
   B. Dual purpose breeds
   C. Ewe breeds

21. Which breed of sheep found in the United States today originated in North Africa?
    A: Tunis

22. Which breed of sheep renowned for its fine quality wool production originated in Spain?
    A: Merino

23. Give an example of a hair sheep breed found in the United States today.
    A: Barbados, Katahdin, St. Croix

24. Name a sheep breed found in the United States that originated in the U.S.S.R.
    A: Karakul, Romanov

25. What breed of sheep originated in the Netherlands and was first imported into the United States in the 1980's?
    A: Texel
1. A first generation crossbred lamb is known as a __________________.
   \( A: \) F1 cross

2. What is the term used to describe the taking of measurements of economically important traits in the live animal?
   \( A: \) Performance testing

3. Sheep have how many pairs of chromosomes on each cell?
   \( A: \) 27

4. Name a term used to describe a genetic combination where both genes are dominant or both genes are recessive.
   \( A: \) Homozygous

5. Explain what is meant when you have a correlation value of "0" for two selected traits.
   \( A: \) Selecting for one trait will have absolutely no effect on the other selected trait.

6. Name the process by which body cells divide and every cell from that division is identical.
   \( A: \) Mitosis

7. If a lamb is heterozygous in its genetic makeup for a specific trait, what is the term used to describe the gene that causes the lamb's phenotype for that trait?
   \( A: \) Dominant gene

8. Explain why more genetic progress can be made in a herd through selection of the ram versus the ewes.
   \( A: \) A ram will sire multiple progeny each year; whereas, a ewe in a normal breeding program can only give birth to a few lambs each year.

9. What will the sex of a lamb carrying a combination of the XY sex chromosomes be?
   \( A: \) Male

10. What is the term used to describe a genotype in which the heterozygous individual is superior to either the homozygous dominant or the homozygous recessive individual?
    \( A: \) Overdominance

11. Name the biggest disadvantage associated with using progeny performance data for selecting herd sires.
    \( A: \) Length of time needed to gather data results in loss of production time.

12. What is the term used to describe a trait that is determined by a gene carried on the X sex chromosome.
    \( A: \) Sex linked characteristic or trait

13. Name the process by which germ cells divide and the resulting cells have only 1/2 the normal number of chromosomes.
    \( A: \) Meiosis
14. An individual's genotype is determined at _________________.
   A. Birth
   B. Slaughter
   *C. Conception

15. What is the term used to describe a mating system in which closely related ancestors are mated
   back to back to each other to increase the concentration of desirable and/or undesirable genes?
   A: Inbreeding

16. Does the sire or the dam contribute the Y chromosome to a ram lamb?
   A: Sire

17. An abnormality that is present in an individual at the time of birth is termed ___________.
   A: Congenital

18. The structures in the cells that carry the genetic material are __________________.
   A: Chromosomes

19. Fertility will _______________ in sheep that have been inbred extensively.
   A. Increase
   B. Stay the same
   * C. Decrease

20. If a ram that is heterozygous for spider lamb syndrome is mated to a ewe that is heterozygous
    for spider lamb syndrome, what proportion of their offspring will be spider lambs?
    A: 25%

21. Superior performance in a trait be crossbred progeny over and above the average performance
    of their straight bred parents is termed _________________.
    A: Heterosis or hybrid vigor

22. What is the proper term used to describe genetic changes, such as changes in certain horned
    breeds that causes their descendants to be polled?
    A: Mutations

23. What is the term used to describe a specific trait that can only be seen in either males or females,
    but not in both sexes of a species?
    A: Sex linked characteristic

24. If a person refers to the "top side" of an animal's pedigree, they are referring to which side?
    A: Paternal

25. Of the total number of chromosomes found in any lamb's body cell, what proportion are
    maternal?
    A: One half

26. As a ram matures and increases in size he will sire lambs with ________________ birth weights.
    A. Heavier
    B. Lighter
    *C. The same
27. If a lamb is heterozygous in its genetic makeup for a specific trait, what is the term used for the gene that does not show up in the lamb's phenotype for that trait?
   A: Recessive gene

28. What is the term used to describe a genetic combination of one dominant and one recessive gene?
   A: Heterozygous

29. What is the term used to describe a specific animal's ancestry or lineage?
   A: Pedigree

30. What is the term used to describe a mating system which involves mating unrelated families within the same breed?
   A: Outbreeding

31. A characteristic of an animal that can be seen and/or measured such as color, weight, wool length is called ________________.
   A: Phenotype

32. The term used to describe the superiority of parent stock compared to the average of the herd from which they were selected is ________________.
   A: Selection differential

33. What is the term used to describe a mating system where 2, 3 or more breeds are combined?
   A: Crossbreeding

34. Which one of the following is a mating system which concentrates the inheritance of one or more outstanding ancestors?
   A. Outbreeding
   B. Linebreeding
   C. Backcross
   D. Crisscross

35. Which one of the following terms is used to describe the actual genetic makeup of an individual?
   A. Prototype
   B. Karyotype
   C. Genotype
   D. Phenotype

36. What does E.P.D. stand for in sire evaluation systems?
   A: Expected Progeny Difference

37. What does a trait ratio of 112 mean?
   A: The animal is 12% above the average in that trait

38. How is percent lamb crop weaned per ewe exposed calculated?
   A: Lambs weaned divided by the number of ewes exposed to rams multiplied by 100.

39. What are half-sibs?
   A: Lambs having the same sire or dam

40. Define contemporary group
   A: A group of animals of similar age, sex and management
41. What two factors determine an animal’s performance?
   A: Genetics and environment

42. Which of the following would be the most accurate basis for selecting herd sires to increase growth rate?
   A. Pedigree
   B. Visual appraisal
   C. Individual performance records
   *D. Progeny performance records

43. Traits that are ________________ in heritability normally show the greatest response in crossbreeding.
   *A. Low
   B. Medium
   C. High

44. What is the paper called that lists the sire and dam of a purebred animal?
   A: Registration paper

45. Why is it hard to recognize an animal that is a carrier of a recessive gene?
   A: There is no difference in appearance of an animal that carries two dominant genes for a trait versus an animal that carries one dominant and one recessive gene for that same trait.

46. All inherited characteristics are contained in the fertilized _________.
   A: Egg

47. In general reproductive traits are ____________ in heritability.
   *A. High
   B. Medium
   *C. Low

48. Reproductive efficiency equals the number of _____________ per ewe in the breeding flock.
   A: Lambs weaned

49. Chromosomes and genes come in _________________.
   A: Pairs

50. Entropion is a ________________ trait.
   A: Heritable

51. Sheep have ____________ chromosomes.
   A: 54 or 27 pairs

52. The heritability estimate for multiple birth is _____________.
   *A. Low
   B. Medium
   C. High

53. Name two examples of jaw defects.
   A: Overshot, undershot, monkey mouth, parrot mouth
54. Inbreeding usually ______________ the likelihood that an undesirable recessive trait will show up in the flock.
   A. Reduces
   B. Doesn't change
   *C. Increases

55. What do the letters F.E.P.D. stand for?
   A: Flock Expected Progeny Difference

56. What are a ram's progeny?
   A: His offspring

57. What do the letters E.B.V. stand for?
   A: Estimated breeding value
1. A long toe on a lamb's foot accentuates a weakness in what part of the leg?  
   A: Pastern

2. What term is used to describe an animal that has too much set to the hock joint as viewed from the side?  
   A: Sickle-hocked

3. The general term used to describe the way a lamb is built is commonly referred to as ________.  
   A: Conformation

4. When a ewe stands with her hocks close together when viewing her from behind, she is said to be _____________.  
   A: Cowhocked

5. Name a condition in sheep, when viewed from the front, the hooves turn out in opposite directions from each other.  
   A: Splay footed

6. What is the term that is used to describe the internal dimension on sheep through the thoracic and abdominal cavity?  
   A: Capacity or volume

7. When viewing a lamb from the rear, what should you look for to get a good indication of total carcass muscle?  
   A: Thickness and width through the stifle area

8. When evaluating a lamb, if it has a very square blocky appearance down his topline, it is an indication of _________________.  
   A: Condition or fat

9. When evaluating live sheep, what does spring and depth of rib indicate?  
   A: Amount of internal capacity

10. The area on a lamb's leg between the dewclaw and the hoof that should be set at a 45 degree angle is known as the _____________.  
    A: Pastern

11. When viewed from the front, a condition in sheep where the hooves turn in toward each other is known as _____________.  
    A: Pigeon toed

12. A lamb with .20 inches of fat thickness is considered to be ____________.  
    A. Overdone with excess fat thickness  
    *B. Relatively trim with high cutability  
    C. Underdone and in need of a longer feeding period

13. The horny growths on the legs of sheep located just above the hooves are known as ________.  
    A: Dewclaws
14. Will a lamb normally have more condition over his forerib or rear rib? Why?
   A: Forerib, because sheep normally fatten through their forequarter first
HEALTH
SECTION E

1. A bone disease in young animals where there is weak and faulty bone formation because they did not receive enough Vitamin D is known as ______________.
   A: Rickets

2. The blood condition in which the number of red blood cells is decreased below normal because of a deficiency of iron in the diet is called ____________.
   A: Anemia

3. When a ewe eats stunted or frosted grain sorghum it can result in a disease which interferes with the utilization of oxygen by the body tissues. This disease is known as ____________.
   A: Prussic Acid Poisoning

4. Which of the following is a condition in sheep that can occur if an animal happens to ingest some sharp metal object and that object punctures the digestive tract causing peritonitis?
   A. Vibriosis
   *B. Hardware Disease
   C. Rumenitis
   D. Brucellosis

5. A profusion of water feces is known as ____________.
   A: Diarrhea or scours

6. To prevent infections, a newborn lamb should have its navel dipped in what solution?
   A: Iodine

7. Arthritis in animals is an inflammation of the ____________.
   A: Joints

8. Eating moldy hay or clover can result in a disease condition known as sweet clover disease in which the major symptoms are ________________.
   A: Internal and external hemorrhaging

9. Club lamb fungus is considered a zoonotic disease. This means that ________________.
   A: It is transmitted from animals to people

10. What disease is caused by an organism commonly found in rivers, lakes, ponds and sewage?
    A: Leptospirosis

11. Warts are caused by which of the following:
    *A. Virus
    B. Bacteria
    C. Fungus
    D. Genetic makeup of the animal

12. What happens when a pregnant ewe is infected by leptospirosis?
    A: She aborts
13. What is a serious lamb disease caused by a protozoa that is also common in poultry?
   A: Coccidiosis

14. Overeating disease is more properly known as ____________________.
   A: Enterotoxemia

15. What type of organism causes ringworm?
   A: Fungus

16. What is a common name for Tetanus?
   A: Lockjaw

17. Name two reasons scours occur in lambs.
   A: Overeating, bacterial infection, viral infection, parasites

18. What is the broad name used to describe udder infections in ewes?
   A: Mastitis

19. Name a disease that may or may not cause problems in swine, but usually causes death in sheep.
   A: Pseudorabies

20. If a veterinarian makes a ewe swallow a magnet, what disease is he attempting to treat?
   A: Hardware disease

21. Grass tetany is a sign of what kind of mineral deficiency?
   A: Magnesium

22. Name a disease that is also known as Wool Sorter’s Disease.
   A: Anthrax

23. What kind of injection is IM?
   A: Intramuscular

24. What kind of injection is IV?
   A: Intravenous

25. Where should IM injections be given?
   A: In the muscles of the neck or muscles between the ribs

26. What kind of injection is SQ?
   A: Subcutaneous or under the skin

27. Where should SQ injections be given?
   A: Under the skin in the axillary region, under the skin along the ribs or under the skin in the neck.

28. The major cause of deaths in newborn lambs is _____________.
   A: Starvation

29. Describe Clip, Drip, Strip and Sip.
   A: As soon after birth as possible clip the navel of the newborn, dip the navel in 7% iodine, strip the ewe’s teats to insure that they are open and make sure the lamb gets a sip of colostrum.
30. Describe a hypothermic lamb. (Must get 2 of 3)
   A: Listless, cold to the touch, temperature below 101 degrees F

31. Toxoplasmosis is caused by a ________________.
   A. Bacteria  
   B. Virus  
   *C. Protozoa  
   D. Fungus

32. What young animal is often responsible for infecting sheep with Toxoplasmosis?
   A: Kittens

33. Why is epididymitis more common in the western states?
   A: Because of the use of large numbers of rams in a group

34. What part of the lamb is affected by septicemia?
   A: The bloodstream

35. How can septicemia be prevented in baby lambs?
   A: By disinfecting the navel

36. What part of an animal is affected by peritonitis?
   A: Abdominal cavity

37. How can peritonitis be prevented in baby lambs?
   A: By disinfecting the navel

38. At what age are lambs most often affected by E. coli scours?
   A: 1-3 days

39. What are the most effective ways in which to treat E. coli scours? (Name 2 of 3)
   A: Immediate rehydration (Given IV if warranted), keeping the lamb warm, appropriate antibiotic

40. What is the most effective navel disinfectant?
   A: 7% Iodine

41. When should 7% iodine be applied to the navel?
   A: At birth

42. What are the protective proteins in colostrum called?
   A: Antibodies

43. Why is it important that a lamb receive colostrum during its first 12 hours of life?
   A: Antibodies will no longer pass through the intestinal tract and into the blood after 12 hours, they will be digested and treated like all other proteins in the animals diet

44. Why must lambs receive colostral antibodies?
   A: Lambs are born immunodeficient, the only way that they can be protected from the viruses and bacteria in their environment is via the absorption of the antibodies in colostrum

45. Enterotoxemia is caused by what group of organisms?
   A: Clostridial bacteria
46. Is there any effective treatment for Clostridial infections?
   A: Yes, if the infection is noted in its earliest stage and treatment is initiated immediately

47. Why is treatment of Clostridial infections difficult?
   A: Because of the rapid progression of the disease

48. What is the most effective preventative measures recommended to control Enterotoxemia?
   A: Vaccination of the ewe 30 days prior to lambing. Be sure lambs receive ample colostrum. Booster vaccine lambs prior to placing on full grain diet.

49. What are the earliest clinical signs of tetanus?
   A: Stiffness of the limbs, stilted gait

50. Which of the following procedures is most likely to happen before a case of tetanus?
   A. Castration with a knife
   *B. Castration and tail docking with a rubber band
   C. Tail docking with a hot iron

51. Is treatment with successful recovery realistic when dealing with tetanus?
   A: No

52. What is the best method to prevent tetanus?
   A: Vaccination of the ewe 30 days prior to lambing. Be sure lambs receive ample colostrum. Booster vaccinate lambs at 3-4 weeks of age.

53. What is another name for ORF?
   A: Soremouth or Ecthyma

54. Soremouth scabs are infectious, what is the best method of disposing of them?
   A: Burning or disposal in a container where no animals will come in contact with them. You should wear gloves when working with sheep infected with soremouth and wash thoroughly when done.

55. What is another name for Chlamydia arthritis?
   A: Polyarthritis or Stiff Lamb disease

56. White Muscle disease is caused by a deficiency of ______________. 
   A: Vitamin E and/or Selenium

57. What part of the sheep is affected by upper respiratory infections?
   A: Nasal area

58. Lower respiratory infections occur in what parts of the sheep?
   A: Longs and bronchi

59. What is the common aftermath of acidosis?
   A: Death, founder

60. What do the letters E.A.E. stand for?
   A: Enzootic Abortion of Ewes

61. Give a common name for E.A.E.
   A: Chlamydia
62. Referring to rams, what does B.S.E. stand for?
   A: Breeding soundness examination

63. How are susceptible ewes exposed to Chlamydia?
   A: They ingest the organism by licking an aborted fetus or eating contaminated feed

64. What sheep abortion diseases can also cause human infections?
   A: Chlamydia, Toxoplasmosis, Salmonellosis, Listeriosis

65. Name three sheep abortion diseases.
   A: Chlamydia, Toxoplasmosis, Salmonellosis, Listeriosis, Vibriosis, Brucellosis, Leptospirosis

66. What is the protrusion of the vagina of a ewe called?
   A: Vaginal prolapse

67. What problem is caused when ewes have a vaginal prolapse in the late stages of pregnancy?
   A: When the vagina is prolapsed the cervix is unable to dilate normally, when the vulva is sewn so that the vagina can no longer prolapse the lambs are unable to be delivered without the removal of the sutures

68. Ketosis or pregnancy toxemia occurs in what term of gestation?
   A: Last trimester

69. Hypocalcemia is symptomatic of what blood deficiency in pregnant and lactating ewes?
   A: Calcium

70. What feed or mineral supplement should be provided to help prevent the problem of retained placenta?
   A: Selenium

71. Name a viral disease in which the first signs observed are an increased body temperature and swollen ears and muzzle.
   A: Bluetongue

72. What is a slow progressive disease of the central nervous system which requires necropsy and dissection of the brain to properly diagnose?
   A: Scrapie

73. U.S.D.A. has an eradication program for the elimination of _________________.
   A: Scrapie

74. What animals intestinal tract is infected with toxoplasmosis?
   A: Cats. This makes them a possible carrier of the disease to sheep and humans

75. The letters O.P.P. stand for _________________________.
   A: Ovine Progressive Pneumonia

76. Ovine Progressive Pneumonia is caused by a _________________________.
   A. Bacteria
   B. Protozoa
   *C. Virus
   D. Fungus
77. Footvax is a vaccine developed for help in control of _________________.
   A: Contagious Footrot

78. Routine foot trimming may be used to help control and identify _________________.
   A: Footrot

79. Uterine prolapse describes what condition?
   A: The expulsion of the uterus through the birth canal to the outside of the body after delivery of the newborn.

80. Name the vitamin and mineral deficiency that causes white muscle disease.
   A: Vitamin E, Mineral-Selenium

81. If you are vaccinating for overeating you will use _________________.
   A: Clostridial perfringens type C and D

82. Name a substance that may be used in a foot bath to help prevent footrot.
   A: Zinc sulfate, formaldehyde, copper sulfate (last resort)

83. Name a neurological disease with a long incubation period.
   A: Scrapie

84. Name a condition of the abdomen that sometimes develops after an extended case of kidney stones.
   A: Water belly

85. Sheep that walk in a circle should be suspected of having what disease?
   A: Listeriosis, encephalitis, circling disease, rabies

86. A rigid saw-horse like stance, stiffness and contracted muscles are typical of what common disease?
   A: Tetanus or lockjaw

87. ________________ is a disease characterized by a hard, swollen udder.
   A: Mastitis

88. What viral disease of sheep can be contacted by humans?
   A: Soremouth or ovine ecthyma

89. Bluebag is another name for what?
   A: Mastitis

90. What drug was cleared in 1984 for use in feedlot lambs for the prevention of coccidiosis?
   A: Lasalocid or Bovatec

91. What do you call a disease that develops slowly and runs a prolonged course?
   A: Chronic

92. What do you call a large protein molecule produced by the immune system as a result of vaccination or disease which protects the animal from that specific disease?
   A: Antibody

93. What do you call a disease which affects only a certain portion of the body?
   A: Localized disease
94. Enterotoxemia type C usually affects lambs at what stage of their lives?
   A: Within the first few weeks

95. A dreaded respiratory disease in which affected animals become depressed, go off feed, may cough, show some respiratory distress, have an accumulation of nasal exudate and have an accompanying high fever is _________________.
   A: Pneumonia

96. What is the normal body temperature of a sheep within 1 degree?
   A: 102.3

97. What common nutritional disease resulting from improper calcium and/or phosphorus levels ultimately causes rupturing of the bladder of the urethra?
   A: Water belly, urinary calculi, urolithiasis, calculus

98. The Brucella ovis organism is responsible for what venereal disease in rams?
   A: Epididymitis

99. When ewes are fed too low an energy level in late gestation, what nutritional disease is likely to develop?
   A: Ketosis, pregnancy toxemia, twin lamb disease, pregnancy disease, lambing paralysis

100. During what part of a lamb’s life do the globulins in colostrum pass most rapidly across the wall of the gut?
    A: The first 1-2 hours of life

101. Metritis is the infection of the _________________.
    A: Uterus

102. If a ewe has mastitis, what type of sample will a veterinarian take to run a culture and sensitivity test on?
    A: Milk

103. What is the correct name for a twisted stomach?
    A: Displaced abomasum

104. Milk fever is the common name for a condition of hypocalcemia primarily due to the stress of _________________.
    A: Lactation

105. Name two components found in colostrum that makes it good for the lamb.
    A: Antibodies, energy, protein, vitamins

106. How do the antibodies in colostrum get into the lamb’s bloodstream?
    A: They are absorbed through the intestinal wall without being digested

107. Why must a lamb receive colostrum within the first hours of life?
    A: As the gut matures it cannot absorb the antibodies undigested

108. What is a balling gun?
    A: Implement used to give sheep pills

109. Zinc sulfate is recommended for the treatment of what disease?
    A: Footrot
110. What is one rapid method to relieve a bloated animal?
   A: Stomach tube or ruminal incision

111. What is a condition in which there is a build up of gases that are unable to escape the rumen, causing an extension on the left side of the sheep?
   A: Bloat

112. Aureomycin is ____________________.
   A: Chlortetracycline

113. Rickets in lambs is caused by a deficiency in what vitamin?
   A: Vitamin D

114. What is entropion?
   A: Inverted eyelids

115. What happens in nitrate poisoning?
   A: Nitrates react, reducing the blood's ability to carry oxygen and the ewe suffers tissue suffocation

116. What disease often develops when a sheep can't belch?
   A: Bloat

117. What is pneumonia?
   A: Disease of the lungs

118. What is one way to keep lambs from catching pneumonia?
   A: Keep them dry and out of drafts

119. What is terramycin?
   A: An antibiotic

120. What is an antibiotic?
   A: A product that is effective in killing bacteria

121. What is a vaccine?
   A: A product that is given to an animal to stimulate the immune system so that the animal is protected from getting the disease.

122. A disease prevalent in sheep grazing rapidly growing legumes and results in a distended rumen is called ____________________.
   A: Bloat
1. What do you call a female sheep?  
   A: Ewe

2. What do you call an intact male sheep?  
   A: Ram, Buck

3. What do you call a castrated male sheep? Spell your answer.  
   A: Wether

4. A sheep that is one year old is known as a _________________.  
   A: Yearling

5. The method of fighting among rams is called ________________.  
   A: Butting

6. A cryptorchid is a ram with what characteristics?  
   A: Failure of one or both testicles to descend into the scrotum

7. What are the advantages for shearing lambs. List 3.  
   A: Will stay cooler in the summer, will eat better, faster and easier to prepare for show, perform with better feed efficiency

8. In months, what is the approximate normal weaning age of lambs in Kansas?  
   A: 2-3

9. Other than providing a palatable, nutritious creep feed, what can you do to the creep area to entice usage?  
   A: Provide a light or heatlamp, keep area dry and bedded

10. ADG on a performance report means ________________.  
    A: Average Daily Gain

11. Comparing rams and wethers, which will have the higher rate of gain?  
    A: Rams

12. Name two management practices that may be performed prior to lambing which will give the lamb greater exposure to the udder and teats of a ewe.  
    A: Shearing and crotching

13. A tool used for docking and castrating that crushes and cuts at the same time is called an __________.  
    A: Emasculator

14. How many lower incisor teeth does a 10-month old lamb have?  
    A: 4 pair (8 teeth)

15. How many upper incisor teeth does a 10-month old lamb have?  
    A: None, sheep don’t have upper incisors

16. At what age is a ewe likely to be the best milker?  
    A: 4 years
17. How many permanent teeth does a 2-year old ewe have?
   A: 2 paid (4 teeth)

18. What is a gummer ewe?
   A: A ewe that has lost all its incisor teeth

19. What are the normal dimensions of a lambing jug?
   A: 4 - 5 foot by 4 - 5 foot

20. What is meant by stanchion grafting a lamb to a ewe?
   A: Placing the ewe’s head and neck in a set of stocks where she can eat and drink, but must allow lambs to nurse. It usually takes 3-5 days for the ewe to accept the lamb

21. Before what age is it best to dock and castrate a lamb?
   A: 2 weeks

22. What is a fairly standard pencil shrink percentage that is deducted from the live weight of lambs hauled a short distance to market?
   A. 2%
   *B. 4%
   C. 6%
   D. 8%

23. Where is the best place for a ewe to lamb?
   A: Weather permitting in the pasture otherwise in a clean, dry, well bedded jug

24. Name a tool used for docking and castrating that crushes.
   A: Burdizzo

25. What piece of equipment is useful in foot trimming?
   A: Tilt cradle

   A: Ear tags, ear notching, tattooing, paint branding, electronic microchips

27. What are two benefits of creep feeding?
   A: Increased weaning weights, reducing weaning stress, lambs will be bunk broke at weaning

28. Give three good reasons for culling a ewe.
   A: Poor performance by her offspring, bad mouth, bad feet, not pregnant, poor udder

29. What is the process in which the testicles of ram lambs are removed?
   A: Castration

30. Loss of weight during shipping is called __________.
    A: Shrink

31. Will sheep eat more or less than normal on a hot summer day?
    A: Less

32. Underfeeding ewe lambs during their first year of life will __________ their first breeding.
    A: Delay
33. What is the first requirement necessary to carry out a constructive flock improvement program?
   A: Complete identification of all animals

34. What is the National Sheep Improvement Program?
   A: A genetic evaluation system

35. What do F.E.P.D. s do?
   A: Predict performance differences of lambs sired by different rams, they do not predict actual performances. They compare sheep born in different years, sheep of different sexes and under different management considerations.

36. Name two things that F.E.P.D. s do not adjust for.
   A: Incorrect data, preferential treatment of individual lambs, incorrect pedigrees

37. Name two things you must know in order to calculate an adjusted 60 day weight for a lamb.
   A: Dam's age, lamb's age at weighing, lamb's weight at weighing, lamb's status at birth and how it was raised, sex of the lamb

38. The adjusted weights of all lambs raised by one ewe is ________________.
   A: A good indicator of the milking ability of that ewe

39. What factors are involved in determining a contemporary group for lambs at weaning?
   A: Contemporary groups are lambs of the same age and sex, raised under the same management considerations

40. How do you figure a 60 day adjusted weaning weight for a lamb?
   A: \[
   \frac{\text{Actual Weight}}{\text{Actual Age}} \times 60 \times \text{Adjustment Factor}
   \]

41. Why is there no adjustment factor for a ewe that is 4 years old?
   A: Because the ewe is at the optimum age for milk production or mothering ability so no compensation factor is needed
1. A crown roast of lamb comes from what wholesale cut?
   A: Rib or rack

2. Which part of a lamb carcass should make up the largest percent of the lamb?
   A: Leg

3. How many calories does a 3 oz. roasted and trimmed serving of lamb contain?
   A: 176

4. About how many pounds of live lamb does it take to equal 1 pound of boneless, trimmed retail cuts?
   A. 1.1
   B. 2.2
   *C. 3.3
   D. 4.4

5. External fat thickness of a lamb carcass is measured over the ribeye muscle between which ribs?
   A: 12<sup>th</sup> and 13<sup>th</sup>

6. Why do many in the sheep industry want to be paid on the basis of their yield grade?
   A: Yield grade is one method in which producers can be paid a premium for lean rather than fat

7. Which of the following lambs is likely to have the highest dressing percentage? A lamb with:
   A. .1 inch fat
   B. .2 inch fat
   C. .3 inch fat
   *D. .4 inch fat

8. A blade chop comes from which wholesale cut on the lamb carcass?
   A: Shoulder

9. Traditionally speaking, which of the following has been the least important in establishing the sale price on a group of commercial slaughter lambs?
   A. Live weight
   *B. Amount of muscle
   C. Fat covering
   D. Dressing percentage

10. How many ribs do lambs have?
    A: 13 or 14 pairs

11. List the four major primal cuts of lamb.
    A: Leg, loin, rack, shoulder

12. What is the approximate per capita consumption of lamb in the United States?
    A: 1.7 lbs of carcass weight or 1.5 lbs of retail weight
13. Which of the following is the largest wholesale and retail cut in the lamb carcass?
   A. Loin
   *B. Leg
   C. Rack
   D. Shoulder

14. What USDA yield grade would imply an extremely trim carcass?
   A. USDA Yield Grade 5
   B. USDA Yield Grade 3
   *C. USDA Yield Grade 1

15. Which of the following are three major factors used to determine lamb quality grade?
   A. Fat cover, loineye area, kidney and pelvic fat
   *B. Conformation, flank streaking, maturity
   C. Flavor, palatability, tenderness

16. Which of the following will have a low dressing percentage?
   A. Lambs that are full
   B. Lightweight, unfinished lambs
   C. Sheep that are carrying heavy fleece
   *D. All of the above

17. What is the approximate age of a lamb carcass?
   A: 2 to 14 months old

18. What fat measurement is commonly used to help determine the total amount of fat in a carcass?
   A: Fat thickness at the 12th rib

19. What are the USDA Yield grades for sheep?
   A: 1, 2, 3, 4, 5

20. Where is the primary fat measurement usually taken on live sheep?
   A: Between the 12th and 13th rib

21. How is a lamb carcass yield grade calculated?
   A: Yield Grade = .4 + (Adjusted 12th rib fat thickness x 10)

22. Name three factors that influence quality grade.
   A: Age (maturity), conformation (muscling) and fat streaking

23. What is the normal range for dressing percent of choice lambs?
   A: 45% to 58%

24. Which of the following refers to cutability?
   *A. Proportion of the meat that is actually saleable at the meat counter
   B. Amount of muscling in the leg
   C. How hard the meat is to cut
   D. The amount of kidney and pelvic fat

25. An average ribeye area for a 100 lb. lamb would be ________________.
   A: 1.5 to 3.2 inches
26. Name two primal cuts of sheep found in the hindquarter.  
   A: Leg and loin

27. The lamb carcass is ribbed between which ribs to determine ribeye size?  
   A: 12th and 13th ribs

28. What are variety meats?  
   A: Edible organs and by-products

29. What does it mean to exsanguinate a lamb?  
   A: Bleed (Remove all the blood)

30. What is K.P. fat?  
   A: Kidney and pelvic fat

31. What does it mean to eviscerate a lamb?  
   A: Remove the entrails (guts)

32. The grading system used to estimate the percentage of closely trimmed, boneless retail cuts from  
   the four major primal cuts is called ________________.  
   A: Yield grade

33. What are the quality grades for lambs?  
   A: Prime, Choice, Good, Utility

34. Which of the following is not a factor in determining USDA sheep carcass yield grades?  
   A. Conformation grade of the legs
   B. Ribeye area
   C. Percent kidney and pelvic fat
   D. None of the above
   E. All of the above

35. Which of the following is not a factor in determining USDA sheep carcass quality grades?  
   A. Conformation
   B. Maturity
   C. Carcass weight
   D. Flank fat streaking
   E. All of the above

36. Name two factors that influence dressing percentage.  
   A: The mount of fill, degree of finish (fatness), weight of the pelt, muscling

37. Tripe comes from what internal sheep organ?  
   A: Stomach

38. How many USDA yield grades are there?  
   A: 5

39. Name the five USDA yield grades in order from the fattest to leanest?  
   A: USDA 5, USDA 4, USDA 3, USDA 2, USDA 1

40. Name three of the four USDA quality grades of sheep.  
   A: Prime, Choice, Good, Utility
41. What is the average desirable market weight for slaughter lambs in the United States?
   A: 120 - 140 lbs

42. Name the greatest factor in determining the cutability of a lamb.
   A: The amount of condition or fat it possesses

43. Name three methods most used for long term meat preservation.
   A: Freezing, curing, canning

44. What must happen to meat before it can be USDA graded?
   A: It must first pass inspection

45. What is the purpose of meat inspection?
   A: Eliminate diseased or contaminated meat from the consumer market

46. What is the term used to describe the proportion of carcass on the rail after slaughter in relation to the live weight?
   A: Dressing percent

47. What is the term that refers to the fatness of a lamb?
   A: Condition or finish

48. Sheep should be held off of feed for at least how many hours prior to slaughter?
   A: 20 to 25 hours
NUTRITION
SECTION H

1. What are 2 feed ingredients that can aid in the prevention of urinary calculi?
   A: Addition of limestone, ammonium chloride or salt to the ration

2. What mineral is toxic to sheep at doses appropriate for cattle?
   A: Copper

3. Selenium and Vitamin E deficiencies can cause what disease?
   A: White muscle, stiff lamb

4. What kind of poisoning is associated with the feeding of forage sorghums, corn stalks, oat hay and other cultivated fertilized forages?
   A: Nitrate, NO3

5. Name the four stomach compartments of a sheep.
   A: Abomasum, Omasum, Rumen, Reticulum

6. Name three types of protein supplements
   A: Soybean meal, Cottonseed meal, Sunflower meal, Linseed meal, Peanut meal, Fish meal

7. What do the letters T.D.N. stand for?
   A: Total digestible nutrients

8. What is the first milk from the ewe called?
   A: Colostrum

9. In which form do mature feeder lambs least prefer to consume corn?
   *A. Finely ground
   B. Cracked
   C. Whole

10. The process in which regurgitation, resalivation and reswallowing occurs is called
    ___________.
    A: Rumination

11. On which of the following diets will a 90 pound feeder lamb probably gain at the slowest rate in a typical Kansas July?
    A. 60% corn
    B. 60% wheat
    *C. 60% oats
    D. 60% barley

12. What does it mean to creep feed lambs?
    A: Provide palatable feed for lambs where the ewes don t have access to it

13. Grains are usually deficient in what mineral needed for growth and development?
    A: Calcium

14. Name 3 of the 4 fat soluble vitamins that mature sheep are known to require.
    A: A, D, E, and K
15. Name the stomach compartment where fermentation takes place.  
   \textit{A: Rumen}

16. What class of drugs is commonly used in starter rations?  
   \textit{A: Antibiotics}

17. Briefly explain the difference between the nutritional needs of young versus mature animals.  
   \textit{A: Young animals need additional nutrients for growth, while mature animals just need enough nutrients to maintain body tissues already present}

18. If a 2 month old lamb receives a ration containing nutrients over and above his maintenance requirements, the excess nutrients will then go toward \underline{______}.  
   \textit{A: Growth}

19. Feed efficiency in feedlot lambs is described as pounds of \underline{______} per pound of \underline{______}.  
   \textit{A: Feed, gain}

20. Balancing ration that contains all necessary nutrients at the proper requirement levels, at minimum cost to the shepherd is known as \underline{______________}.  
   \textit{A: Least-cost ration formulation}

21. Nutrient requirements for the pregnant ewe are highest during which trimester?  
   \textit{A: Last}

22. Name 3 high energy concentrates.  
   \textit{A: Corn, milo, barley, oats, wheat}

23. Grains are higher in which mineral when compared to forages?  
   \textit{A: Phosphorus}

24. Name the primary avenue of water intake, and the primary avenue of water loss in the normal animal.  
   \textit{A: Drinking water and urinary loss}

25. The breaking down of feedstuffs by the body is known as \underline{__________}.  
   \textit{A: Digestion}

26. What term describes the amount of feed a sheep will clean up each day?  
   \textit{A: Full feed or ad-libitum}

27. Feeds that are high in fiber content and low in energy content are referred to as \underline{______}.  
   \textit{A: Roughages}

28. Corn is a poor source of what mineral?  
   \textit{A: Calcium}

29. What mineral contains sodium and chlorine and is generally fed free choice to sheep?  
   \textit{A: Salt}

30. What abundantly available feed grain typically has the highest energy value?  
   \textit{A: Corn}
31. What nitrogen-containing compound can be fed to a sheep to meet up to 30% of its protein requirement, but can be toxic at higher levels?
   A: Urea

32. What legume hay generally has the highest feeding value for sheep?
   A: Alfalfa

33. What is the function of the rumen microbial population?
   A: Digest fiber, utilize non-protein nitrogen (NPN)

34. What is one of the best choice of products given orally to supply the necessary energy to a pregnant ewe with signs of pregnancy toxemia?
   A: Propylene glycol

35. What percent of their body weight will a lamb typically consume in dry feed each day?
   A: 3-5%

36. What mineral is found in abundance in bone meal and limestone?
   A: Calcium

37. As a ruminant the sheep bases its diet on what class of feedstuffs?
   A: Roughages

38. Name a common feed grain that is high in fiber and used for sheep>
   A: Oats

39. Corn is a good source of _____________.
   A: Energy

40. What is the name of the largest of the four compartments of a sheep’s stomach?
   A: Rumen

41. Name three of the nutrients required for sheep to maintain their bodies and grow.
   A: Protein, energy, vitamins, minerals, water

42. The most limiting nutrient in ewe nutrition is ________________.
   A: Energy

43. At what stage in the ewe’s production cycle is protein the most critical?
   A. Open
   B. Early gestation
   C. Late gestation
   *D. Lactation

44. If a ewe is underfed protein during lactation, what is the likely negative result?
   A: She will be a poor milker

45. Increased salt intake requires an increase in the consumption of _____________.
   A: Water

46. What are two minerals closely interrelated, particularly in the development and maintenance of normal bone structure?
   A: Calcium and Phosphorus
47. The levels of which class of nutrients in feeds is largely determined by the level in the soil on which the feeds are grown?
   A: *Trace minerals*

48. Under normal nutritional conditions, when is the ewe likely to weigh the least?
   A: *Weaning time*

49. Excess fatness of replacement ewe lambs between birth and first lambing should be avoided for what major reason?
   A: *Her future milk production is reduced*

50. On a ewe condition scoring system of 0-5, the desired condition score range to maintain the ewe year round is:
   A. 1 ½ to 2 ½
   *B. 2 ½ to 3 ½
   C. 3 ½ to 4 ½
   D. 4 ½ to 5

51. A good quality commercially prepared lamb milk replacer will contain _______% fat and _______% protein.
   A: 25-30, 20-25

52. Give one reason why it is recommended to feed orphan lambs cold rather than warm milk replacer.
   A: *Cold doesn t sour as quickly, lambs consume a smaller amount of cold milk replacer each time they nurse, but they nurse more often*

53. The trade name for the product lasalocid, an ionophore which is FDA approved for sheep is __________.
   A: *Bovatec*

54. What do the letters T.D.N. stand for?
   A: *Total Digestible Nutrients*

55. What do the letters A.D.G. stand for?
   A: *Average Daily Gain*

56. What is the name for the rhythmic muscular contractions which occur in the rumen?
   A: *Peristalsis*

57. What is the greatest importance of salt in a livestock ration?
   A: *Stimulates appetite*

58. What are two factors that influence nutrient requirements of an animal?
   A: *Sex, weight, level of production, nutrient intake, environment*

59. What is feed efficiency?
   A: *The amount of feed it takes for an animal to produce a pound of gain*

60. When lambs are maintained on a high concentrate diet, what mineral is more likely deficient?
   A: *Calcium*

61. The raw source of Vitamin A found in a feedstuff is called ____________.
   A: *Carotene*
62. Where do sheep store Vitamin A during times of abundant intake?
   A: Liver and body fat

63. Rank the five nutrient groups from the one with the highest amount needed in the diet to the one with the lowest amount needed in the diet.
   A: Water, energy, protein, minerals, vitamins

64. What is the function of the esophageal groove in a lamb?
   A: Allows milk to bypass the rumen and reticulum for digestion in the abomasum

65. Which of the following minerals has been called the master mineral because it is involved in practically all of the metabolic processes in the body?
   A. Sodium
   B. Iron
   *C. Phosphorus
   D. Potassium

66. Define ration.
   A: Feed given to an animal over a 24 hour period

67. What mineral is likely to be deficient when sheep are maintained on a high roughage diet?
   A: Phosphorus

68. Which of the following would be expected to have the highest protein content?
   A. Prairie hay
   *B. Alfalfa hay
   C. Wheat straw
   D. Sorghum silage

69. Minerals, especially trace minerals such as selenium, are _______________ at high levels of intake.
   A: Toxic

70. Corn silage, pasture and hay are examples of what type of feed?
   A: Roughages

71. Iron, phosphorus, calcium and magnesium are examples of which of the following types of nutrients?
   A. Protein
   *B. Minerals
   C. Vitamins
   D. Energy

72. What are two ways that sheep usually receive adequate quantities of Vitamin D?
   A: By synthesizing it in their own bodies during exposure to direct sunlight or from sun cured hay

73. When corn is overfed to lambs not used to concentrates, what is a common result?
   A: Acidosis, founder

74. What type of sheep feed is most commonly high in Vitamin A?
   A: Green, leafy legume forage
75. What enables sheep to eat and digest the cellulose in hay?  
   A: Bacteria and other microbes in the rumen

76. What do the letters N.P.N. stand for?  
   A: Non-protein nitrogen

77. Into what structure does the food pass when it leaves the stomach?  
   A: Small intestine

78. What is the most practical method you can use to measure a lamb’s performance during the feeding period?  
   A: Weighing him periodically

79. Which basic nutrient is found in the largest quantity in an animal’s body?  
   A: Water

80. What is the primary purpose of chewing food?  
   A: Break feedstuffs into smaller particles, allowing better contact with the digestive enzymes

81. The specialized system in which food is broken down is called the ________________.  
   A: Digestive tract

82. Flushing can help increase ________________ efficiency in a sheep flock.  
   A: Reproductive

83. As ruminant animals, sheep utilize many plant materials which would otherwise be __________ to humans.  
   A: Inedible

84. TDN is an indication of the ________________ of a feed.  
   A: Energy value

85. Sheep are ruminant animals while pigs are monogastric animals. Briefly explain the difference.  
   A: Ruminants have complex, 4 compartment stomachs while monogastrics have simple, 1 compartment stomachs

86. Sunshine and sun-cured hay are good sources for Vitamin __________.  
   A: Vitamin D

87. Which nutrient serves as the body’s built in cooling system?  
   A: Water

88. Which nutrient serves as the body’s built in heating system?  
   A: Energy

89. What do the letters I.U. stand for when applied to vitamins?  
   A: International Units

90. How much more energy does it take for a lamb to gain a pound of fat than a pound of lean muscle tissue?  
   A: 2.25 more energy needed for fat tissue gain

91. When added to sheep rations, what is the primary function of molasses?  
   A: To increase or improve palatability
92. What is a common digestive upset that can occur in sheep if you feed them straight alfalfa hay?  
A: Bloat

93. What is the function of the esophagus?  
A: Carries or provides a passageway for food from the mouth to the stomach

94. Ruminants have the ability to synthesize the __________ vitamins in the rumen.  
A: B-complex

95. The science of all processes which take place when feed is given to animals is called __________.  
A: Animal nutrition

96. Skin, hair, hooves and horns are made up primarily of what basic nutrient?  
A: Protein

97. The colon is also known as the ________________.  
A: Large intestine

98. Before formulating a ration you must know ________________ and ________________.  
A: What feedstuffs you have available, the animal's nutrient requirements

99. Explain briefly how rumen bacteria and the ruminant animal can benefit each other in their life cycles.  
A: Ruminants provide a home or good environment for bacteria to grow and develop whereas bacteria help ruminants digest fibrous feedstuffs and synthesize some nutrients for the animal's use

100. When sheep overeat a concentrate source, or go off feed then overeat when re-exposed to the feed source, a condition can result where there is an upset in the rumen pH. This is known as ________________.  
A: Lactic acidosis

101. Cleaning out the feed bunk at least once a day will ________________.  
A: Encourage greater feed intake

102. What is tocopherol?  
A. Vitamin A  
B. Vitamin B  
C. Vitamin C  
*D. Vitamin E

103. What is ascorbic acid?  
A. Vitamin A  
B. Vitamin B  
*C. Vitamin C  
D. Vitamin D

104. Why is salt iodized?  
A: To supply iodine which helps control goiter, a condition of the thyroid.
105. Why is it important to change a sheep’s ration slowly?
   A: To give the rumen bacteria time to adapt to a new feed

106. Molasses is a good source of ____________ and is used in many feeds to increase palatability.
   A: Energy

107. The energy remaining after digestive losses, gas losses, urinary losses and the work of digestion are deducted is called which of the following?
   *A. Gross energy
   B. Net energy
   C. Metabolizable energy

108. Of the five basic nutrient groups, which is the cheapest in almost all cases?
   A: Water

109. Are bacteria or protozoa usually present in the rumen in greater numbers?
   A: Bacteria

110. Why is it important that the newborn lamb receive colostrum milk?
   A: To provide antibodies for immunity from disease. To provide Vitamin A.

111. What happens when milk first gets into the abomasum?
   A: It coagulates, glabbers, or clots like cottage cheese

112. What kind of gas is produced in the rumen?
   A: Methane, carbon dioxide

113. The organ which secretes digestive enzymes into the small intestine is called the __________.
   A: Pancreas

114. How can you tell when the rumen is contracting?
   A: Watch the flank, in front of the left hook, listen at the left flank

115. When a lamb nurses, into which compartment of the stomach does the milk enter?
   A: Abomasum

   A: A ration which furnished all the nutrients in the proper amount and proportion to properly nourish an animal for 24 hours

117. Which intestine comes first?
   A: Small intestine

118. When a ewe belches, where does the gas go?
   A: 80% goes into the lungs to be exhaled, 2% goes out the mouth directly

119. What is a cud?
   A: The feed the ewe has brought up from the rumen and is re-chewing

120. Where does the lamb get the organisms that live in its stomach?
   A: From touching the mouths of other sheep
121. What does urea substitute for in the diet?
   A: Protein

122. The first milk from a ewe following parturition is called _____________.
   A: Colostrum

123. What nutrient if left out of the diet will cause death first?
   A: Water

124. What is ruminating?
   A: Chewing the cud

125. Which is fermented in the rumen first, hay or corn?
   A: Corn

126. What is the primary reason for considering urea as a nitrogen source in ruminant rations?
   A: Cost

127. Roughages are _______ in fiber and _______ in energy compared to concentrates.
   A: Higher, lower

128. List 4 macro minerals required by sheep.
   A: Calcium, phosphorus, magnesium, chloride, potassium, sulfur, sodium

129. List 4 micro minerals required by sheep.
   A: Iron, manganese, zinc, cobalt, iodine, selenium, molybdenum

130. List 2 specific functions of rumen microorganisms.
   A: Convert cellulose materials into digestible products; synthesis of B vitamins; synthesis of vitamin K; convert NPN to bacterial protein; produce unidentified factors essential for growth, fattening and reproduction

131. Is a newborn lamb a functioning ruminant?
   A: No

132. Why can a sheep utilize urea and other non-protein nitrogen compounds as a protein source?
   A: Because the rumen microorganisms convert NPN into microbial protein which is then used by the sheep

133. Name 3 functions of water in the body.
   A: A medium to transport nutrient, to carry waste products to the point of excretion, to cool the body at high environmental temperature, functions as a universal solvent, serves as a fluid which lubricates joints, serves as a fluid base for milk, substrate for metabolic reactions

134. When a ewe reswallows her cud where does it go?
   A: Rumen

135. What is the primary advantage of a ruminant over a simple stomach animal with respect to diet?
   A: Ruminants can obtain much of their nutrients directly from roughages not directly convertible into food for human use, thereby not competing with man for food supplies

136. What good is protein in the diet?
   A: It is used to build muscle or milk protein
137. What term is applied to the total energy contained in a feedstuff?
   A: Gross energy

138. What lives in the rumen that digests food?
   A: Bacteria and Protozoa

139. In feeding sheep, the nutrient requirements are outlined in a N.R.C. publication. What do the initials N.R.C. stand for?
   A: National Research Council

140. What does protein solubility refer to?
   A: The ability of protein in a feed to dissolve in a liquid

141. Which is more digestible, very mature hay or corn?
   A: Corn

142. Name a major volatile fatty acid produced in the rumen.
   A: Acetic, propionic, butyric

143. The primary digestive activity that occurs in a sheep rumen is
   A. Water absorption
   B. Mineral absorption
   *C. Feedstuff fermentation
   D. Absorption of nutrients
PARASITES
SECTION I

1. Live flukes affect the ________________ of the liver.
   A: Bile ducts

2. Which internal parasite that also infects dogs can be grown to lengths of three feet in sheep?
   A: Tapeworm

3. What is bottle jaw in sheep an indication of?
   A: Severe internal parasite infestation

4. Internal parasites are more likely to be a problem under ________________ weather conditions.
   A. Dry
   *B. Wet
   C. Doesn’t matter

5. The barber-pole worm feeds on the lining of which stomach compartment?
   A: Abomasum or true stomach

6. Which internal parasite infestation is most commonly associated with scouring in lambs under stress?
   A: Coccidiosis

7. What is a disease of lambs characterized by dark diarrhea?
   A: Coccidiosis

8. Name a disease caused by a mite that has now been eradicated in this country.
   A: Psoroptic mange, scabies, sheep scab

9. What is another name for the stomach worm Haemonchus contortus?
   A: Barber pole worm

10. Feed or hay that is contaminated with cat feces may cause what disease that can result in abortion?
    A: Toxoplasmosis

11. A sheep ked may also be referred to as a what?
    A: Tick

12. What is an anthelminthic?
    A: A compound for deworming

13. Give an example of an obligatory parasite.
    A: Screwworm, maggot

14. Stomach worms can cause which of the following symptoms?
    A. Anemia
    B. Diarrhea
    C. Rough hair coat
    D. Slow rate of gain
    E. None of these
    *F. All of these
15. What is the best prevention for flies?
   *A: Sanitation*

16. Name three methods for giving wormers.
   *A: Bolus, drench, feed additive, paste, gel, injection, drinking water, mineral (block or salt)*

17. What is a maggot?
   *A: Immature or larval stage of a fly*

18. Face flies and horn flies develop as maggots in which of the following compounds?
   *A: Freshly deposited sheep manure
   B. Rotting grass clippings
   C. Rotting or fermenting hay*
1. Name the master gland controlling the estrous cycle.  
   A: Pituitary

2. Which ovarian hormone appears to be involved in the development of the duct system of the mammary gland?  
   A: Estrogen

3. Frightening a ewe will cause the release of what hormone?  
   A: Adrenalin, norepinephrine

4. The hormone responsible for interfering with milk ejection is ___________________.  
   A: Adrenalin, norepinephrine

5. Which hormone is the one responsible for the ejection of milk?  
   A: Oxytocin

6. Name two hormones produced by the ovary.  
   A: Estrogen, Progesterone

7. What is the male hormone called?  
   A: Testosterone

8. What is the term used to describe the taking of oxygen from the atmosphere, and then the release of carbon dioxide back into the atmosphere by an animal?  
   A: Respiration

9. What role does the hormone vasopressin (ADH) have?  
   A: Water reabsorption from the kidney back into the body

10. Blood consists primarily of _________________.  
    A: Water

11. Insulin is produced by the _________________.  
    A: Pancreas

12. The nitrogenous waste product that is secreted by the kidney is called _________________.  
    A: Urea

13. The pH of the abomasum of a ruminant is very _________________.  
    *A. Acidic  
    B. Alkaline

14. Hormones are carried in the ________________ of an animal.  
    A: Bloodstream

15. Oxytocin is a hormone secreted from which endocrine gland?  
    A: Posterior pituitary

16. Estrogen is secreted from which endocrine gland?  
    A: Ovary
17. Another name for growth hormone is ________________.
   A: Somatotropin

18. The hormone that moves calcium into bone is called ________________.
   A: Calcitonin

19. Name the chemical messenger that causes a slightly higher body temperature?
   A: Adrenalin, norepinephrine

20. What time of day will an animal have a slightly higher body temperature?
   A: Late afternoon

21. When an animal becomes agitated or scared, a hormone known as ____________ is released
   causing increased heart rate, respiration and blood pressure.
   A: Adrenalin, norepinephrine

22. The movement of water across cell membranes to a high concentration of salt, in order to dilute
   that concentration is called ________________.
   A: Osmosis

23. What are pheromones?
   A: Chemical messengers that aid in communication between animals

24. Glucose levels are lower in sheep than in non-ruminants. What do they use for energy?
   A: Volatile fatty acids (VFA s)

25. What endocrine gland in the body actually works to control the pituitary gland by sending out
   specific releasing hormones?
   A: Hypothalamus

26. The study of the hormonal system is known as ________________.
   A: Endocrinology

27. White blood cells are important for ________________.
   A: Protection against disease

28. ________________ is produced by the thyroid gland and works to increase body metabolism.
   A: Thyroxin

29. In general, the smaller an animal the ________________ its metabolic rate and the ____________
   its heart rate.
   A: Higher, faster

30. Blood carries ____________ from the lungs to the body tissues and ____________ from the body
    tissues to the lungs.
    A: Oxygen, carbon dioxide

31. The blood in the arteries has a ________________ oxygen content than that in the veins.
    A: Higher

32. Skin plays an active role in converting sunlight to Vitamin ________.
    A: Vitamin D
33. The _______________ primary responsibility is to help the body handle short and long term stress.
   A: Adrenal gland s

34. Younger animals normally have a __________ pulse than older animals.
   A: Faster

35. Increased heart rate in an animal will result in ____________ blood pressure.
   A: Increased

36. The small intestine has a more _______________ pH than does the abomasum of a ruminant.
   A: Alkaline

37. As blood leaves the heart to go to the rest of the body, that blood will pass through the ___________ system first.
   A: Arterial

38. When both testicles fail to descent into the scrotum and remain in the body cavity, the male animal is:
   A. Fertile and shows normal sexual activity
   *B. Infertile and shows normal sexual activity
   C. Fertile and does not show normal sexual activity
   D. Infertile and does not show normal sexual activity
1. Cryptorchidism describes what condition?
A: A male lamb that is born with one or both testicles still in the abdominal cavity.

2. What is meant by the term flushing the ewe?
A: Increasing the plane of nutrition prior to breeding

3. What is the name of a procedure which is used to determine ram's sexual aggressiveness?
A: Serving capacity test

4. What is the name of the lip-curling reflex exhibited by rams when they smell a ewe in heat?
A: Flehming reflex

5. In sheep, estrus lasts how long?
A: 24 to 36 hours

6. How many days are there between heat or estrous cycles?
A: 16 to 17 days

7. What is the average length of gestation in sheep?
A: 148 days (144 to 150)

8. What is a ewe doing when she is lactating?
A: Producing milk

9. Approximately 70% of fetal growth occurs during what period of gestation?
A: The last 4 weeks

10. Ewes with twin lambs produce _________ more milk than those suckling singles.
A: 20 to 40%

11. What do the letters A.I. stand for?
A: Artificial Insemination

12. What do the letters P.M.S. stand for?
A: Pregnant mare serum

13. What is the function of the sheep's epididymis?
A: Storage and maturation of sperm

14. Prior to the normal birth of a lamb, the ______________ must be fully dilated.
A: Cervix

15. The unborn lamb is linked to the placenta by the ________________.
A: Umbilical cord, naval

16. Does the ram or the ewe determine how many lambs the ewe will have?
A: Ewe

17. What is the normal presentation of the fetal lamb for delivery?
A: Head between front legs (Diving position)
18. What is a commercially available prostaglandin used to synchronize ewes?
   A: Lutalyse

19. A naturally occurring compound used to superovulate donor ewes for embryo transfer is ________.
   A: F.S.H. (Follicle stimulating hormone), P.M.S. (Pregnant mare serum)

20. Dystocia is another word for ____________.
    A: Lambing difficulty

21. Name the reproductive organ in the ram that produces sperm cells.
    A: Testes

22. What structure forms on the ewe's ovary that contains the egg?
    A: Follicle

23. What term is used to describe the length of time from breeding to lambing?
    A: Gestation

24. In delivering a lamb that is presenting breech, why should one deliver the lamb quickly after the legs are out?
    A: Because the lamb will take its first breath as soon as the umbilical cord breaks and the head may still be in fluid.

25. What is a lamb called during its developmental stay in the uterus?
    A: Fetus

26. What is the sac-like tissue that contains the fetus during its development?
    A: Placenta

27. What term is used to describe the length of time from breeding to lambing?
    A: Gestation

28. Name two breeds of sheep that are most often considered to be highly prolific.
    A: Finnsheep, Booroola Merino, Romanov, Polypay

29. What is accelerated lambing?
    A: Lambing more often than once every 12 months

30. How often does the ideal ewe on the Star system lamb in three years?
    A: Five times

31. Failure of the cervix to dilate may be caused by a condition called ____________.
    A: Ringwomb

32. In the sperm cell, the genetic information is contained in which of the following locations?
    A. Acrosome or cap
    *B. Head
    C. Tail

33. When ewes are in standing heat, what are they doing?
    A: Standing and letting other ewes or the ram ride her
34. You breed a ewe during her ____________ period.  
   A: Estrus

35. What do the letters E.T. stand for?  
   A: Embryo transfer

36. Estrous synchronization with prostaglandin works only on ____________ ewes.  
   A: Cycling

37. Which hormone is responsible for male behavior and sex drive?  
   A: Testosterone

38. What is estrus synchronization?  
   A: Causing females to express estrus at a predictable time, usually within a period of 1-4 days

39. What hormone is responsible for follicle development on the ovary?  
   A: F.S.H. (Follicle stimulating hormone)

40. Name three signs of estrus.  
   A: Standing while being mounted, roughed up wool over tailhead, mud on rumps or hip, swollen wet vulva, restlessness, bleating, fence walking

41. What is the primary function of the uterus?  
   A: Provides protection and housing for the fertilized egg to develop into a fetus, acts as womb

42. What is the largest of the female reproductive organs?  
   A: Uterus

43. The common name for the expelled placenta following parturition is _____________.  
   A: Afterbirth

44. What are the primary sex organs of the male and female?  
   A: Male - testes; female - ovaries

45. What specific structure within the testicles is responsible for the production of sperm?  
   A: Seminiferous tubules

46. The testicles produce both ____________ and _____________.  
   A: Spermatozoa, testosterone

47. What is the practice called that enables an entire flock of females to come into heat within a 1-4 day period?  
   A: Estrus synchronization

48. What is the function of the hormone relaxin during parturition?  
   A: To widen the birth canal

49. Odors that signal sexual readiness are caused by chemical messengers known as __________.  
   A: Pheromones

50. A ram that is able to detect heat but is incapable of settling ewes is called a __________.  
   A: Gomer, teaser
51. The vulva is the external opening to what part of the reproductive tract?
   A: Vulva

52. What structure forms on the ovary and produces progesterone in early pregnancy?
   A: Corpus luteum

53. What term is used to describe the sexual behavior or sex drive in rams?
   A: Libido

54. The lamb is approximately _________ percent water at birth.
   A: 70

55. What enzyme in a lamb's stomach causes milk to form into curds?
   A: Rennin

56. What is the endometrium?
   A: Layer of the uterus adjacent to the lumen

57. What structure of the ram has the function of regulating the temperature of the gonad or testicles?
   A: Scrotum

58. What is the benefit of ultrasonic pregnancy checking in the ewe?
   A: By identifying the number of embryos the ewes can be fed according to number of lambs they will have. This will help to prevent the incidence of pregnancy toxemia in ewes carrying multiple lambs.

59. What is the natural barrier in a ewe's reproductive tract through which an artificial insemination rod must be passed before semen is properly deposited?
   A: Cervix

60. Sexual receptivity in the female is primarily dependent on high levels of _________.
   A: Estrogen

61. Fertilization normally takes place in the _____________.
   A: Oviduct

62. Prostaglandin is produced by the _________________.
   A: Uterus

63. The process involving formation of the male gamete is called _________________.
   A: Spermatogenesis

64. The term describing the release of an egg from the ovary is _________________.
   A: Ovulation

65. The membranes which enclose the fetus in a fluid filled sac are called the _________________.
   A: Placenta

66. What is a breech birth?
   A: When a lamb is presented tail first

67. What hormone is known as the hormone of pregnancy?
   A: Progesterone
68. What does gestation mean?  
A: Period of carrying a lamb, duration of pregnancy

69. What is the thin membranous structure at the end of the oviduct which partially covers the ovary?  
A: Fimbria, infundibulum, funnel

70. Prostaglandin can be used as an estrus synchronization agent by performing what action on the ovary?  
A: Causes regression of the corpus luteum (CL)

71. The term to describe a difficult lambing is _______________.  
A: Dystocia

72. During natural mating between a ewe and a ram, semen is deposited in the _____________.  
A: Vagina

73. The scientific term for the birth process is _____________.  
A: Parturition

74. What is the sac-like pouch called that is suspended from the ram and houses the testicles?  
A: Scrotum

75. The oviduct carries the egg to what part of the ewe’s reproductive tract?  
A: Uterus

76. The male gonad is the _____________.  
A: Testicle

77. The female sex cell is called the ________________.  
A: Egg, ovum

78. Name the hormone that is produced from the ram’s testicles.  
A: Testosterone

79. Name the structure in the female that serves as a womb.  
A: Uterus

80. What primary structure links the fetus to the placenta?  
A: Naval, umbilical cord

81. What is meant when it is said that a ewe has failed to clean following lambing?  
A: The ewe retains her placenta or afterbirth instead of shedding it as she should have within about 12 hours after birth.

82. How many testicles should a ram have?  
A: 2

83. How many sperm cells are actually needed to fertilize an egg?  
A: 1

84. Endometritis describes what condition in a ewe?  
A: Uterine infection
85. The uniting of the male and female sex cells is called _______________.  
   A: Fertilization

86. The male gamete is called the _______________.  
   A: Sperm cell

87. The eggs are produced by the _______________, paired structures in the female reproductive tract.  
   A: Ovaries

88. Satisfactory sperm production in the ram requires the testicles to be _______ than normal body temperature.  
   A: Cooler

89. When both testicles fail to descend into the scrotum of a ram, he will retain his ___________, but lose his _________________.  
   A: Sex drive, ability to fertilize eggs

90. Name the hormone that triggers growth of a follicle on the female ovary.  
   A: F.S.H. (Follicle stimulating hormone)

91. The female gonad is the ___________.  
   A: Ovary

92. The unborn animal is nourished through the _________________.  
   A: Placenta via the umbilical cord

93. Name the hormone in the female that triggers ovulation and where it is produced.  
   A: L.H. (Luteinizing hormone) from the anterior pituitary gland

94. What are two primary factors affecting how easily a ewe lambs?  
   A: Pelvic size, number of fetuses, size of fetuses, presentation of fetuses, sire selection

95. Total sperm production in yearling rams can be directly related to ________________.  
   A: Scrotal circumference

96. What is the minimum acceptable scrotal circumference for a yearling ram?  
   A: Centimeters

97. Sperm is produced by what tissue in the testes?  
   A: Interstitial

98. Name two functions of the female ovary.  
   A: Production of ova, secretion of hormones

99. Following ovulation, a corpus luteum develops and produces ________________.  
   A: Progesterone

100. An embryo contains ________________ water as a percent of the total body weight than an adult animal.  
    A: More

101. The fetus increases its size about how many times during the last month of pregnancy?  
    A: Three
102. A fertilized egg is called a ____________.
   A: Zygote

103. The life of a sperm cell in the female reproductive tract is about _________ times as long as the life of an unfertilized ovum.
   A: Five

104. What does the uterus of a pregnant ewe contain?
   A: Fetus, unborn lambs

105. Name two hormones produced by the ovary.
   A: Estrogen, progesterone

106. What is the period of pregnancy called?
   A: Gestation

107. Proestrus, estrus, metestrus and diestrus are stages of the ____________ cycle.
   A: Estrus

108. What is diestrus?
   A: A period when the female is having regular estrus cycles. In the ewe this may be seasonal, due to pregnancy or due to some malfunction of the system.

109. What does the term fertility refer to?
   A: Ability to produce young

110. What is the primary female organ of reproduction?
    A: Ovary

111. Name two ways that gomer rams may be used.
    A: To mark ewes that are in heat, to induce the onset of estrous cycles earlier in the season

112. Name the condition occurring when a ewe expels a fetus prematurely.
    A: Abortion

113. If a male sperm bearing the X chromosome fertilizes an egg, what sex will the resulting lamb be?
    A: Female
1. If the recommended stocking rate for a given summer range is .6 AUM (Animal Unit Months) per acre, how many acres of rangeland would be required per animal unit for 3 months of grazing?
   \[ A: 5 \text{ (# months divided by rating of pasture)} \]

2. How many sheep make up 1 Animal Unit
   \[ A: 5 \text{ ewes and their offspring} \]

3. A forb is a broad-leafed, herbaceous plant which is commonly referred to as a _________.
   \[ A: \text{Weed} \]

4. What is the standard test weight per bushel of milo?
   \[ A: 57 \text{ pounds per bushel} \]

5. In drought stressed sorghum, what part of the plant will contain the highest amount of nitrate?
   \[ A: \text{Stalks (lower 1/3)} \]

6. Hay can be a fire hazard when it is ____________ percent moisture.
   \[ A: 30-40\% \]

7. What happens when silage or haylage is stored too wet?
   \[ A. \text{Loses nutrients} \]
   \[ B. \text{Improper fermentation} \]
   \[ C. \text{Lower palatability} \]
   \[ *D. \text{All of the above} \]

8. What poisonous factor is associated with wilted sweet clover?
   \[ A: \text{Dicoumarin} \]

9. When a grain is harvested while still immature and the stalks are chopped and left with the grain allowing the product to ferment, the resulting feedstuff is known as _____________.
   \[ A: \text{Silage, ensilage} \]

10. Hay is costing $60 per ton, and is fed at the rate of 5 lbs. per ewe per day. What is the daily feed cost?
    \[ A. \$ .80 \]
    \[ B. \$ .60 \]
    \[ C. \$ .30 \]
    \[ *D. \$ .15 \]

11. Forage crops are commonly harvested as hay, haylage or silage. One criteria of deciding which class they fit into is dry matter content. Three crops have the following dry matter contents: 55%, 88% and 30%. Which one would be hay, silage and haylage?
    \[ A: \text{Hay - 88\% dry matter, Silage - 30\% dry matter, Haylage - 55\% dry matter} \]

12. Dark color and burnt odor are general indicators of what problem in haylage?
    \[ A: \text{Heat damage} \]
13. What is the biggest advantage and disadvantage of baling hay in small bales?
   A: Advantage - less wastage due to storage losses; Disadvantage - high labor requirement

14. What type of plant is commonly associated with nitrogen fixing bacteria?
   A: Legumes (alfalfa, soybeans)

15. Spring top dressing of pasture land refers to what common pasture management practice?
   A: Applying fertilizer

16. Mycotoxins come from ________________.
   A: Mold

17. Applying ammonia fertilizers to the soil increases the level of ________________.
   A: Nitrogen

18. If you wanted to kill thistles in a fence row you would use which of the following?
   A. DDT
   B. 2, 4-D
   C. CMT
   D. Copper sulfate

19. The most valuable constituent of manure is ________________.
   A: Nitrogen

20. What percentage of the primary nutrients in manure are available to crops during the first year after application?
   A: 50%

21. Which crop would respond most to the application of manure?
   A. Alfalfa
   B. Grass sod
   C. Soybeans

22. Under drought conditions, certain crops may cause prussic acid poisoning. Name a crop you are likely to have this problem with.
   A: Sorghum-sudan grass

23. Under what conditions do poisonous plants pose the most problems?
   A: When animals are not fed and watered properly; after thirsty animals are watered, they readily eat plants they would otherwise avoid, starving animals will do likewise
1. A lamb shorn 75 days before going to slaughter is likely to have what type of pelt?
   A: Number 1

2. An extremely well-fed ewe flock will produce ________ pounds of wool that is __________ grading than a marginally-fed flock.
   A: More, coarser

3. Name the two layers of a sheep skin.
   A: Dermis and epidermis

4. Name the two types of follicles that produce wool fibers.
   A: Primary and secondary

5. Primary and secondary wool follicles have sebaceous glands. What do they produce?
   A: Wax and grease

6. What type of string should be used to tie fleeces?
   A: Paper

7. What do you call the entire coat of wool shorn from the sheep at one time?
   A: Fleece

8. What do you call purified wool grease?
   A: Lanolin

9. What does it mean to skirt a fleece?
   A: Remove the stained or inferior wool from it

10. The poorest quality wool is located on the _____________ of the sheep.
    A: Belly

11. What does carding do for a fleece?
    A: Pulls out and straightens the ends of the wool

12. The natural waviness of wool fibers is called _____________________.
    A: Crimp

13. Wool that is 20 microns in diameter is considered:
    A. Quarter blood
    B. 3/8 blood
    C. ½ blood
    *D. Fine

14. What causes a break in the wool fiber?
    A: Sickness (fever or very poor nutrition)

15. What is tagging?
    A: Removal of the wool from the udder and vaginal area of the ewe prior to lambing

16. How is wool graded?
    A: Based on crimp (waviness) and spin count (diameter)
17. Skin folds are highly ____________ in sheep.
   
   *A: Heritable*
HANDLING
SECTION N

1. The field of vision for an average sheep is approximately how many degrees?
   A: 270

2. To prevent sheep from being spooked by distractions outside the handling facilities, what type of fences should be used in chutes and crowding pens?
   A: Solid

3. Which of the following breeds is generally more gregarious or has the greater flocking instinct?
   A. Hampshire
   B. Dorset
   C. Suffolk
   *D. Rambouillet

4. Solid shades should be used over working, sorting and shearing facilities rather than materials such as snow fence. What is the sheep’s likely reaction to the snow fence shade?
   A: They will balk because of the shadows or contrasting light levels

5. Sheep move more readily:
   A. Uphill/with the wind
   *B. Uphill/toward the wind
   C. Downhill/with the wind
   D. Downhill/toward the wind

6. A producer should provide how many square feet of building space per ewe with lamb at side on dirt floor?
   A: 15-20

7. How much linear feeder space should a producer provide for each 80 pound feeder lamb on a selffeeder?
   A: 1-2 inches

8. Fences and gates of gathering pens should be ______________ structure.
   A: Open

9. A fairly standard minimum height of fences and gates for a gathering pen is ________ inches.
   A: 42 inches

10. Unless the sheep are extremely large or prone to jumping, a standard working chute height is ________ inches.
    A: 36 inches
1. What is the main wild predator of sheep?
   \( A: \) Coyote

2. Name two predators, other than a coyote, that sometimes prey on sheep.
   \( A: \) Dog, fox, bobcat, bear, mountain lion, wolf, eagle

3. Name two breeds of dogs that are commonly regarded as good guard animals to prevent predation.
   \( A: \) Great Pyrenees, Komondor, Anatolian Shepherd, Akbash, Moremma

4. Name two animals other than guard gods that are sometimes used to protect sheep from predation.
   \( A: \) Donkeys, goats, mules, ostriches, llama, sometimes cattle

5. How does the evidence of a typical coyote attack differ from a dog attack?
   \( A: \) A coyote is usually efficient and kills one animal by strangulation. Dogs will generally mutilate a number of sheep.

6. In Kansas, what is the single most effective management measure a sheep producer can incorporate to reduce coyote predation?
   \( A: \) Pen sheep at night

7. Name two legal means of predator control.
   \( A: \) Guard animals, trapping, snaring, shooting, netting

8. Coyote attacks are most likely to occur at ________________.
   \( A: \) Night
1. Which state in the U.S. has the highest number of sheep and lambs?
   A: Texas

2. Which state in the U.S. finishes more feedlot lambs than any other state?
   A: Colorado

3. Which general area of the country produces a high percentage of the lambs to be placed in feedlots?
   A: Southwest or Northwest range

4. What is one possible reason for a price dock on light weight lambs in the summer and a dock on heavy weight lambs in the winter?
   A: The market can handle a percentage of all weight lambs at all times of the year, but when the market is flooded with too high a percentage of lambs from one weight class, the price drops for that category

5. What is the name of a contract signed by a farmer in which he agrees to deliver a quantity and quality of a commodity such as grain at a specified month and provides a hedge against market fluctuations?
   A: A futures contract

6. Where should you look to find the latest recommendations on how to use an antibiotic?
   A: On the label

7. What does drug withdrawal time mean in regard to marketing animals for slaughter?
   A: The amount of time prior to slaughter for which the animal must be off the drug

8. What is the major problem associated with antibiotics turning up in the lamb on the consumer’s table?
   A: Some people are allergic to them

9. What Act of Congress regulates safety and health standards for agriculture, business, and industry?
   A: Occupational Safety and Health Act (OSHA)

10. What is the current market prices for market lambs?
    A: