

## Sheep & Goats: Disease (causes and sources, signs and symptoms)

1. Caseous Lymphadenitis, an infectious, contagious disease of sheep and goats that commonly presents as internal and external abscesses, is caused by a bacterium called
  - a. Clostridium perfringens
  - b. Corynebacterium pseudotuberculosis
  - c. Clostridium tetani
  - d. Listeria monocytogenes
2. The disease is shown in the image and is commonly spread between sheep in wet spring/summer months with warm temperatures.



- a. Pizzle Rot
  - b. Puncture Abscess
  - c. Hypocalcemia
  - d. Foot Rot
3. A farm recently had a large number of sheep die acutely after their neighbor did chores for them. This farm also has some potbelly pigs on feed and their feed is stored next to the sheep feed. It is assumed the sheep accidentally got fed some pig feed which contains a very high amount of this mineral which is toxic to sheep.
    - a. Magnesium
    - b. Calcium
    - c. Copper
    - d. Potassium
  4. Which of the following diseases cause abortion in goats?
    - a. Toxoplasmosis
    - b. Leptospirosis
    - c. Listeriosis
    - d. All of the Above
  5. What disease is caused by a deficiency in the intake of energy during late pregnancy, when fetuses are making their most rapid growth.
    - a. Campylobacter jejuni
    - b. Toxoplasmosis
    - c. Ovine Progressive Pneumonia
    - d. Pregnancy Toxemia
  6. When purchasing a new breeding ram for your flock it is important to consider genetic resistance from Scrapie. Which ram would be considered resistant to Scrapie?
    - a. Ram 1-QQ
    - b. Ram 2-QR
    - c. Ram 3-RR
    - d. None of the above

7. Which of the following diseases is transmitted from sheep to sheep by biting gnats and causes the tongue and mucous membranes of the mouth to become swollen, hemorrhagic, and may look red or dirty blue in color?
- Bluetongue disease
  - Facial eczema
  - Hoof and mouth disease
  - Bottle jaw
8. *Toxoplasma gondii* is a disease that causes health problems in pregnant does. What species of animal is the carrier of this protozoa?
- Raccoons
  - Dogs
  - Cats
  - Opossums
9. Show lambs are inspected prior to exhibiting at the Iowa State Fair for small, crusty, round lesions found on the wool and if any signs of this disease are observed then the animal is not allowed to exhibit.



- Ringworm
  - Alopecia
  - Ulcer
  - Fly Strike
10. A week ago you docked the tail on a newborn lamb using an elastrator band. Today the lamb is stiff and having difficulty walking. What is the culprit?
- Low Calcium Intake
  - E. Coli*
  - Clostridium tetani*
  - Scrapie
11. FAMACHA is a common method used in sheep and goats to select certain animals for treatment of anemia commonly caused by
- Lice
  - Mange
  - Intestinal Parasites
  - Fly Strike
12. This disease is a fatal, degenerative disease affecting the central nervous system of sheep and goats. It is classified as a transmissible spongiform encephalopathy (TSE), which is similar to “mad cow disease” in cattle. Clinical signs include behavioral changes such as tremors of the head and neck, itching, and locomotor incoordination that progresses to recumbency and death.
- Scrapie
  - Leptospirosis
  - Clostridium perfringens*
  - Brucella abortus*

13. Enterotoxemia, also known as “Overeating Disease”, is a frequent disease of sheep and goats of all ages. Prevention of this disease is very successful. It is a common practice for producers to vaccinate at 4 weeks of age followed by a booster at the time of weaning with this bacterium.
- Mycobacterium tuberculosis
  - Clostridium perfringens C-D
  - Campylobacter jejuni
  - E. Coli
14. Orf virus is an infectious disease of sheep and goats that is also easily transmitted from animals to humans. What is another name for this disease?



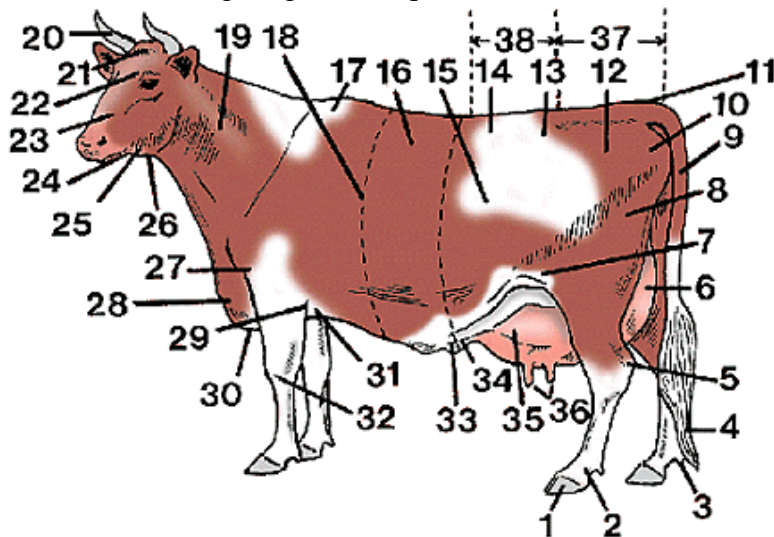
- Sore Mouth
  - Nasal Bots
  - Sheep Pox
  - Ovine Chlamydia
15. A newborn lamb is having difficulty walking. When the lamb is standing, it has an arched back and appears uncomfortable. You diagnose the lamb with White Muscle Disease. What is the best treatment?
- Vitamin C
  - Selenium/Vitamin E
  - Vitamin B12
  - Calcium

### **Cattle: Anatomy/Physiology**

16. Which of the following stomach compartments of a cow is the largest compartment and acts as a storage or holding vat for feed?
- Reticulum
  - Omasum
  - Abomasum
  - Rumen
17. Which of the following stomach compartments of a cow is comparable to the stomach of a non-ruminant animal and called the “true stomach”?
- Reticulum
  - Omasum
  - Abomasum
  - Rumen
18. Which of the following stomach compartments of a cow is a common location for nails and other sharp objects to penetrate the tissues, causing hardware disease?
- Reticulum
  - Omasum
  - Abomasum
  - Rumen

19. Cows spend 35% to 40% of each day ruminating, which is
- Belching
  - Grazing
  - Cud chewing
  - Rumen contractions
20. What is the gestation period for a cow?
- 6 months
  - 9 months
  - 12 months
  - 15 months
21. What is the average length of the estrous cycle of a cow?
- 14 days
  - 21 days
  - 30 days
  - 35 days
22. What is the term used for the open area between the teat and the large ducts that allows for accumulation of milk in a cow udder?
- Cistern
  - Mammary gland
  - Suspensory system
  - Streak canal
23. What is the name of the anatomical structure located in a cow udder that is lined with epidermis containing antibacterial properties, providing the main barrier against intramammary infection?
- Cistern
  - Suspensory system
  - Streak canal
  - Inguinal canal
24. What hormone is released from the cow's pituitary gland in the brain that causes "milk-letdown"?
- Oxytocin
  - Adrenalin
  - Estrogen
  - Progesterone

Use the following diagram for questions 25-30.



25. What is the anatomical term for #18?
- Neck
  - Stomach
  - Heart girth
  - Thurl
26. What is the anatomical term for #11?
- Loin
  - Flank
  - Tail head
  - Withers
27. What is the anatomical term for #30?
- Thurl
  - Chest
  - Barrel
  - Brisket
28. What is the anatomical term for #36?
- Teat
  - Udder
  - Milk vein
  - Cistern
29. What number represents the loin?
- 10
  - 16
  - 19
  - 38
30. What number represents the shoulder?
- 17
  - 19
  - 27
  - 29
31. Which of the following is a bone located in the hindlimb of a cow?
- Radius
  - Tibia
  - Humerus
  - Scapula
32. Which of the following vertebrae is in the neck of a cow?
- Cervical
  - Thoracic
  - Sacral
  - Coccygeal
33. Where is the coffin joint located in a cow?
- Pelvis
  - Neck
  - Hoof
  - Hock

34. What is the name of the large subcutaneous vein that extends along the lower side of the abdomen of a cow and returns blood from the udder?
- a. Abdominal aorta
  - b. Milk vein
  - c. Epigastric vein
  - d. Perineal vein

**Swine: Identification of equipment, parasites, and breeds of**

35. Name the American hog breed that is named for its most distinctive feature, the solid, non-cloven hoof.



- a. Duroc
  - b. Mulefoot
  - c. Landrace
  - d. Yorkshire
36. Name the fast-growing hog breed that is characterized by color variations ranging from very light golden to a mahogany dark red, medium length and slight dish of the face, and drooping ears.



- a. Duroc
- b. Landrace
- c. Yorkshire
- d. Hampshire

37. Name the swine breed that is black with a white band behind the shoulders.



- a. Landrace
- b. Yorkshire
- c. Hampshire
- d. Duroc

38. Name the breed that gets its name from its birthplace village in Belgium and is white in color with black spots. The black spots are surrounded with characteristic rings of light pigmentation and white hair.



- a. Pietrain
- b. Meishan
- c. Berkshire
- d. Poland China

39. Name the swine breed whose color pattern was refined with a cross of Siamese and Chinese blood and are known for their excellent pork quality.



- a. Hampshire
- b. Yorkshire
- c. Berkshire
- d. Poland China

40. Name the swine breed that is known as the “mother breed” due to their large litter sizes and are the most nationally recorded breed of swine in the United States and Canada.



- a. Hampshire
- b. Yorkshire
- c. Berkshire
- d. Chester white

41. Name the piece of swine equipment pictured.



- a. Pig puller
- b. Hog snare
- c. Tail docker
- d. AI rod

42. Name the piece of swine equipment pictured.



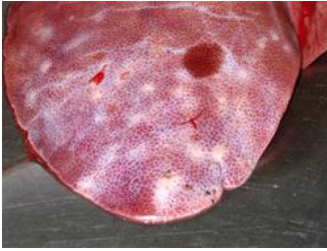
- a. Emasculator
- b. Tail docker
- c. Ear notcher
- d. Tooth nipper

43. What mineral is commonly injected into piglets during the “processing” phase due to being raised indoors in confinement barns?

- a. Magnesium
- b. Copper
- c. Calcium
- d. Iron



44. If “milk spots” (pictured) are observed on the liver of a pig during processing, the pig is most likely infected with



- a. Mange
- b. Roundworms
- c. Lung worms
- d. Stomach worms

45. What is a common cause of mucohemorrhagic diarrheal disease of “finishing” pigs that affects the large intestine also known as “swine dysentery”?

- a. *Brachyspira hyodysenteriae*
- b. Coccidiosis
- c. *Salmonella Typhimurium*
- d. *E. Coli*

46. Name the piece of swine equipment pictured.



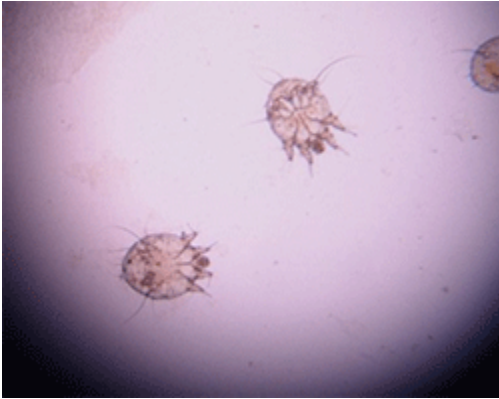
- a. Hog snare
- b. Ear notcher
- c. Hog prod
- d. AI rod

47. The following photograph shows a parasite that commonly lives in the pig’s small intestine but immature phases travel through the liver and lungs. This parasite may cause coughing and diarrhea.



- a. Scabies
- b. Roundworms
- c. Lung worm
- d. Tapeworms

48. Name the parasite that is extremely contagious from pig to pig, cause small red pimples and crusty lesions on the skin, and causes severe discomfort and itchiness.



- a. Ringworm
- b. Sarcoptes scabiei
- c. Alopecia
- d. Fly strike

49. Name the piece of swine equipment pictured.



- a. Tail docker
- b. Ear notcher
- c. Needle teeth nipper
- d. Hoof trimmer

50. Name the piece of swine equipment pictured.



- a. Tail docker
- b. Ear notcher
- c. Needle teeth nipper
- d. Hoof trimmer

## Answer Key

1. B
2. D
3. C
4. D
5. D
6. C
7. A
8. C
9. A
10. C
11. C
12. A
13. B
14. A
15. B
16. D
17. C
18. A
19. C
20. B
21. B
22. A
23. C
24. A
25. C
26. C
27. D
28. A
29. D
30. C
31. B
32. A
33. C
34. B
35. B
36. A
37. C
38. A
39. C
40. B
41. B
42. C
43. D
44. B
45. A
46. D
47. B
48. B
49. A
50. C

## 2017 FFA Veterinary Science CDE Written Scenario

“The discovery of antibiotics and their use to fight infection were the most significant medical advances of the 20<sup>th</sup> century, and antibiotics continue to provide life-saving support to animals and people worldwide.” (AVMA, 2017)

There is no doubt that the use of antibiotics has reduced illness and death for both humans and animals throughout the past 70 years. However, bacterial organisms are adapting and becoming resistant to the antibiotics that were created to destroy them. According to the Center for Disease Control (CDC), at least 2 million people become infected with antibiotic resistant bacteria each year and at least 23,000 people die because of these infections. 400,000 people that become infected with antibiotic resistant bacteria each year had acquired their infection from contaminated food or water. Veterinary professionals play a vital role in the prevention of antibiotic resistance.

Study the CDC’s poster “Antibiotic Resistance from the farm to the table.” (<https://www.cdc.gov/foodsafety/challenges/from-farm-to-table.html>) (attached in pdf)

Explore the CDC’s antimicrobial resistance webpage.  
[https://www.cdc.gov/drugresistance/protecting\\_yourself\\_family.html](https://www.cdc.gov/drugresistance/protecting_yourself_family.html)

Read about how veterinarians can prescribe antibiotics responsibly, minimizing antibiotic resistance development.  
[https://www.avma.org/KB/Resources/Reference/Documents/Responsible\\_Use\\_Of\\_Antibiotics\\_in\\_US\\_Animal\\_Agriculture.pdf](https://www.avma.org/KB/Resources/Reference/Documents/Responsible_Use_Of_Antibiotics_in_US_Animal_Agriculture.pdf) (attached in pdf)

Visit the Food Animal Residue Avoidance Databank (FARAD) and read about antibiotics that are prohibited for use in food animals. <http://www.farad.org/eldu/prohibit.asp>

Lastly, familiarize yourself with the Veterinary Feed Directive Final Rule that went into effect on January 1, 2017. [https://www.avma.org/public/Health/Pages/Antibiotic-Use-Changing.aspx?utm\\_source=prettyurl&utm\\_medium=print&utm\\_campaign=mktg&utm\\_term=AntibioticUse](https://www.avma.org/public/Health/Pages/Antibiotic-Use-Changing.aspx?utm_source=prettyurl&utm_medium=print&utm_campaign=mktg&utm_term=AntibioticUse)

Write a letter to your legislature expressing your agreement or disagreement with the Veterinary Feed Directive that went into effect on January 1, 2017. Demonstrate your knowledge of the purpose of the Veterinary Feed Directive. Is there a need for more strict regulations on antibiotic use in animals and humans? Should veterinarians be prohibited to use certain antibiotics in food animals? What are other ways that antibiotic resistance can be avoided? What can veterinary professionals do to ensure animals are receiving the medical care and medications they need to be healthy, while ensuring not to pose a danger to humans by way of food-borne antibiotic resistance bacteria? Make a suggestion about how to battle antibiotic resistance in the veterinary community.