1. What does subcutaneous mean?
   1. In the muscle c. In the stomach
   2. **Under the skin**  d. In the blood vessels
2. How often does a heifer come into estrus?
   1. 5-8 days **c. 18-21 days**
   2. 10-13 days d. 22-25 days
3. What is not an advantage of artificial insemination?
   1. Increased use of outstanding sires c. Helps control reproductive and genetic disease
   2. Improves marketing **d. Decreased uniformity of calves**
4. Approximately how much does a market hog weigh?
   1. 110-140 lbs **c. 240-280 lbs**
   2. 150-230 lbs d. 1100-1400 lbs
5. When is the leptospirosis vaccine given to sows?
   1. **2-3 weeks post-farrowing** c. Neither A or B
   2. 2-3 weeks pre-farrowing d. Never
6. Trueor False A balling gun is used specifically for solids while a drenching gun is used specifically for liquids.
   1. **True**
   2. False
7. What is meat mostly composed of?
   1. **Water** c. Carbohydrates
   2. Proteins d. Fats
8. When should body condition scoring in cattle be done?
   1. 2-3 weeks before calving c. 2-3 weeks after calving
   2. **2-3 months before calving** d. When the Heifer is no pregnant
9. What is the normal dressing percentage of a pork carcass?
   1. 50-55% **c. 70-75%**
   2. 60-65% d. 80-85%
10. What is the role of the FDA?
    1. Promote and protect public health c. Regulate medications
    2. Regulate food safety **d. All of the Above**
11. At what pH do organisms grow best?
    1. 3 **c. 7**
    2. 5 d. 10
12. What class of nutrients is alfalfa hay high in?
    1. Water c. Carbohydrates
    2. **Protein**  d. Fats
13. The scrapie genotype in sheep is designated by the letters and .
    1. **Q and R**  c. O and P
    2. N and S d. None of the above
14. Calving ease is a:
    1. Highly heritable trait c. Lowly heritable trait
    2. **Moderately heritable trait** d. Not heritable at all
15. True or FalseEstrogen is only released in females.
    1. True
    2. **False**
16. What breed of swine is known for quick growth?
    1. **Duroc** c. Berkshire
    2. Chester white d. Landrace
17. What is the maximum amount of litters a sow can have in one year?
    1. 1.5 c. 3.5
    2. **2.5** d. 4.5
18. Cattle are fed roughages because they are high in \_\_\_\_\_\_.
    1. Protein **c. Fiber**
    2. TDN d. None of the Above
19. What is it called when you increase the feed given to ewes prior to ovulation and during the first few weeks of breeding?
    1. Lambing **c. Flushing**
    2. Over-eating d. Flocking
20. The rack of lamb comes from what primal cut?
    1. Shoulder c. Loin
    2. **Rib** d. Leg
21. The normal gestation length of a beef animal is:
    1. 210-220 days **c. 279-290 days**
    2. 250-263 days d. 295-306 days
22. What part of the beef carcass does a t-bone steak come from?
    1. Chuck c. Flank
    2. **Loin**  d. Round
23. Crude protein is not a true measure of amino acid content of a feed. Rather it is a measure of the amount of present in a particular sample.
    1. Crude Fat **c. Nitrogen**
    2. Oxygen d. Calcium
24. You want to start producing sheep milk. What breed would be best for this purpose?
    1. Merino **c. Lacaune**
    2. Katahdin d. St. Croix
25. What is the correct ear notch number for the pig shown below?
    1. 4-13 c. 39-4
    2. 4-39 **d. 13-4**

