# Texas A&M University (TAMU) ANSC108 General Animal Science Laboratory Final Practice Exam (Sample)

Study Guide



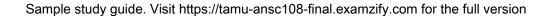
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# **Questions**



- 1. Explain the importance of feed additives in livestock diets.
  - A. They are primarily used to make feed more palatable
  - B. They can enhance growth, improve feed efficiency, and promote health
  - C. They increase the cost of livestock management
  - D. They serve no real purpose in modern diets
- 2. What do the prostate glands primarily produce?
  - A. A thick gel-like fluid
  - B. A thin, watery fluid
  - C. A hormone for testis function
  - D. Semen components
- 3. What are the primary factors that affect yield grade in beef?
  - A. Fat thickness, rib eye area, carcass weight, KPH fat
  - B. Color, marbling, muscle shape, age
  - C. Location of slaughter, cutting technique, chilling time, packaging
  - D. Weight of animal, feed type, breed, health status
- 4. What does the acronym PSE stand for in pork quality?
  - A. Pale, soft, exudative
  - B. Process, standard, effect
  - C. Pork, safety, education
  - D. Prime, select, excellent
- 5. What is the cooler storage temperature for processed meat products?
  - A. 28°F
  - B. 32°F
  - C. 36°F
  - D. 40°F

6. What is the effect of withholding feed prior to slaughter on meat quality?
A. Improves fat deposition
B. Increases tenderness
C. Reduces stress on the animal
D. Enhances flavor

- 7. What method is used for stunning hogs in the U.S.?
  - A. Vapor stunning
  - B. Mechanical stunning
  - C. Electrical shock
  - D. Gas stunning
- 8. What is a key characteristic of extensive farming?
  - A. Higher stocking rates
  - B. Large land areas
  - C. High input costs
  - D. Greater animal density
- 9. How much feed is required to grow a pound of chicken?
  - A. Less than 1.5 pounds
  - B. Less than 1.9 pounds
  - C. 2.5 pounds
  - D. 3.0 pounds
- 10. Which breed is commonly associated with high egg production?
  - A. Leghorn
  - B. Plymouth Rock
  - C. Rhode Island Red
  - D. Silkie

# **Answers**



- 1. B
- 2. B
- 3. A
- 4. A
- 5. C
- 6. C
- 7. C
- 8. B
- 9. B
- 10. A

# **Explanations**

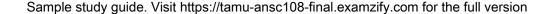


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  - C. They increase the cost of livestock management
  - D. They serve no real purpose in modern diets

The importance of feed additives in livestock diets lies in their ability to enhance growth, improve feed efficiency, and promote overall health in animals. Various types of feed additives, such as antibiotics, probiotics, vitamins, and minerals, play crucial roles in optimizing the nutritional value of the diet. By enhancing growth, feed additives can help livestock reach market weight more rapidly, which is economically beneficial for producers. Improved feed efficiency means that animals can convert feed into body mass more effectively, reducing feed costs and waste. Additionally, certain additives can support animal health by preventing disease, improving gut health, and boosting immune function, ultimately leading to healthier livestock populations. These benefits collectively contribute to more sustainable animal production systems, better resource management, and enhanced farm profitability while ensuring that livestock are raised in environments that support their wellbeing. Thus, the utilization of feed additives is a crucial aspect of modern livestock management.

- 2. What do the prostate glands primarily produce?
  - A. A thick gel-like fluid
  - B. A thin, watery fluid
  - C. A hormone for testis function
  - D. Semen components

The primary function of the prostate glands is to produce a thin, watery fluid that serves as an important component of semen. This fluid plays a crucial role in semen composition by providing nutrients and creating an optimal environment for sperm motility. The prostate fluid also helps to neutralize the acidity of the female reproductive tract, facilitating successful fertilization. The other options refer to functions or products that do not accurately describe the primary contribution of the prostate glands. For instance, while the prostate does contribute to the overall makeup of semen, it specifically produces a fluid that is more watery than thick or gel-like. This distinction is important in understanding the prostate's key role in reproductive physiology.



- 3. What are the primary factors that affect yield grade in beef?
  - A. Fat thickness, rib eye area, carcass weight, KPH fat
  - B. Color, marbling, muscle shape, age
  - C. Location of slaughter, cutting technique, chilling time, packaging
  - D. Weight of animal, feed type, breed, health status

The primary factors that affect yield grade in beef are indeed fat thickness, rib eye area, carcass weight, and KPH fat (kidney, pelvic, and heart fat). Yield grade is essentially a prediction of the amount of lean meat that can be obtained from a carcass, and these four components play significant roles in determining that value. Fat thickness is crucial because it directly influences the amount of usable meat; if there is too much fat, the yield grade will be lower since excess fat does not contribute to the quantity of sellable meat. The rib eye area is a measure of the muscle yield; a larger rib eye indicates a higher potential for lean meat. Carcass weight helps establish the overall size and potential meat yield of the animal, while KPH fat helps assess the internal fat content, which also factors into the quality and quantity of the meat that can be harvested. In contrast, the other choices do not focus specifically on yield grade. The factors in the second choice pertain more to quality grade evaluation rather than yield, while the third option involves aspects related to processing rather than the carcass itself. The factors in the last choice could influence growth rates or overall health but do not directly impact the yield grade used in carcass

- 4. What does the acronym PSE stand for in pork quality?
  - A. Pale, soft, exudative
  - B. Process, standard, effect
  - C. Pork, safety, education
  - D. Prime, select, excellent

The acronym PSE in pork quality stands for Pale, Soft, Exudative. This terminology is used to describe a specific condition in pork products that can negatively impact meat quality. PSE pork exhibits a pale color, soft texture, and exudative properties, which are typically associated with a rapid drop in pH following stunning and a lack of glycogen at the time of slaughter. This condition can result in meat that is less desirable for consumers, as it leads to poor cooking characteristics and affects the overall experience of eating pork. Recognizing PSE is important for producers and processors in maintaining meat quality standards and ensuring consumer satisfaction.

- 5. What is the cooler storage temperature for processed meat products?
  - A. 28°F
  - B. 32°F
  - C. 36°F
  - D. 40°F

The cooler storage temperature for processed meat products is most effective and safe at 36°F. Keeping processed meats at this temperature helps inhibit the growth of pathogenic bacteria while maintaining quality and freshness for a more extended period. At 36°F, there is a balance between safety and preservation, as meats can be kept for an adequate duration without compromising flavor or texture. This temperature is commonly recommended by food safety guidelines to ensure that meat products remain safe to eat while retaining their desired characteristics. Higher temperatures, such as those in the options above 36°F, can promote the proliferation of bacteria, which poses a risk to food safety. Conversely, temperatures below 36°F can unnecessarily limit the availability of products for consumption or cause texture changes in some meats. This balance is crucial in handling and storing processed meats for consumer safety and quality assurance.

- 6. What is the effect of withholding feed prior to slaughter on meat quality?
  - A. Improves fat deposition
  - B. Increases tenderness
  - C. Reduces stress on the animal
  - D. Enhances flavor

Withholding feed prior to slaughter is primarily intended to reduce the weight of the gastrointestinal tract, which can help in minimizing the stress associated with transport and handling of the animal before slaughter. This practice can contribute to better meat quality by ensuring that the animal is less stressed when it arrives at the processing facility. Stress is known to adversely affect muscle metabolism and can lead to poor meat quality, including conditions like dark cutting beef, which arises from elevated stress levels prior to slaughter. In this context, reducing stress on the animal directly contributes to a more favorable outcome for meat quality, ensuring that the muscle is in optimal condition during the slaughter process. Lower stress levels can ultimately improve factors pertinent to the final product, such as palatability and juiciness. While other options, such as improving fat deposition or enhancing tenderness and flavor, may be associated with various management practices or post-slaughter techniques, they do not directly relate to the immediate effects of withholding feed prior to slaughter. The practice mainly centers around managing the animal's stress levels, which is critical for maintaining high standards of meat quality.

## 7. What method is used for stunning hogs in the U.S.?

- A. Vapor stunning
- B. Mechanical stunning
- C. Electrical shock
- D. Gas stunning

Electric shock is the method predominantly used for stunning hogs in the U.S. This technique involves the application of a carefully controlled electrical current to the animal, which induces immediate unconsciousness and insensibility to pain. This method is preferred due to its effectiveness in rendering the animal unconscious quickly and humanely, thereby minimizing stress and suffering during the process prior to slaughter. Mechanical stunning typically involves devices such as captive bolt guns, which are more common in other livestock species but less so in hogs. Vapor stunning, which involves the use of gas mixtures to render animals unconscious, may not be as widely adopted for hogs in the U.S. as electrical stunning. Gas stunning is generally more prevalent in poultry but not standard for swine. Therefore, electrical shock is the most recognized method used in hog processing in the country.

## 8. What is a key characteristic of extensive farming?

- A. Higher stocking rates
- B. Large land areas
- C. High input costs
- D. Greater animal density

Extensive farming is characterized by the use of large land areas to raise livestock or cultivate crops. This type of farming typically involves lower input costs and a focus on using the available natural resources efficiently over a broader area, rather than intensively managing a smaller plot of land. The large land areas allow for lower stocking rates, which means that fewer animals are kept per unit of land, reducing the overall intensity of production. This approach contrasts with intensive farming, where high stocking rates, greater animal density, and higher input costs are more typical due to the concentrated nature of farming practices. The vast expanses of land utilized in extensive farming often lead to more sustainable practices, as they can reduce the risk of overgrazing and allow for ecosystems to maintain biodiversity.

# 9. How much feed is required to grow a pound of chicken?

- A. Less than 1.5 pounds
- B. Less than 1.9 pounds
- C. 2.5 pounds
- D. 3.0 pounds

The correct answer to how much feed is required to grow a pound of chicken is less than 1.9 pounds. This figure reflects modern poultry production practices, where advances in genetics, nutrition, and management have led to improved feed efficiency. Typically, industry standards indicate that broiler chickens can reach market weight with a feed conversion ratio ranging around 1.75 to 1.9 pounds of feed required for each pound of weight gain, depending on various factors such as breed, age, and rearing conditions. This efficiency is significant to poultry producers as it allows for more sustainable production, reduces feed costs, and supports animal welfare by promoting faster growth rates with optimal nutrition.

- 10. Which breed is commonly associated with high egg production?
  - A. Leghorn
  - B. Plymouth Rock
  - C. Rhode Island Red
  - D. Silkie

The Leghorn breed is renowned for its exceptional egg production capabilities. This breed is particularly valued in commercial egg-laying operations due to its ability to produce a large number of eggs consistently throughout the year. Leghorns are also known for their efficient feed conversion, meaning they can convert feed into eggs more effectively than many other breeds. They are typically white or light in color and are active foragers, adapting well to different rearing conditions. This combination of traits makes them a top choice for poultry producers focused on egg output, illustrating why they are commonly associated with high egg production.