1. Roan coat color in Shorthorns can be produced 100% of the time by crossing a red bull (RR) with a white female (WW). What type of gene interaction is expressed in this case?
   a. Complete dominance  
   b. Codominance  
   c. Heterosis  
   d. Incomplete dominance

2. Which portion of the ruminant stomach is often referred to as the “true” stomach?
   a. Rumen  
   b. Omasum  
   c. Reticulum  
   d. Abomasum

3. Which of these traits will have the **lowest** heritability?
   a. Number born  
   b. Loin-eye area  
   c. Milk production  
   d. Marbling

4. Which of the following is **not** preventable by a vaccine?
   a. Enterotoxemia  
   b. Cryptosporidiosis  
   c. Blackleg  
   d. Leptospirosis

5. Your 600 lb feeder steer sold for $190/cwt. What was his total sale price per head?
   a. $316  
   b. $600  
   c. $1140  
   d. $1250

6. Which of the following is responsible for causing the red color of meat?
   a. Myoglobin  
   b. Hemoglobin  
   c. Acetate  
   d. Immunoglobulin

7. What hormone is responsible for triggering ovulation and corpus luteum development?
   a. Estrogen  
   b. Luteinizing Hormone  
   c. Testosterone  
   d. Progesterone

8. Where were Poland China hogs first bred?
   a. Ohio  
   b. Poland  
   c. China  
   d. Maryland

9. Your market lamb is being fed a high-energy, predominantly grain diet. Which of the following disorders is of **least** concern?
   a. Acidosis  
   b. Urinary calculi  
   c. Enterotoxemia  
   d. Listeriosis

10. Which of the following feeds would have the highest %TDN?
    a. Cracked corn  
    b. Grass hay  
    c. Wheat straw  
    d. Cottonseed hulls

11. Which of the following is an example of a sex-limited trait?
    a. Horns in sheep  
    b. Scurs in cattle  
    c. Milk production  
    d. Fleece length

12. What is the causative agent of fescue toxicosis?
    a. Selenium deficiency  
    b. Clostridial bacteria  
    c. Endophyte fungus  
    d. Hypomagnesia

13. Your doe was marked on October 19th. When is her approximate kidding date?
    a. January 19th  
    b. February 16th  
    c. March 18th  
    d. April 17th
14. Which organic acid is added to hay with higher moisture content than desired to prevent mold growth?
   a. Butyric acid  c. Acetic acid
   b. Lactic acid  d. Propionic acid

15. Your new ram tested to be a carrier for Spider Lamb Syndrome. If you breed your ram to carrier ewes, what percentage of the offspring will be affected with Spider Lamb Syndrome?
   a. 0%  c. 50%
   b. 25%  d. 100%

16. Which of the following forages are classified as legumes and possess the ability to fix nitrogen?
   a. Clover  c. Lespedeza
   b. Alfalfa  d. All are legumes

17. The dosage instructions on your medication label say to dose with 4.5 mL per 100lbs body weight. How much medication should you give your 320 pound calf?
   a. 4.5 mL  c. 450 mL
   b. 14.4 mL  d. 1440 mL

18. Where in the sow’s reproductive tract does the boar deposit semen?
   a. Cervix  c. Vagina
   b. Uterus  d. Ovaries

19. A bull breeding soundness exam includes assessment of __________?
   a. Scrotal circumference  c. Physical examination
   b. Sperm morphology  d. All are part of a BSE

20. Which fatty acids are required in the human diet, and are found naturally in higher concentrations in grass-fed beef over grain fed beef?
   a. Omega 6  c. Omega 3
   b. Oleic  d. Stearic

21. Which of the following amino acids is most commonly supplemented in corn-soy swine diets?
   a. Aspartate  c. Lysine
   b. Tryptophan  d. Threonine

22. Pregnancy ketosis in ewes is the result of __________?
   a. Thin body condition  c. Multiple fetuses
   b. Inadequate energy intake  d. All of these are contributing factors

23. What meat goat breed is white in color, originated in New Zealand, and has a name that means “meat producing animal”?
   a. Myotonic  c. Boer
   b. Kiko  d. Pygmy

24. Prussic acid poisoning is the result of ____________?
   a. Wilted wild cherry leaves  c. Frost damaged sorghum sudan
   b. Excess alfalfa in diet  d. Both A and C

25. Which of the following is considered a water soluble vitamin?
   a. Vitamin A  c. Vitamin C
   b. Vitamin D  d. Vitamin K