

Livestock

- 1 The gestation length for swine is:
 - a. **114 days**
 - b. 148 days
 - c. 104 days
 - d. 144 days
- 2 The most common form of identification used in the swine industry is:
 - a. tattooing
 - b. **ear notching**
 - c. ear tagging
 - d. freeze branding
- 5 Which major swine breed originated in England, with the major development of the breed occurring in Kentucky? They were originally known as the Thin Rind.
 - a. **Hampshire**
 - b. Duroc
 - c. Chester White
 - d. Berkshire
- 6 The testes produce sperm cells and the male sex hormone:
 - a. progesterone
 - b. **testosterone**
 - c. estrogen
 - d. infundibulum
- 10 Which of the following breeds of swine is the best on performance of litter size?
 - a. Duroc
 - b. Berkshire
 - c. **Yorkshire**
 - d. Hampshire
- 11 The age at which an animal reaches sexual maturity is:
 - a. gestation
 - b. adolescence
 - c. puberty
 - d. parturition
- 12 Cattle and sheep both have multiple stomachs referred to as a(n):
 - a. **ruminant**
 - b. Omasum
 - c. reticulum
 - d. intestine
- 13 When animals band together in a herd or a flock, this behavior is known as:
 - a. **gregarious**

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- b. agnostic
 - c. investigative
 - d. flocking
- 14 Which of the following wholesale cuts of beef has the highest value?
- a. chuck
 - b. round
 - c. **rib**
 - d. shank
- 15 What area of livestock production is the major concern of animal rights organizations?
- a. reproduction
 - b. nutrition
 - c. **confinement**
 - d. health
- 17 The first American breed of cattle was the:
- a. **Texas Longhorn**
 - b. Polled Hereford
 - c. Santa Gertrudis
 - d. Shorthorn
- 18 The amount of fat covering found on a market steer is called:
- a. **finish**
 - b. marbling
 - c. flesh
 - d. carcass merit
- 20 The average feed conversion ratio for beef cattle on full feed is:
- a. 10:1 - 12:1
 - b. **6:1 - 7:1**
 - c. 3:1 - 4:1
 - d. 2:1 - 3:1
- 21 The first Continental breed to be imported in the U.S. was:
- a. **Charolais**
 - b. Limousin
 - c. Chianina
 - d. Simmental
- 22 The weight of a chilled beef carcass compared to the live weight of the animal is referred to as:
- a. quality
 - b. marbling
 - c. **yield**

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- d. carcass merit
- 23 This breed of beef cattle originated in Italy and has black pigment with white hair.
- a. **Chianina**
 - b. Simmental
 - c. Gelbvieh
 - d. Charolais
- 24 The physical appearance of an animal is known as:
- a. **phenotype**
 - b. genotype
 - c. pedigree
 - d. performance
- 27 Symptoms of this condition are swollen abdomen on the left side, labored breathing, and profuse salivation:
- a. Colic
 - b. **Bloat**
 - c. Founder
 - d. Anemia
- 28 Which of the following vitamins is considered water-soluble?
- a. **Vitamin B**
 - b. Vitamin A
 - c. Vitamin D
 - d. Vitamin E
- 30 Sheep rations typically consist of 80 to 90 percent:
- a. corn
 - b. **roughage**
 - c. protein
 - d. oats
- 31 Ideally, desirable market lambs weigh between:
- a. 140-160 pounds
 - b. **120-135 pounds**
 - c. 90-110 pounds
 - d. 70-90 pounds
- 32 Generally, in market animals, the leaner the animal is:
- a. **the lower the numerical yield grade**
 - b. the higher the numerical yield grade
 - c. the higher the quality grade
 - d. the yield and quality are equal

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- 33 To meet staple requirements, a fine-wool fleece should have a staple length of:
- 3 inches or longer
 - 2.75 inches or longer**
 - 1 inch or longer
 - 3.5 inches or longer
- 34 This is the most popular fine-wool breed of sheep in the U.S.:
- Suffolk
 - Rambouillet**
 - Merino
 - Dorset
- 35 This breed of sheep originated in southern England and often has a lamb crop of 150 percent or better.
- Suffolk**
 - Hampshire
 - Columbia
 - Southdown
- 36 Administering a medical agent to livestock that requires placement into the skin is a(n) _____ injection.
- intramuscular
 - intramammary
 - intravenous
 - intra-dermal**
- 37 The first milk produced by a ewe after parturition is called:
- colostrum**
 - lactose
 - lecithin
 - mammary
- 40 Water constitutes approximately what percent of an animal's body?
- 75%**
 - 44%
 - 80%
 - 50%
- 41 Which country has the largest number of hogs?
- Japan
 - United States
 - China**
 - Brazil

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- 42 This breed originated in southern England and was used in the formation of most medium wool breeds.
- Southdown**
 - Suffolk
 - Cotswold
 - Merino
- 43 What is the basic protein source used in most livestock rations?
- fish meal
 - corn
 - chromium
 - soybean meal**
- 45 Which of the following breeds of ewes is a non-seasonal breeder?
- Dorset**
 - Suffolk
 - Hampshire
 - Cheviot
- 46 Corn is deficient in what essential amino acid for swine?
- Glycine
 - Lysine**
 - Arginine
 - Methionine
- 47 The practice of feeding a ration for ten days to two weeks before breeding and two weeks after breeding that causes a ewe to gain rapidly is known as:
- Flushing**
 - Lactating
 - Gestation Feeding
 - Breeding
- 48 The type of muscle composing most of the meat (flesh) in farm animals:
- Striated involuntary**
 - Smooth
 - Skeletal
 - Visceral
- 49 The most important consideration for breeding yearling heifers:
- Age
 - Breed
 - Size**
 - Appearance

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- 50 Which type of breeding system can produce hardier, vigorous lambs with more rapid gains?
- Crossbreeding**
 - Purebred Breeding
 - Seedstock Breeding
 - Inbreeding
- 52 U.S. No. 1 swine carcasses have an average backfat thickness of:
- Less than 1.00**
 - 1.25-1.49 inches
 - 1.50 inches
 - 1.00 to 1.24 inches
- 54 Which class of sheep is noted for producing a fleece, medium in firmness and in length?
- Medium Wool Breeds**
 - Fine Wool Breeds
 - Long Wool Breeds
 - Carpet Wool Breeds
- 56 This breed of swine originated from the eastern United States and is known for its growth rate and feed conversion efficiency.
- Chester White
 - Hampshire
 - Duroc**
 - Yorkshire
- 57 Which breed of swine introduced the Napole gene which is responsible for excess acid and can negatively effect meat quality?
- Poland China
 - Yorkshire
 - Pietrain**
 - Hampshire
- 58 Breed of cattle originating from Switzerland and known for being docile, having rapid growth and thick muscling.
- Simmental**
 - Hereford
 - Shorthorn
 - Brahman
- 59 This disease is a chronic infection of cattle that causes a thickening of the wall of the intestine:
- Lumpy jaw
 - Johne's disease**
 - Foot and mouth disease

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- d. BVD
- 60 The highest quality grade for steers and heifers.
- a. **Prime**
 - b. Choice
 - c. Select
 - d. Commercial
- 61 This is the largest compartment of a ruminant stomach:
- a. Omasum
 - b. **Rumen**
 - c. Abomasum
 - d. Reticulum
- 62 Which of the following is called the true stomach of a ruminant?
- a. Rumen
 - b. Omasum
 - c. **Abomasum**
 - d. Reticulum
- 63 Most food nutrients used by the animal are absorbed from the:
- a. **Small Intestine**
 - b. Duodenum
 - c. Stomach
 - d. Cecum
- 64 What organ in the animal's body produces bile?
- a. **Liver**
 - b. Gall Bladder
 - c. Pancreas
 - d. Cecum
- 66 What are the main energy nutrients found in animal rations?
- a. Fats
 - b. Proteins
 - c. **Carbohydrates**
 - d. Vitamins
- 69 The lowest level of response to the use of antibiotics in swine feeding is during the:
- a. **Finishing stage**
 - b. Farrowing stage
 - c. Weaning stage
 - d. Growing stage

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- 70 Which hormone implant has been approved for use with feedlot lambs?
- Compudose
 - Synovex
 - Ralgro**
 - Implus-S
- 73 What breed of beef cattle is the leader in total number registered since 1970 in the US?
- Angus**
 - Charolais
 - Limousin
 - Hereford
- 74 The first pure breed of beef cattle imported to the U.S. (Virginia) in 1783 were the:
- Angus
 - Hereford
 - Shorthorn**
 - Simmental
- 76 Which of the following breeds has the highest standard birth weights used in performance testing programs?
- Charolais**
 - Hereford
 - Shorthorn
 - Angus
- 77 When judging a market class of beef cattle, the term referring to the natural fleshing of the animal is:
- Finish
 - Type
 - Muscling**
 - Balance
- 78 Feeding programs for beef cow-calf herds are based on the use of:
- Roughages**
 - Concentrates
 - Grains
 - Proteins
- 80 What type of identification is commonly used, especially with large herds, and required by law in most western states?
- tattooing
 - Neck Chains
 - Branding**

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- d. Ear Tags
- 81 Which is NOT one of the main minerals needed in rations for finishing cattle?
- a. Salt
 - b. Phosphorus
 - c. **Copper**
 - d. Calcium
- 82 Which disease often causes cattle to abort during the last half of pregnancy?
- a. **Brucellosis**
 - b. Enteritis
 - c. Anthrax
 - d. Blackleg
- 83 What disease is carried by insects and affects the eyes of cattle?
- a. **Pinkeye**
 - b. Leptospirosis
 - c. Actinomycosis
 - d. Listeriosis
- 84 A nutritional problem where rapid fermentation in the rumen, causing too much gas being produced, is called:
- a. **Bloat**
 - b. Flurosis
 - c. Traumatic Gastritis
 - d. Urinary Calculi
- 87 Which pure breed of swine, developed in the early 1700s, was the first to be imported to the United States?
- a. Tamworth
 - b. Landrace
 - c. **Berkshire**
 - d. Pietrain
- 91 Which is the most important nutrient in hog rations?
- a. **Water**
 - b. Vitamins
 - c. Roughages
 - d. Animal Protein
- 93 The time during which an animal is pregnant is:
- a. Fertilization
 - b. Parturition
 - c. **Gestation**

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- d. Ovulation
- 94 What is the period of time when a female will accept the male for breeding?
- a. conception
 - b. gestation
 - c. **estrus**
 - d. ovulation
- 95 What common swine disease, caused by a bacteria, affects the turbinate bones located in the snout?
- a. **Atrophic Rhinitis**
 - b. Avian Tuberculosis
 - c. Actinobacillus Pleuropneumoniae
 - d. Eperythrozoonosis
- 97 Anemia is a condition affecting mainly baby pigs due to a diet deficient in:
- a. Calcium
 - b. Proteins
 - c. **Iron**
 - d. Amino Acids
- 98 The sudden death of heavily muscled hogs is referred to as:
- a. Streptococcus Suis
 - b. **Porcine Stress Syndrome**
 - c. Eperythrozoonosis
 - d. Necrotic Enteritis
- 100 The American Merino breed of sheep is classified as a:
- a. **Fine Wool Breed**
 - b. Fur Sheep Breed
 - c. Long Wool Breed
 - d. Carpet Wool Breed
- 101 Which breed of sheep was developed in France?
- a. **Rambouillet**
 - b. Debouillet
 - c. Southdown
 - d. Delaine Merino
- 102 Backfat of lambs should measure 0.15 to 0.20 inches at the:
- a. 1st Rib
 - b. 5th Rib
 - c. 8th Rib
 - d. **12th Rib**

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- 103 The gestation time for sheep is:
- 148 days**
 - 114 days
 - 128 days
 - 283 days
- 105 Which of the following quality grades is used for lambs and yearlings, but not for slaughter sheep?
- Prime**
 - Choice
 - Good
 - Utility
- 107 Swine were first domesticated around 4900 BC by the:
- English
 - Arabians
 - Chinese**
 - Germans
- 108 Which is NOT correct about livestock classified as mammals?
- Warm blooded
 - Three chambered heart**
 - Diaphragm between chest and abdominal cavities
 - Mammary glands
- 110 Which bone is a part of the pelvic limb in the skeletal system of livestock?
- Tibia**
 - Ulna
 - Humerus
 - Mandible
- 111 Vertebra bones are classified as:
- Irregular**
 - Long
 - Flat
 - Short
- 112 The bones in the front legs of an animal make up the:
- Axial skeleton
 - Pectoral limbs**
 - Vertebral column
 - Pelvic limbs
- 113 Air is drawn into the respiratory system through the:

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- a. Trachea
 - b. Nostrils**
 - c. Pharynx
 - d. Bronchioles
- 114 The kidneys and bladder are major components of the:
- a. Urinary system**
 - b. Lymphatic system
 - c. Nervous system
 - d. Endocrine system
- 115 The digestive system in swine begins with the:
- a. Esophagus
 - b. Stomach
 - c. Mouth**
 - d. Small intestine
- 116 In cattle and sheep, the rumen and reticulum make up what percent of the stomach?
- a. 85%**
 - b. 66%
 - c. 50%
 - d. 25%
- 117 The key to absorption is the small finger-like projections on the walls of the small intestine called:
- a. Villi**
 - b. Hairs
 - c. Cecum
 - d. Duodenum
- 118 Feed nutrients made of sugars and starches are:
- a. Complex carbohydrates
 - b. Simple carbohydrates**
 - c. Amino acids
 - d. Vitamins
- 120 Which feed nutrients have the highest energy value?
- a. Fats**
 - b. Carbohydrates
 - c. Proteins
 - d. Minerals
- 123 Which feed nutrient is the most important on a daily basis for livestock?
- a. Energy Nutrients

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- b. Proteins
 - c. **Water**
 - d. Vitamins
- 125 Livestock feeds that contain more than 18 percent crude fiber when dry are called:
- a. **Roughages**
 - b. Concentrates
 - c. Palatable
 - d. Legumes
- 126 Protein supplements are livestock feeds containing what percent proteins?
- a. **20% or more**
 - b. 16-18%
 - c. 10-12%
 - d. 6-8%
- 127 A ration that tastes good to an animal, which promotes consumption, is said to be:
- a. Balanced
 - b. **Palatable**
 - c. Concentrated
 - d. Nutritional
- 128 The primary use of the nutrients in a ration for livestock is:
- a. **Maintenance**
 - b. Reproduction
 - c. Fattening
 - d. Growth
- 129 A maintenance ration for beef cattle is primarily:
- a. Carbohydrates
 - b. **Roughages**
 - c. Fats
 - d. Proteins
- 130 The diploid number (number of pairs of chromosomes) for swine is:
- a. **19**
 - b. 22
 - c. 27
 - d. 30
- 131 What occurs when a sperm cell from the male reaches an egg cell from the female?
- a. Mitosis
 - b. **Fertilization**
 - c. Meiosis

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d. Heritability

132 The characteristics of an animal that are inheritable are passed from one generation to the next by:

- a. **Genes**
- b. DNA
- c. Cells
- d. Chromosomes

133 The average length of the estrus cycle for sheep is:

- a. 13 days
- b. **16 days**
- c. 21 days
- d. 22 days

135 The first successful cloning of livestock was done in 1996 with:

- a. **Sheep**
- b. Swine
- c. Cattle
- d. Goats

136 The mating of animals of different families within the same breed is:

- a. **Outcrossing**
- b. Inbreeding
- c. Crossbreeding
- d. Grading up

140 The typical market hog will produce a carcass weighing:

- a. 126 pounds
- b. **184 pounds**
- c. 225 pounds
- d. 250 pounds

141 According to the National Pork Producers Council, the goal for ideal market hogs is to have a minimum loin muscle area of:

- a. **6.5 square inches**
- b. 6 square inches
- c. 5 square inches
- d. 4.5 square inches

142 When using performance data in judging hogs, which is NOT one of the indexes used as an EPD (Expected Progeny Differences)?

- a. Sow Productivity Index
- b. Terminal Sire Index

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- c. **Feed Efficiency Index**
- d. Maternal Line Index

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143 A visual evaluation of the amount of muscle on a hog is best seen by looking at which view of the hog?

- a. **Rear**
- b. Side
- c. Front
- d. Top

144 Which classes of sheep are bred primarily for meat?

- a. **Medium Wood Breeds**
- b. Fine Wool Breeds
- c. Crossbred Wool Breeds
- d. Fur Sheep Breeds

145 The most commonly used method of classifying sheep is by:

- a. Carcass type
- b. Point of origin
- c. **Type of wool**
- d. Number of young produced

146 Sheep are a major livestock enterprise in which area of the United States?

- a. Southern range
- b. **Western range**
- c. Eastern range
- d. Northern range

148 The section of the vertebrae that makes up the neck in cattle, swine, or sheep is the:

- a. **Cervical vertebrae**
- b. Sacral vertebrae
- c. Lumbar vertebrae
- d. Coccygeal vertebrae

149 The "Femur" is classified as what type of bone?

- a.
- b. short
- c. **long flat**
- d. irregular

150 Which is NOT a function of the skeletal system?

- a. strength
- b. **blood storage**
- c. mineral storage
- d. protection

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- 151 Hormones are organic catalysts that influence the growth and development of the body and are produced in the:
- Lymphatic system
 - urinary system
 - endocrine system**
 - digestive system
- 152 In what part of the respiratory system are the passages from the nostrils and the mouth joined?
- pharynx**
 - trachea
 - bronchi
 - alveoli
- 153 The pancreas produces which hormone?
- estrogen
 - testosterone
 - insulin**
 - thyroxine
- 155 Which major mineral is often lacking in animal rations?
- selenium
 - calcium**
 - copper
 - iodine
- 156 The proportion of the total variation in offspring from parents due to additive gene effects:
- heritability**
 - estimate
 - heterosis
 - hybrid vigor
- 157 Which trait in beef cattle has the highest heritability estimate?
- ribeye area**
 - birth weight
 - carcass grade
 - dressing percent
- 158 Which trait in sheep has the lowest heritability estimate?
- mature weight
 - ribeye area
 - feed efficiency**
 - staple length
- 159 The diploid number (pairs of chromosomes) for sheep is:

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- a. 36
- b. **27**
- c. 19
- d. 12

160 Which gland in the male produces the sperm cells?

- a. **testicles**
- b. vas deferens
- c. urethra
- d. epididymis

161 The average age for cattle to reach puberty is:

- a. 4-6 months
- b. **6-8 months**
- c. 10-12 months
- d. 12-14 months

162 The average length of the estrus cycle in swine is:

- a. 14 days
- b. **21 days**
- c. 28 days
- d. 36 days

163 The release of the egg from the ovary is called:

- a. reproduction
- b. fertilization
- c. parturition
- d. **ovulation**

165 Which region of the United States produces the most beef cattle?

- a. Pacific
- b. Cornbelt
- c. Southwest
- d. Lake States

169 Which breed of cattle is classified as a *Bos indicus* type?

- a. **Brahman**
- b. Galloway
- c. Simmental
- d. Pinzgauer

171 What is the standard number of days that beef cattle weaning weights are adjusted to?

- a. 180
- b. **205**

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- c. 225
 - d. 260
- 175 The normal average body temperature for healthy beef cattle is:
- a. **101.5 degrees F**
 - b. 100.1 degrees F
 - c. 99.9 degrees F
 - d. 98.6 degrees F
- 176 What is the length of time that bacteria causing Anthrax can remain in the soil?
- a. **40 years**
 - b. 10 years
 - c. 18 months
 - d. 90 days
- 177 Pinkeye, the common name of this disease, is carried by insects and affects the eyes of the animal:
- a. Leptospirosis
 - b. Brucellosis
 - c. **Infectious Keratitis**
 - d. Blackleg
- 178 Which nutritional disease is a heart condition of beef cattle at high altitudes?
- a. **Brisket Disease**
 - b. Founder
 - c. Bloat
 - d. Hardware Disease
- 179 White Muscle disease is caused by a deficiency of the trace element _____.
- a. **selenium**
 - b. calcium
 - c. copper
 - d. iron
- 180 Which breed of swine is known to produce the largest loin muscle area based on performance tests?
- a. **Hampshire**
 - b. Landrace
 - c. Chester White
 - d. Yorkshire
- 181 What term refers to the degree of refinement of head, hair, hide, and bone of the live hog?
- a. proportion
 - b. soundness

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- c. **quality**
- d. finish

182 Since 1970, which breed of sheep has the largest number registered with their breed association?

- a. Southdown
- b. Rambouillet
- c. **Suffolk**
- d. Hampshire

183 Which fine wool breed of sheep originated in the United States?

- a. **Debouillet**
- b. Merino
- c. Rambouillet
- d. Corriedale

184 The backfat on a market lamb should measure _____ at the 12th rib.

- a. **0.15 to 0.20 inches**
- b. 0.25 to 0.30 inches
- c. 0.05 to 0.10 inches
- d. 0.35 to 0.50 inches

185 A lack of what substance in the blood causes milk fever in sheep?

- a. **Calcium**
- b. Vitamin K
- c. Vitamin D
- d. Zinc

186 What type of parasites are the most serious health problem for sheep?

- a. external
- b. live
- c. **internal**
- d. mutated

187 To _____ is to adapt the behavior of an animal to fit the needs of people.

- a. Masticate
- b. **Domesticate**
- c. Tame
- d. Feral

189 What two wild stocks did American breeds of swine come from

- a. Bos taurus & Sus vittatus
- b. **Sus vittatus & Sus scrofa**
- c. Bos taurus & Bos indicus

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- d. *Sus scrofa* & *Bos vittatus*

191 Timid, defenseless, and the least intelligent of all tamed livestock, these were thought to be the first wild species domesticated

- a. **Sheep**
- b. Dogs
- c. Cattle
- d. Swine

192 Livestock belong to what class of homoeothermic animals that are characterized as having four-chambered hearts, mammary glands, and have young born alive?

- a. Animalia
- b. Vertebrata
- c. **Mammalia**
- d. Chordata

193 All the domestic animals found on the farm are included in what kingdom?

- a. **Animalia**
- b. Mammalia
- c. Vertebrata
- d. Chordata

194 Similar to a genus containing a group of related species, a species can contain all of the following except?

- a. **Classes**
- b. Strains
- c. Breeds
- d. Varieties

195 What does the rumen of a cow contain that allows it to effectively digest low quality feedstuffs

- a. Algae
- b. **Microorganisms**
- c. Antibiotics
- d. Small rocks and pebbles

196 In the subdivision Pecora of the suborder Ruminantia, are considered "true ruminants" because they have what unique characteristic?

- a. Four stomachs
- b. Three stomachs
- c. **Stomachs with four compartments**
- d. Stomachs with three compartments

197 What percentage of total beef and dairy energy intake in the U.S. consists of roughages and other waste materials that can't be used for human food?

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- a. Exactly 45%
- b. About 65%
- c. **About 75%**
- d. Exactly 95%

198 Which of the following is not a carcass byproduct of slaughter animals?

- a. **Meat**
- b. Wool
- c. Leather
- d. Mohair

199 Which of the following is not strictly composed of animal functions?

- a. **Clothing, Hospitality, Conversion of Feed to Food.**
- b. Stabilize Farm Economy, Power, & Recreation
- c. Conservation, Concentrating Bulky Feeds, & Food
- d. Power, Conversion Feed to Food, & Clothing

204 The long term trend in poultry consumption has resulted in decreased consumption of red meat especially in what type?

- a. Mutton
- b. Pork
- c. Lamb
- d. **Beef**

205 Livestock producers have responded to decreasing demand by increasing advertising, promotion, and...

- a. **Increasing overall efficiency**
- b. Decreasing overall quality
- c. Increased production
- d. Diversification of production

206 Those individuals who support and emphasize the humane treatment of animals hold what fundamental view?

- a. Animal Rights
- b. Animal Liberation
- c. **Animal Welfare**
- d. Animal Humility

208 In recent years, animal rights activists have begun distributing their message to school children by providing free materials to schools under what following label?

- a. **Educational Material**
- b. Extravagant Propaganda
- c. Late Breaking News
- d. Public Service Announcements

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209 Societies for the preventions of cruelty to animals were first organized in both England and the United States in the...

- a. 1700's
- b. 1800's**
- c. 1900's
- d. 2000's

210 APHIS is a division of the USDA that is responsible for enforcing what type of legislation concerning plant health and animal welfare?

- a. Federal**
- b. Local
- c. State
- d. Regional

211 Which of the following acts requires federally inspected slaughter plants to comply with humane methods of slaughter?

- a. Federal Humane Slaughter Act**
- b. Animal Welfare Act
- c. Horse Protection Act
- d. Animal Enterprise Protection Act

212 Which one of the following is not an advantage of developing a database and system of animal identification

- a. Provide data for disease control and eradication programs
- b. Comply with the APHIS standards**
- c. Improve quality assurance programs and food safety
- d. Improve genetics and breeding programs

214 Major issues regarding food safety include all of the following except...

- a. Irradiation of food
- b. Bacteria Contamination
- c. Saturated Fatty Acids**
- d. Genetic Engineering

215 At 66%, most of the problems with foodborne illness are caused by what source?

- a. Viral
- b. Chemical
- c. Bacteria**
- d. Parasitic

218 In 1977 the Sanitation Standard Operating Procedures (SSOPs) system introduced a new concept for pathogen reduction in meat and poultry harvesting and placed the responsibility for food safety on the...

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- a. **Processing/Slaughter Plants**
- b. United States Department of Agriculture
- c. Food Safety and Inspection Service
- d. Food and Drug Administration

219 Any point, step, or procedure in the meat or poultry harvesting process where control can be applied to prevent, eliminate, or reduce a food safety hazard to an acceptable level is termed...

- a. Critical Management Point
- b. **Critical Control Point**
- c. Crucial Controlled Point
- d. Management Point

220 By January 2000 all slaughter plants were required to have a HACCP system to monitor the safe processing of meat and poultry; what does HACCP stand for?

- a. Harmful Additives and Crucial Confirmation Points
- b. **Hazard Analysis and Critical Control Points**
- c. Hazardous and Crucial Control Points
- d. None of the answers listed

223 Many livestock producers seek to increase production efficiency through genetic diversity and crossbreeding, this has resulted in the near extinction of...

- a. All purebred cattle
- b. **Purebred lines of traditional breeds**
- c. Many wild game species
- d. None of the answers listed

224 In some specific breeds of livestock there are high levels of resistance to which of the following?

- a. Scours caused by Escherichia
- b. Parasite Infestations
- c. Heat and High Temperatures
- d. **All of the answers listed**

227 There are five major categories for agriculture-related jobs they are: Farm Production and Agricultural services, Input Supplies, Agriculture Wholesale and Retail, Indirect Agricultural Business and what?

- a. Cosmetics
- b. Commercial Advertising
- c. **Processing and Marketing**
- d. Gold and Silver Mining

232 A Farmer or Rancher would fall under what category of animal-science-related category?

- a. Agriculture Production Specialist

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- b. Education, Communication, and Information Specialists
- c. Marketing, Merchandising and Sales Representatives
- d. Managers and Financial Specialists

237 Using yelling, arm waving, punching, and indiscriminant use of electric prods are practices to...

- a. **Avoid**
- b. Utilize regularly
- c. Utilize on occasion
- d. None of the answers listed

238 In cattle the flight zone generally ranges from _____ to _____ feet but can be much smaller for cattle that are use to being handled and much larger for cattle that have not been handled in the past.

- a. 2,5
- b. **5,20**
- c. 12,40
- d. 30,60

239 If a worker positions him or herself 30 degrees off from directly behind an animal, the animal will typically move straight ahead. If the worker moves further off center to 45 degrees what results?

- a. **The animal will begin to turn**
- b. The animal will move faster
- c. Nothing will change
- d. The animal will stop

241 Sows are particularly dangerous during what circumstance?

- a. During feeding time
- b. **When they have small piglets**
- c. When they are sick
- d. None of the answers listed

243 Diseases and parasites that can be transmitted between man and animals are known as what?

- a. Trichinosis
- b. **Zoonoses**
- c. Mammalia
- d. Leptospirosis

247 Class D Fires involve what type of fuel source?

- a. Oils, Grease, Paints & Gasoline
- b. Electrical Materials
- c. **Combustible Metals**
- d. Wood, Paper, Textiles, and Grass

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248 Under the Endangered Species Act if an area is determined to be critical habitat for an endangered species what must happen?

- a. All detrimental human activity in that area must be stopped
- b. The species must be removed
- c. The area may not be farmed but ranching is ok
- d. **None of the answers listed**

249 Laws to protect farmers against nuisance lawsuits based on subjective perceptions of people who moved into rural areas from the cities where termed what?

- a. **"Right to Farm" Laws**
- b. "Urban Sprawl" Laws
- c. "Farm Friendly" Laws
- d. "Equal Farming" Laws

250 What state supreme court ruled against a law protecting a farmer's right to farm and brought into question status of similar laws in all the states?

- a. **Iowa**
- b. California
- c. New York
- d. Texas

251 According to the Clean Water Act of 1972, animal waste that is carried from a large feedlot directly into a river or stream by runoff is considered what?

- a. A sound practice
- b. **Point source pollution**
- c. Non-point source pollution
- d. None of the answers listed

252 In 1987 the Federal Water Pollution Control Act was amended to regulate nonpoint source pollution; which of the following is an example of nonpoint source pollution?

- a. A factory with a direct outlet into a nearby stream
- b. **Runoff from farm fields that were freshly fertilized**
- c. Runoff from a dairy draining into a nearby river
- d. All of the answers listed

253 The Federal Clean Air Act establishes national air quality standards and considers which of the following as a source of air pollution?

- a. Dust & Grit
- b. Open Burning
- c. Organic Matter
- d. **All of the answers listed**

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- 254 Under the Federal Clean Air Act who is held primarily responsible for ensuring that standards are met?
- The Individual States**
 - Federal Clean Air Service
 - Individual Property Owners
 - All of the answers listed
- 255 The Environmental Protection Agency monitors all of the following except:
- Chloride**
 - Fecal
 - Coliform
 - BOD
- 256 Biochemical Oxygen Demand is a direct measure of pollution in waters, if the BOD gets too high there may not be enough oxygen to...
- Sustain Aquatic Plants
 - Support Aquatic Life**
 - Maintain Clarity
 - None of the answers listed
- 257 Phosphorus and Ammonia contamination in water results excessive amounts of what?
- Algae Growth**
 - Bacterial Growth
 - Oxygen
 - All of the answers listed
- 258 Consideration must be given to problems with rodents, flies, dust, and nitrate problems in water supplies when handling what type of potential pollutant?
- Synthetic Fertilizer
 - Oil and Grease
 - Animal Waste**
 - All of the answers listed
- 259 There are three options for appropriate manure handling which is the most cost effective way?
- Holding and disposing of on the Land**
 - Biological Treatment
 - Chemical Treatment
 - Dumping into surface waters
- 260 Facilities are classified as either confined or unconfined, which of the following is and unconfined operation?
- Registered Angus herd on pasture**
 - Dairy operation only feeding a mixed ration

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- c. Farrow to finish hog farm
- d. A large feedlot

261 Which of the following is an example of a liquid manure handling system?

- a. Pits
- b. Lagoons
- c. Storage Basins
- d. **All of the answers listed**

262 Diversion, diversion terraces, debris basins, detention ponds, and disposal are five ways to prevent what?

- a. Runoff entering the feedlot
- b. Runoff leaving the feedlot
- c. Point source pollution
- d. **All of the answers listed**

263 Deodorants, counteractants, digestive deodorants, and masking agents are all forms to control what problems associated with animal manure?

- a. **Gases and odors**
- b. Nonpoint Source Pollution
- c. Manure Runoff
- d. None of the answers listed

264 The comfort zone is the temperature range in which maxim efficiency is reached and is also known as what?

- a. **Thermoneutral Zone**
- b. Effective Ambient Temperature
- c. Acclimatized Range
- d. Lower Critical Temperature

265 Which of the following factors influence water intake by cattle?

- a. Ambient Temperature and Humidity
- b. Pregnancy/Lactating Status
- c. Feed Typer
- d. **All of the answers listed**

266 What of the following is an acceptable method for disposing of dead animals?

- a. **Rendering Plants**
- b. Composting of Poultry and Hogs

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- c. Burying the Carcass
- d. All of the answers listed

267 A domestic animal of unknown ownership that is running at large is referred to in the text as what?

- a. Stray
- b. Estray
- c. Maverick
- d. **All of the answers listed**

268 Which of the following types of tissue forms a covering for most internal and external surfaces of the body?

- a. **epithelial**
- b. fluid
- c. nerve
- d. connective

269 Which of the following tissues is responsible for all transmittance of information throughout the animal's body?

- a. fluid
- b. **nerve**
- c. connective
- d. muscle

270 Bones are classified as what type of tissue?

- a. fluid
- b. **connective**
- c. epithelial
- d. muscle

271 A group of organs that carries out a major function is considered a what?

- a. **system**
- b. cohort
- c. tract
- d. community

272 What tough connective tissue that is flexible and elastic forms as the early skeletal structure of the vertebrate embryo?

- a. **Cartilage**
- b. Bone
- c. Sternum
- d. Calcium

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- 273 Bones are living structures containing all of the following except what?
- Muscle**
 - Nerve fibers
 - Lymph Vessels
 - Blood
- 274 Animals with rigid skeletal systems that are found inside the body are considered to have which of the following?
- Vertebral Systems
 - Endoskeletons**
 - Exoskeletons
 - All of the answers listed
- 275 In addition to long and short bones what are the other two types of bone shape?
- Irregular and Flat**
 - Ribbed and Round
 - Round and Flat
 - Irregular and Ribbed
- 276 Which of the following is not a major type of muscle found in the body?
- cardiac
 - skeletal
 - smooth
 - connective**
- 277 Which of the three following types of muscle is the only voluntary type?
- skeletal**
 - connective
 - smooth
 - cardiac
- 278 What type of muscle tissue is considered to be striated and involuntary?
- cardiac**
 - connective
 - smooth
 - skeletal
- 279 One end of a muscle is attached to a relatively immovable part of the skeleton referred to as what?
- Base
 - Origin**
 - Insertion
 - All of the answers listed

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280 What acts as the energy source for muscle contraction and is the end product of oxidizing nutrients such as glucose and fatty acids?

- a. **Adenosine triphosphate (ATP)**
- b. Calcium
- c. Ions
- d. Myosin Actin

281 The tension that is maintained by paired muscles balancing the contraction of each with the other is referred to as what?

- a. Muscle Balance
- b. **Muscle Tone**
- c. Antagonist
- d. Agonist

282 Muscles that surround the hollow internal organs of the body are considered what type of muscle?

- a. **Smooth Muscle**
- b. Cardiac Muscle
- c. Agonist Muscle
- d. Skeletal Muscle

283 Cardiac muscle is found only in the muscular wall of what internal organ?

- a. **Heart**
- b. Liver
- c. Kidney
- d. Lung

284 After air flows through the bronchi and bronchioles it finally enters what structure of the respiratory system?

- a. **Alveoli**
- b. Larynx
- c. Trachea
- d. Pharynx

285 Oxygen enters the bloodstream through the alveoli by what process?

- a. Mechanical Separation
- b. Hydraulic Action
- c. **Simple Diffusion**
- d. Atmospheric Pressure

286 Which of the following is a function of the respiratory system?

- a. Expel carbon dioxide
- b. Produce sounds

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- c. Helps control body temperature
- d. **All of the answers listed**

287 The pulmonary artery carries blood from where to where?

- a. **Heart to lung**
- b. Heart to brain
- c. Brain to heart
- d. Lung to heart

288 The aorta carries blood from the left ventricle to the rest of the body and is considered what?

- a. A vein
- b. **An artery**
- c. A capillary bed
- d. None of the answers listed

289 Capillary beds that are in almost all body tissues accomplish all of the following except?

- a. Provide cells with oxygen
- b. Provide cells with nutrients
- c. Pickup of waste products
- d. **None of the answers listed**

290 The pressure is highest with the heart contracts this is known as what pressure?

- a. **Systolic pressure**
- b. Diastolic pressure
- c. Capillary pressure
- d. All of the answers listed

291 The fluid portion of blood is referred to as plasma and comprises what percent of the total volume?

- a. Ten to twenty percent
- b. Thirty to forty percent
- c. **Fifty to sixty percent**
- d. Seventy to eighty percent

292 Red blood cells help maintain pH in the body and also transport what?

- a. **Oxygen**
- b. Nutrients
- c. Waste
- d. None of the answers listed

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293 There are five types of leukocytes or white blood cells and all five types serve the purpose of what?

- a. **As part of the Immune System**
- b. Oxygen Transport
- c. Waste Management
- d. Heat Regulation

294 Which of the following serves as an auxiliary to the circulatory system?

- a. Nervous system
- b. Endocrine system
- c. **Lymphatic system**
- d. Urinary system

295 What hormone opposes the action of insulin and increases blood sugar level?

- a. **Glucagon**
- b. Testosterone
- c. Estrogen
- d. Prolactin

296 Consisting of all the parts of the body involved in chewing and digesting feed what system is responsible for moving feed through the body?

- a. **Digestive**
- b. Endocrine
- c. Urinary
- d. Lymphatic

297 Ruminant animals are capable of digesting large amounts of what type of fibrous feeds such as hay and pasture?

- a. **Roughages**
- b. Concentrates
- c. Grains
- d. Protein supplements

298 Rumination occurs when small masses of feed are forced back up the esophagus to be chewed again. What is another name for Rumination?

- a. Chewing the cob
- b. Mastication
- c. **Chewing the cud**
- d. None of the answers listed

299 The rumen and reticulum are just two of the four parts of what internal digestive organ?

- a. **Ruminant stomach**
- b. Small intestine

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- c. Large intestine
- d. Nonruminant stomach

300 Bacteria and Protozoa in the rumen convert low quality protein into what that is essential for growth and maintenance of cells?

- a. **Amino acids**
- b. Glucagon
- c. Maltase
- d. Cellulose

301 If a ruminant consumes large amounts of fresh grass or legumes gas may build up faster than the animal can eliminate it and this results in what condition?

- a. **Bloat**
- b. Minor discomfort
- c. Decreased libido
- d. Increased water intake

302 The small intestine is lined with many small fingerlike projections called villi that serve what purpose?

- a. Increase feed movement
- b. Increase sensitivity of intestine
- c. **Increase surface area**
- d. None of the answers listed

303 The major function of the large intestine is to what?

- a. **Absorb water**
- b. Absorb the majority of minerals
- c. Absorb mucus
- d. All of the answers listed

304 The only functioning stomach in a new born ruminant is the abomasum yet by what age will the rumen have grown large enough to utilize roughages efficiently?

- a. 2 months
- b. **3 months**
- c. 9 months
- d. 1 year

305 Villi function to absorb which of the following?

- a. Some water
- b. Dissolved minerals
- c. Fats
- d. **All of the answers listed**

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306 The sum of the processes that are used by living organisms and cells to handle nutrients after they have been absorbed is referred to as what?

- a. **Metabolism**
- b. Anabolism
- c. Catabolism
- d. Oxidation

307 What refers to the formation and repair of body tissue?

- a. Catabolism
- b. Oxidation
- c. **Anabolism**
- d. Metabolism

308 What refers to the breakdown of body tissues into simpler substances and waste products?

- a. **Catabolism**
- b. Metabolism
- c. Anabolism
- d. Oxidation

309 What process provides energy for the animal?

- a. **Oxidation**
- b. Metabolism
- c. Anabolism
- d. Catabolism

310 Any chemical element or compound that aids in the support of life is considered to be a what?

- a. Vitamin
- b. Protein
- c. **Nutrient**
- d. Mineral

311 Protein and Energy nutrients are two of the five types of nutrient groups which of the following is not a type of nutrient group?

- a. **Sugars**
- b. Water
- c. Minerals
- d. Vitamins

312 Which of the following are considered simple carbohydrates?

- a. Fiber and cellulose
- b. Cellulose and lignin
- c. **Sugars and starches**
- d. Sugars and lignin

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- 313 What type of carbohydrates are referred to as nitrogen free extract (NFE)?
- Simple carbohydrates**
 - Those derived from corn and wheat
 - Those derived from cereal grains
 - All of the answers listed
- 314 Fats have increased amounts of carbon and hydrogen than do carbohydrates and as a result fats have how many times the energy value of carbohydrates?
- 5 times
 - 3 times
 - 2.25 times**
 - 1.5 times
- 315 Proteins are organic compounds made up of what?
- Amino acids**
 - Lignin
 - Sugars
 - Starches
- 316 How many essential amino acids must be provided in swine and beef rations?
- 14 for swine and 10 for beef
 - 10 for swine and 0 for beef**
 - 10 for swine and 14 for beef
 - 0 for swine and 14 for beef
- 317 What is a common synthetic nitrogen source that is manufactured from the air along with water and carbon?
- Arginine
 - Valine
 - Urea**
 - Rumen
- 318 What is considered to be the true amount of protein in a feed?
- Crude protein
 - Nitrogen free extract
 - Digestible protein**
 - All of the answers listed
- 319 Water soluble and fat soluble are two types of what nutrient?
- Vitamins**
 - Minerals
 - Fats and oils
 - Protein

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- 320 An animal's body produces what vitamin if it is exposed to direct sunlight for part of the day?
- Vitamin A
 - Vitamin C
 - Vitamin D**
 - Vitamin E
- 321 What two nutrients do not contain carbon and hence aren't considered organic materials?
- Minerals and water**
 - Water and vitamins
 - Vitamins and minerals
 - None of the answers listed
- 322 What significance is the nutrient water?
- Acts as a carrier of nutrients within the body
 - Helps regulate body temperature
 - Necessary for many chemical reactions
 - All of the answers listed**
- 323 Which of the following has the highest energy value?
- Fats**
 - Carbohydrates
 - Proteins
 - None of the answers listed
- 324 What is the main source of energy found in animal rations?
- Carbohydrates**
 - Fats
 - Proteins
 - Vitamins
- 325 Feed additives and hormone implants are sometimes called which of the following?
- Performance stimulants**
 - Microorganisms
 - Antioxidants
 - Antimicrobial drugs
- 326 The use of drugs at a lower level in feed than would typically be used for treating sick animals is what type of use?
- Subtherapeutic**
 - Therapeutic
 - All of the answers listed
 - None of the answers listed

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- 327 What is one major concern of feeding antibiotics at subtherapeutic levels?
- Resistant strains of bacteria**
 - Hormone residue in meat
 - Environmental impact
 - None of the answers listed
- 328 What are the potential benefits from feeding antibiotics at subtherapeutic levels?
- Increased nutrient-sparing effect
 - Increased feed intake
 - Improved health of the intestine wall
 - All of the answers listed**
- 329 What major concern does the European Union have about importing American beef?
- Hormone residue from implants
 - Environmental impact of antibiotic use
 - Resistant strains of bacteria from subtherapeutic drugs**
 - None of the answers listed
- 330 If hormone implants use were banned in the United States the expected drop in the amount of beef produced has been estimated to be how much?
- 2 percent
 - 13 percent**
 - 40 percent
 - 60 percent
- 331 Hormones are said to improve rate of gain by ten percent and feed efficiency by six to eight percent in cattle when delivered as feed additive or by what other means?
- Intravenously
 - In water supply
 - Implant**
 - None of the answers listed
- 332 Melengestrol Acetate(MGA) is a synthetic hormone similar to progesterone that improves rate of gain and feed efficiency during the fattening of heifers mainly because MGA accomplishes what?
- Heat suppression**
 - Establishes a pregnancy
 - Increases appetite
 - Improves microbial population
- 333 What type of cattle should not typically receive most implants?
- Animals kept for breeding purposes
 - Replacing heifers

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- c. Young bull calves
- d. **All of the answers listed**

334 What hormone implant has been approved for use with feedlot lambs but not for ewes or replacement stock?

- a. **Ralgro**
- b. Synovex-L
- c. Finaplix-H
- d. None of the answers listed

335 Current detailed information on feed additive use and regulations may be found in what publication by the Miller Publishing Company?

- a. **Feed additive compendium**
- b. Feed additive emporium
- c. Medicating ingredient brochure
- d. None of the answers listed

336 When keeping good records to avoid feed contamination and drug residue issues which of the following is not a major point of information?

- a. **Storage temperature for batch**
- b. Date of batch mixing
- c. Location of batch storage
- d. Mixing order and amount of medication added

337 It is feared that the continuous low level subtherapeutic use of antibiotics might result in the development of what potential health concern?

- a. **Bacterial resistance to drugs**
- b. Human resistance to drugs
- c. All of the answers listed
- d. None of the answers listed

338 Livestock feeds that contain more than 18 percent crude fiber when dry are considered what?

- a. Silage
- b. Concentrates
- c. **Roughages**
- d. None of the answers listed

339 Which of the following is not an example of a legume or a plant that can fix nitrogen from the air and make it plant available?

- a. **Corn**
- b. Alfalfa

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- c. Bean
 - d. Peas
- 340 Concentrates contain less than what percent crude fiber when dry?
- a. 2 percent
 - b. 18 percent**
 - c. 30 percent
 - d. 60 percent
- 341 Livestock feeds that contain 20 percent or more protein are considered what?
- a. Legumes
 - b. Concentrates
 - c. Protein supplements**
 - d. Roughages
- 343 The amount of feed given to an animal to meet its needs during a 24 hour period is known as what?
- a. A ration**
 - b. A legume
 - c. A diet
 - d. All of the answers listed
- 344 The term palatable when applied to a ration means which of the following?
- a. Easily developed
 - b. Tastes good**
 - c. Balanced nutrients
 - d. None of the answers listed
- 345 A ration that is said to be what has all the nutrients in the right proportions and amounts?
- a. Palatable
 - b. Accountable
 - c. Balanced**
 - d. All of the answers listed
- 346 The energy requirement for the heart and other vital processes comprises the basal metabolism of the animal and falls under what category of ration function?
- a. Maintenance**
 - b. Growth
 - c. Productions
 - d. reproduction
- 347 Fat stored within an animal's muscles is called what?
- a. Marbling**
 - b. Muscle fat

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- c. Yellow fat
- d. None of the answers listed

348 Which of the following is measured in a bomb calorimeter and refers to the total energy potential from dietary intake?

- a. **Gross energy**
- b. Digestible energy
- c. Metabolizable energy
- d. Net energy

349 Which of the following is left over after energy in feces is subtracted from gross energy?

- a. Heat increment
- b. Metabolizable energy
- c. **Digestible energy**
- d. Net energy

350 Which of the following is derived from subtracting energy from feces and energy in urine from gross energy?

- a. **Metabolizable energy**
- b. Heat increment
- c. Digestible energy
- d. Net energy

351 What are the two minerals that are important to consider when balancing a ration?

- a.
- b. **Calcium and phosphorous**
- c. Calcium vitamin A
- d. Calcium and magnesium
- e. Calcium and manganese

352 A feed analysis report will generally include a measure for DM which is an abbreviation for which of the following?

- a. Drug material
- b. **Dry matter**
- c. Dry material
- d. Dietary Minerals

353 Data that is calculated on the basis of the average amount of moisture in the feed as it is used on the farm is considered what?

- a. **As-fed basis**
- b. 100 percent dry matter basis
- c. All of the answers listed
- d. None of the answers listed

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354 Beef cattle should be fed what percentage of their weight for a primarily roughage maintenance ration?

- a. **2 percent**
- b. 4 percent
- c. 10 percent
- d. 20 percent

355 Bred sows and gilts should be limit fed to receive about how many pounds of air-dry feed in the ration?

- a. 2 pounds
- b. **4 pounds**
- c. 10 pounds
- d. 20 pounds

356 Sows nursing litters should be fed about how many pounds of air-dry feed in the ration?

- a. 2 to 4 pounds
- b. 4 to 6 pounds
- c. **10 to 15 pounds**
- d. 22 to 25 pounds

357 Sheep maintenance rations should have about what percent body weight as air-dry roughage?

- a. **3 percent**
- b. 7 percent
- c. 11 percent
- d. 20 percent

358 What is the first step in balancing a ration?

- a. **Identify the kind, age, weight and function of the animals**
- b. Calculate the amounts of each feed to use in the ration
- c. Choose the feeds to be used in the ration
- d. Determine the nutrient needs of animal

359 When comparing cost of different protein supplements the most beneficial number to look at is which of the following?

- a. Percent protein
- b. Price per ton
- c. **Price per pound of protein**
- d. Pounds of protein per ton

360 It is difficult to balance a ration by trial and error and it is highly useful to use a simple tool for balancing rations known as what?

- a. The O'Reilly Factor
- b. The Mendelian Square

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c. The Pearson Square

d. The Fite Factor

361 An Australian monk named Gregor Johann Mendel is considered to be the founder of the science of what?

- a. Gene mapping
- b. Nutrition
- c. Animal breeding
- d. **Genetics**

362 When many different genes are involved in the expression of a trait that expression is said to be controlled by what effect?

- a. **Additive gene effects**
- b. Nonadditive gene effects
- c. All of the answers listed
- d. None of the answers listed

363 Most of the economically important traits of livestock are controlled by what type of effect?

- a. Additive gene effects
- b. **Nonadditive gene effects**
- c. All of the answers listed
- d. None of the answers listed

364 What term refers to the likelihood of a trait being passed on from parent to offspring?

- a. Hybrid vigor
- b. heterosis
- c. **heritability**
- d. All of the answers listed

365 Selection for breeding stock that focuses one trait at a time is the least effective type of selection and referred to as what?

- a. **Tandem selection**
- b. Independent culling
- c. Selection index
- d. All of the answers listed

366 Selection for breeding stock that establishes a performance level for each trait in the selection program is referred to as what type of selection

- a. **Independent culling**
- b. Selection index
- c. Tandem selection
- d. A combination of all of the answers

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367 Although it requires extensive records what one selection method is the most effective at achieving improvement in genetic merit?

- a. **Selection index**
- b. Independent culling
- c. Tandem selection
- d. None of the answers listed

372 What is the technical term used for when two haploid cells unit to form a zygote?

- a. **Fertilization**
- b. Pollination
- c. Utilization
- d. None of the answers listed

373 What refers to the combination of genes that an individual animal possesses?

- a. Phenotype
- b. **Genotype**
- c. Environment
- d. All of the answers listed

374 The physical appearance of an animal is known as which of the following?

- a. genotype
- b. **phenotype**
- c. Environment
- d. All of the answers listed

375 What may be used to predict the results of crossing animals with two kinds of genotype?

- a. Pearson square
- b. First filial generation
- c. **Punnett square**
- d. None of the answers listed

376 When both alleles are only partially expressed they are said to have what type of relationship dominance?

- a. **Incomplete dominance**
- b. Complete dominance
- c. Codominance
- d. None of the answers listed

377 When neither allele in a heterozygous condition dominates and both are fully expressed they are said to have what type of relationship?

- a. **Complete dominance**
- b. Incomplete dominance
- c. Codominance

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- d. None of the answers listed

378 When the phenotypic expression of some genes is determined by the presence or absence of one of the sex hormones the gene that would or would not be expressed is considered what type of gene?

- a. Sex-influenced gene
- b. Haploid gene
- c. Sex-limited gene**
- d. None of the answers listed

379 Offspring sex in mammals is determined by the animal with a chromosome pair of XY, which sex carries the XY chromosome pair?

- a. Male**
- b. Female
- c. Both
- d. None of the answers listed

380 What genes are only carried on the sex chromosomes?

- a. Sex-influenced genes
- b. Sex-linked genes**
- c. Sex-limited genes
- d. All of the answers listed

381 What is the term used to describe when the actual genes change during the process of transferring from parent to offspring?

- a. Linkage
- b. Mutation**
- c. Crossover
- d. None of the answers listed

382 When chromosome pairs are divided in such a manner that each gamete has one of each type of chromosome, the process is called what?

- a. Mitosis
- b. Meiosis**
- c. Cell division
- d. Sequencing

383 Sexual reproduction begins with the act of a mating between male and female, which is referred to as what?

- a. Embryo
- b. Copulation**
- c. Fertilization
- d. All of the answers listed

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384 What is the saclike part of the male reproductive system that is outside the body cavity and contains the testicles and epididymis?

- a. **Scrotum**
- b. Parturition
- c. Copulation
- d. Sterile

385 The male scrotum serves what one major purpose?

- a. Protection of testicles
- b. Protection of fetus
- c. **Regulation of testicle temperature**
- d. All of the answers listed

386 Testicles produce sperm cells and what male hormone(s)?

- a. estrogen
- b. Progesterone
- c. **testosterone**
- d. All of the answers listed

Livestock

- 387 Which of the following is a male accessory gland?
- Seminal vesicles
 - Prostate gland
 - Cowper's gland
 - All of the answers listed**
- 388 After early stages of development the embryo becomes an unborn animal and is referred to as what?
- Fetus**
 - Zygote
 - Mature embryo
 - All of the answers listed
- 389 What are the two tubes in a female that carry ova from the ovaries to the uterus?
- Corpus luteum
 - Oviducts**
 - Infundibulum
 - None of the answers listed
- 390 The uterus of mammals is a structure consisting of the body, uterine horns, and the cervix that are arranged most like which of the following?
- U-Shaped
 - L-Shaped
 - Y-Shaped**
 - P-Shaped
- 391 Fertilization, or the union of sperm and egg, usually occurs in which of the following locations in livestock?
- Uterine horn**
 - Body of the uterus
 - Infundibulum
 - Vagina
- 392 The lower outlet to the uterus is termed what?
- Bladder
 - Cervix**
 - Vulva
 - Vagina
- 393 The urethra is not part of the reproductive tract in which sex of livestock?
- Female**
 - Male
 - Both

Livestock

d. Neither

394 The release of the egg from an ovary is termed?

- a. **Ovulation**
- b. Copulation
- c. Matication
- d. All of the answers listed

395 What structure forms shortly after ovulation and releases progesterone to maintain early pregnancy?

- a. Ovule
- b. Cervix
- c. **Corpus Luteum**
- d. All of the answers listed

396 After the egg cell is released how long can it typically live if not fertilized?

- a. 6 hours
- b. **12 hours**
- c. 24 hours
- d. None of the answers listed

397 The time during which the animal is pregnant is considered what period?

- a. **Gestation period**
- b. Copulation period
- c. Parturition period
- d. Fertilization period

398 What is the process of giving birth to a new animal?

- a. Copulation
- b. Gestation
- c. **Parturition**
- d. Fertilization

399 The first milk that is rich in all the antibodies, vitamins and minerals that a newborn calf needs is called what?

- a. Afterbirth
- b. **Colostrum**
- c. Placenta
- d. Fertilization

400 What refers to the manipulation of DNA in living organisms at the molecular and cellular level to produce new commercial applications?

- a. **Biotechnology**
- b. Deoxyribonucleic acid

Livestock

- c. Cell technology
- d. Cloning

401 Which of the following organizations is not involved in the regulation of biotechnology in agriculture and testing for the safety of its products?

- a. Environmental Protection Agency
- b. Food and Drug Administration
- c. United States Department of Agriculture
- d. Natural Resource Conservation Service**

402 When cells or organisms are genetically identical to each other they are said to be what?

- a. Clones**
- b. Genetic engineering
- c. Vertebrates
- d. Surrogate

404 The process of identifying and transferring a gene or genes for a specific trait from one organism to another is referred to as which of the following?

- a. Cloning
- b. Somatotropin
- c. Genetic engineering**
- d. Animal Breeding

405 Which of the following is not a potential benefit from genetic engineering in livestock production?

- a. Creating new species**
- b. Developing disease resistance
- c. Developing growth regulators
- d. Production of pharmaceuticals

406 What naturally occurring bovine growth hormone affects the utilization of energy derived from feed and causes it to be used for milk production rather than for weight gain?

- a. Deoxyribonucleic acid
- b. Porcine somatotropin
- c. Testosterone
- d. Bovine somatotropin**

407 Porcine Somatotropin is said to have great potential for the production of leaner pork with improved feed efficiency but is not currently used in large commercial herds due to what main reason?

- a. Simply not practical for larger facilities to inject swine every day**
- b. Increasing negative pressure from animal rights groups
- c. Skeptical and fearful consumers
- d. No research has proven the benefits of using pST

Livestock

408 There is some opposition against the development and use of genetically engineered products from environmental groups who fear what possibility?

- a. Increased global climate change
- b. Increasing overall food production
- c. Release of some new type of uncontrollable disease**
- d. Increased efficiency of food production

409 After the U.S. Patent office began issuing patents for genetically modified organisms the amount of money spent for research and development in biotechnology...

- a. Increased dramatically**
- b. Decreased minimally
- c. Increased minimally
- d. Decreased dramatically

410 Superovulation of desirable cows can produce many embryos which can then be implanted in donor cows of lower quality through a process called what?

- a. Artificial Insemination
- b. Embryo Transfer**
- c. Artificial Implantation
- d. Genetic Engineering

411 The process of inducing a cow to produce several oocytes during each estrus cycle is referred to as which of the following?

- a. Superovulation**
- b. Artificial Insemination
- c. Embryo Transfer
- d. Estrus

412 Currently it is believed that if embryos are handled properly they are not capable of transferring what?

- a. Distorted DNA
- b. Poor Genetics
- c. Diseases**
- d. Bovine Somatotropin

413 Genetic Engineering has been used to increase the level of bovine somatotropin in cows, which results in higher production of what?

- a. Fat
- b. Calves
- c. Lean Gain
- d. Milk**

414 Of the two basic systems of livestock breeding, mating animals of the same breed is called straightbreeding and what is the mating of animals of different breeds called?

Livestock

- a. **Crossbreeding**
- b. Linebreeding
- c. Purebred breeding
- d. Outcrossing

415 The mating of related animals is known as what?

- a. Outcrossing
- b. **Inbreeding**
- c. Purebred breeding
- d. Grading up

416 Closebreeding and Linebreeding are examples of what classification of breeding system?

- a. **Inbreeding**
- b. Outcrossing
- c. Purebred breeding
- d. Grading up

417 Inbreeding is a valued because it has the tendency to make both desirable and undesirable traits more visible which is a result of an increase in what condition?

- a. **Homozygosity**
- b. Heterozygosity
- c. Heterosis
- d. Docility

418 The mating of different families within the same breed is known as what type of breeding system?

- a. Inbreeding
- b. Purebred breeding
- c. **Outcrossing**
- d. Grading up

419 A grade animal is any animal that is considered what?

- a. **Ineligible for registry**
- b. a terminal animal
- c. Eligible for registry
- d. Meets certain standards for registry

420 If a rancher was able to cross his commercial non-registered cow to an unrelated purebred sire, what type of breeding system would he be using?

- a. Inbreeding
- b. Outcrossing
- c. Purebred Breeding
- d. **Grading up**

Livestock

- 421 The white breeds of swine are genetically superior in what type of traits?
- Maternal**
 - Terminal
 - Leanness
 - Growth
- 422 Swine breeds such as Hampshire and Duroc are considered to be superior in what major type of traits?
- Terminal Traits**
 - Maternal Traits
 - Litter Size Traits
 - Weaning Weight Traits
- 423 What is a common disqualification in rules for registering animals in a breed association?
- Weight
 - Size
 - Color markings**
 - Eyes
- 424 Raising beef has all of the following advantages except what
- Increasing heard size is easier than hogs or sheep
 - Beef use roughages that otherwise would be wasted for feed
 - Beef are adapted for use in small operations as well as large ones
 - Death losses are usually low
- 425 Many modern breeds have origins from where?
- Europe**
 - Middle-East
 - South America
 - Africa
- 426 Currently and for many previous years which breed has led all other beef breeds in numbers registered annually?
- Angus**
 - Hereford
 - Simmental
 - Charolais
- 427 Which breed has more total animals registered than cattle of any other breed:
- Angus
 - Hereford**
 - Simmental
 - Charolais

Livestock

428 Which breed has cattle that have smooth black hair coats and produce a carcass of high-quality, well marbled meat?

- a. **Angus**
- b. Hereford
- c. Simmental
- d. Charolais

430 Which popular light straw colored cattle are members of one of the oldest French breeds?

- a. Chianina
- b. Devon
- c. Maine-Anjou
- d. **Charolais**

431 Which breed is composed mainly of Charolais breeding and the rest of there inheritance being derived from registered Brahma or Zebu breeds?

- a. **Charbray**
- b. Chianina
- c. Carolais
- d. Red Angus

432 Which Italian breed in existence since before the roman empire is most likely the largest framed breed of cattle with mature bulls weighing as much as 4,000 pounds?

- a. **Chianina**
- b. Carolais
- c. Red Angus
- d. Charbray

434 Which breed is one of the smallest breeds of beef cattle and has color varieties of black, belted, red, dun, and white?

- a. Devon
- b. **Galloway**
- c. Maine-Anjou
- d. Hereford

435 Which breed was created in 1920 and composed of four yellow breeds of cattle?

- a. Charolais
- b. Galloway
- c. **Gelbvieh**
- d. Angus

436 Which two colored breed is docile in nature, easily handled, and was very popular in the late 1800's because they are well adapted to the western cattle-raising regions of the United States

- a. **Hereford**

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- b. Brangus
- c. Brahma
- d. Bradford

438 Which French origin breed of cattle possesses light yellow hair with lighter circles around the eyes and muzzle?

- a. Angus
- b. Galloway
- c. **Limousin**
- d. Hereford

439 Which French breed of excellent beef producers were the result of crossing English Shorthorns with French Mancelle cows?

- a. **Maine-Anjou**
- b. Hereford
- c. Angus
- d. Limousin

440 Which breed originating from Australia has a solid-color hair coat that is dark to silver gray?

- a. **Murray Gray**
- b. Scotch Highland
- c. Shorthorn
- d. Simmental

441 Which breed of excellent foragers is used in crossbreeding to give winter hardiness to their offspring?

- a. Murray Gray
- b. **Scotch Highland**
- c. Brahma
- d. Simmental

442 Which English breed was originally a dual-purpose breed that had a color variation of red, white, or roan?

- a. Brangus
- b. Angus
- c. Hereford
- d. **Shorthorn**

443 Which breed's herd book was established in Switzerland and has a performance pedigree for milk and conformation?

- a. **Simmental**
- b. Murray Gray
- c. Maine-Anjou
- d. Shorthorn

Livestock

444 What breed was developed in Arizona with the first cross being between an Africander and a Hereford?

- a. **Barzona**
- b. Beefmaster
- c. Angus
- d. Brahman

445 What compositional breed was developed out of Texas and is a result of crosses among Herefords, Shorthorns, and Brahman?

- a. Barzona
- b. **Beefmaster**
- c. Angus
- d. Bradford

446 The history of what breed began in 1947 by crossing Hereford bulls with Brahman cows?

- a. Barzona
- b. Beefmaster
- c. Brangus
- d. **Braford**

447 What cattle are used in the development of many new American breeds, have a very high heat tolerance, and a characteristic hump over their shoulder?

- a. **Brahman**
- b. Beefmaster
- c. Barzona
- d. Braford

448 What breed was developed at the USDA Experiment Station in Louisiana by crossing Angus and Brahman cattle?

- a. **Brangus**
- b. Barzona
- c. Beefmaster
- d. Braford

450 What heat tolerant breed of cattle has a natural resistance to insects and disease but also has a gentle disposition and no hump behind the shoulders?

- a. Brahman
- b. Simmental
- c. **Senepol**
- d. Braford

Livestock

- 451 Which once free ranging breed of cattle are descendants of the Spanish Andalusian cattle that were brought to Santa Domingo by Columbus on his second voyage?
- Barzona
 - Angus
 - Texas Longhorn**
 - Hereford
- 454 Which of the following is not a characteristic of a Cow-Calf producer?
- Feeds very little roughage**
 - Requires less labor and lower investment in equipment and facilities
 - Little or no grain is utilized
 - Difficult to expand or reduce size of operation quickly
- 455 What is the term for a young beef animal between the ages of one and two years that is sold to be fed to finish for slaughter?
- Newborn calf
 - Feeder calf
 - Yearling feeder**
 - Yearling calf
- 456 What is the term for a weaned calf that is under one year of age and will be sold to be fed for continued growth?
- Newborn calf
 - Feeder calf**
 - Yearling calf
 - Yearling feeder
- 458 Which main type of producers typically feed the most grain to their cattle?
- Cattle Feeders**
 - Cow-Calf Producers
 - Purebred Breeders
 - Packing Plants
- 459 When compared to cows of medium weight, the decreased efficiency in heavier cows negates the benefits received from the increase in what?
- Weaning Weights**
 - Body Condition
 - Birth Weights
 - Milking Ability
- 460 What is the number called that is based on observation and height measurement when calves are evaluated at 205 days of age?

Livestock

- a. **Frame Score**
- b. Body Condition Score
- c. Muscle Conformation Score
- d. Weight Score

461 A very heavy muscled bull is most likely to receive a muscle conformation score of which of the following?

- a. 1
- b. 3
- c. **6**
- d. 10

462 What term refers to the appearance of the live animal?

- a. genotype
- b. **Conformation**
- c. Performance
- d. Production

463 What term refers to the use of high-frequency sound waves to measure fat thickness and loin-eye area?

- a. Ultrafrequency
- b. Production
- c. Conformation
- d. **Ultrasonics**

464 Which of the following is not a type of testing used to develop performance records?

- a. **Proficiency Testing**
- b. Production Testing
- c. Progeny Testing
- d. Performance Testing

465 When testing for weaning weight the weights should be adjusted for all of the following factors except what?

- a. Age of the calf
- b. Age of the dam
- c. **Breed of the calf**
- d. Sex of the calf

466 A record including the names of ancestors of an animal is typically referred to as what?

- a. Ancestral Data
- b. A Shepard's Tree
- c. Family History
- d. **Pedigree**

Livestock

- 467 The ability to transmit genetic traits is defined in sire summaries as what? Expected
- Maternal Breeding Value
 - Progeny Difference**
 - Brucellosis
 - Vibriosis
- 469 Bulls with unruly dispositions shouldn't be used as their progeny will be expected to have the same disposition and hence will not do which of the following?
- Gain as fast in the feedlot**
 - Become fertile
 - Develop completely
 - Be a danger to handlers
- 470 Which of the following is not a main point to consider when judging a market class?
- Condition**
 - Type
 - Muscling
 - Finish
- 471 When judging a breeding class it is important to look at animal condition, size, and structure as well as which of the following?
- Yield and Quality Grades
 - Breed and Sex Character**
 - Carcass merit
 - Finish and Muscling
- 472 Bang's disease is another name for which of the following?
- Vibriosis
 - Tuberculosis
 - Brucellosis**
 - Mad Cow disease
- 473 Which of the following best describes a management tool available to beef producers that utilizes a team of accountants, extension personnel, veterinarians, and soil and water conservationists?
- SPA-P
 - Standard Performance Analysis
 - SPA-EZ
 - Integrated Resource Management**
- 474 Cow-calf producers typically utilize what following feed type that provides the cheapest source of energy for the cow and calf?
- Roughages**
 - Concentrates

Livestock

- c. Supplements
- d. Oats and Straw

475 What term refers to the number of animals that can be grazed on the pasture during the grazing season?

- a. Standard Performance Analysis
- b. Seasonal Grazing
- c. Rotational Grazing
- d. **Carrying Capacity**

476 In addition to fertilizer, what is another management practice a producer could use to increase the carrying capacity of their pasture and hay land?

- a. Seasonal Grazing
- b. **Rotational Grazing**
- c. Limitless Grazing
- d. Forage Grazing

477 Treatment of low-quality roughages with what can increase protein content by four to six percentage units?

- a. Methane
- b. **Anhydrous Ammonia**
- c. Ammonium Chloride
- d. Carbon Dioxide

480 Which of the following is a way of providing calves with extra feed from an area where cows cannot reach?

- a. Protein supplementation
- b. **Creep feeding**
- c. Legume feeding
- d. Lactation ration

481 Creep feeding may not always be profitable, which of the following situations may prove creep feeding as a profitable practice?

- a. Calves were born in the fall
- b. Cows are milking poorly
- c. Calves are from first-calf heifers
- d. **All of the answers listed**

482 It is recommended to wean bulls when they are approximately how old?

- a. 10 to 12 months
- b. 3 to 4 months
- c. **6 to 8 months**
- d. 6 weeks

Livestock

- 483 Ninety percent of all breeding problems can be eliminated by what one practice?
- Performing a breeding soundness exam**
 - Feeding 5 to 6 pounds of grain to thin bulls
 - Removing bulls from cow herd after breeding season
 - None of the answers listed
- 484 In the British breeds, a replacement heifer should gain about how much per day from weaning to breeding?
- 1 pound**
 - .5 pounds
 - 3 pounds
 - 10 pounds
- 485 How many bulls should one expect to have in order to efficiently cover 100 cows?
- 4 bulls**
 - 2 bulls
 - 6 bulls
 - 10 bulls
- 486 What is defined as the placing of sperm in the female reproductive tract by other than natural means?
- Embryo Transfer
 - Breeding Management
 - Estrus Synchronization
 - Artificial Insemination**
- 487 Which of the following is an example of an advantage of using artificial insemination?
- Less time and supervision of herd
 - No training is necessary
 - No special facilities are required
 - Permits use of superior bulls in any herd**
- 488 This practice is defined as the use of various compounds(usually hormones) to cause all of the females in a herd to come into heat within a short period of time:
- Artificial Insemination
 - Estrus Synchronization**
 - Embryo Transfer
 - Calving
- 489 What is the most important consideration when breeding yearling heifers that are sexually mature?
- Age of the calf**
 - Breed

Livestock

- c. **Size**
 - d. Condition
- 490 In an ideal situation how long should the calving season last?
- a. 1 month
 - b. **40 to 60 days**
 - c. 4 months
 - d. All year
- 491 The removal of the testicles of the bull calves is termed what?
- a. Calving
 - b. **Castrating**
 - c. Weaning
 - d. Insemination
- 492 Which of the following is a benefit of dehorning market calves?
- a. **All of the answers listed**
 - b. Bring more money when sold
 - c. Cause less damage to facilities
 - d. Less space is needed for hauling
- 493 The process of preparing calves for the stress of being moved into the feedlot is known as which of the following?
- a. Backgrounding
 - b. **Preconditioning**
 - c. Castrating
 - d. All of the answers listed
- 494 Which of the following is a term used for the growing and feeding of calves from weaning until they are ready to enter the feedlot?
- a. Preconditioning
 - b. **Backgrounding**
 - c. Castrating
 - d. Yearling
- 495 Which of the following characteristics describe commercial cattle feedlots with a capacity of 1,000 head of cattle or more?
- a. All of the answers listed
 - b. Breed and grow their own feeder calves
 - c. **Increasing in number where cow-calf operations are common**
 - d. Typically grow the grain they feed
- 496 The system of feeding mostly grain and smaller amounts of roughages is known as which of the following?

Livestock

- a. Deferred Finishing System
- b. **Finishing Immediately System**
- c. Farmer-Feeder System
- d. Roughage Finishing System

497 The system of feeding more roughages and little grain is referred to as which of the following?

- a. **Deferred Finishing System**
- b. Finish Immediately System
- c. Farmer-Feeder System
- d. Roughage Finishing System

301-400

504 What term relates the size of an animal's skeleton in relation to its age?

- a. **Frame Size**
- b. Grade
- c. Thriftiness
- d. Sex

505 Small framed steers are expected to produce U.S. Choice carcasses at which of the following live weights?

- a. None of the answers listed
- b. **Under 1,000 pounds**
- c. Over 1,000 pounds
- d. 1,000 to 1,250 pounds

506 Which of the following grades of feeder cattle refers to an animal that is not considered thrifty?

Livestock

- a. **Inferior Large Frame; No. 1**
- b. Medium Frame; No. 3
- c. Small Frame; No. 2

507 What is the main source for buying feeder cattle in the United States?

- a. Stocks and Bonds
- b. Terminal Markets
- c. Futures Contracts
- d. **Auction Markets**

508 Which of the following is one of the best roughages to use for finishing beef cattle?

- a. Hay
- b. Sorghum Silage
- c. Grass Silage
- d. **Corn Silage**

509 When cattle are finished on quality pasture and fed grain at 1 percent of their body weight per day they can be expected to finish at what grades?

- a. Select of Choice
- b. **Standard or Select**
- c. Choice or Prime
- d. All of the answers listed

510 Which of the following concentrates has 100 to 105 percent of the feed value of corn in beef rations but should be limited to less than 50% of the ration due to its effect of decreasing consumption and increasing digestive problems?

- a. Corn
- b. Milo
- c. **Wheat**
- d. Molasses

511 The processes where feed is passed through a hammer mill and beaten with rotating hammers until it is broken up enough to pass through a screen is referred to as which of the following?

- a. **Grinding**
- b. Rolling Pelleting
- c. High-Moisture
- d. Storage

512 Which of the following is a process sometimes called flaking where closely set smooth rollers are used to press grain flat?

- a. Grinding
- b. **Rolling**
- c. Crimping
- d. Pelleting

Livestock

513 Which of the following is not an example of natural protein source often used in finishing rations for beef cattle?

- a. Linseed Meal
- b. Soybean Meal
- c. **Urea**
- d. Cottonseed Meal

514 How do younger cattle that are growing differ in their dietary requirements when compared to older cattle that are being finished and fattened for harvest?

- a. All of the answers listed
- b. Need more total protein in ration
- c. Need less protein per unit of grain
- d. **Need more protein per unit of grain**

515 Which of the following is a term used for distiller's grains that are a by-product of grain alcohol fermentation and high quality supplementary protein?

- a. **Stillage Silage**
- b. Soybean
- c. Iodine

516 Which of the following vitamins is not a vitamin that is most commonly added to beef cattle rations?

- a. Vitamin A
- b. Vitamin D
- c. Vitamin E
- d. **Vitamin K**

517 At what temperature is feed intake considered to be normal?

- a. **40 degrees F. and 59 degrees F.**
- b. 59 degrees F. and 75 degrees F.
- c. 75 degrees F. And 93 degrees F.
- d. Above 93 degrees F.

518 Typically as temperatures rise feed intake _____ and as temperatures fall feed intake _____.

- a. **Decreases, Increases**
- b. Increases, Decreases
- c. Increases, Increases
- d. Decreases, Decreases

519 Well cattle that have not been fed grain in the past are put on a full feed of grain too quickly; the microorganisms in the rumen do not have time to adjust to the new ration and what will happen?

- a. Cattle will overeat

Livestock

- b. Cattle will go off feed**
 - c. Cattle will need excessive water
 - d. All of the answers listed
- 520 Fattening cattle will typically eat what percent of their body weight per day?
 - a. 10 percent
 - b. 5.1 to 6.5 percent
 - c. 5.1 to 6.5 percent
 - d. **2.5 to 3 percent**
- 521 The most critical time in feeding cattle is when?
 - a. The first 2 to 3 weeks after they enter the feedlot**
 - b. The last 2 to 3 weeks before harvest
 - c. Both answers are correct
 - d. None of the answers listed
- 522 Feeder cattle are exposed to disease as they pass through sale rings, auction markets, and holding yards and should be vaccinated when?
 - a. 7 to 10 days after arrival
 - b. 2 to 3 weeks after arrival
 - c. **As they come off the truck**
 - d. Anytime, just as long as they are vaccinated
- 523 Which of the following is not a sign of sickness in feeder calves?
 - a. Moving about slowly
 - b. Drooping Ears
 - c. **Overeating**
 - d. Discharge from eyes or nose
- 524 Feed efficiency can be increased by what practice because less is wasted in the bunk?
 - a. Pelleting**
 - b. Wetting
 - c. Grinding
 - d. Powdering
- 525 Anthrax is a disease caused by bacteria that may remain in the soil for how many years?
 - a. 10 years
 - b. 20 years
 - c. 30 years
 - d. **40 years**
- 526 Sudden death is often the first sign of infection in which of the following diseases?
 - a. Bovine Virus
 - b. **Anthrax**

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- c. Diarrhea
- d. Brucellosis
- e. Foot Rot

527 Which of the following diseases is neither caused by a virus or bacteria but it is related to a prion?

- a. Bovine Virus Diarrhea
- b. Bovine Respiratory Syncytial Virus
- c. **Bovine Spongiform Encephalopathy**
- d. Brucellosis

528 Which of the following is a common disease throughout the United States and can appear in mild, acute, or chronic forms?

- a. Bovine Respiratory Syncytial Virus
- b. **Bovine Virus Diarrhea**
- c. Bovine Spongiform Encephalopathy
- d. Brucellosis

529 Which of the following bovine diseases is also dangerous to humans, causing undulant (Malta) fever?

- a. Bovine Spongiform Encephalopathy
- b. Bovine Virus Diarrhea
- c. Bovine Respiratory Syncytial Virus
- d. **Brucellosis**

530 This disease is caused by bacteria that grow only in the absence of oxygen and infect the animal through the mouth or open wounds:

- a. **Blackleg**
- b. Bovine Viral Diarrhea
- c. Brucellosis
- d. Bovine Spongiform Encephalopathy

531 This is a disease of young calves, under two months of age, and symptoms range from a state of shock or sudden death to weight loss and diarrhea:

- a. **Calf Enteritis(Scours)**
- b. Blackleg
- c. Brucellosis
- d. Foot Rot

532 What 2001 disease outbreak occurred in Europe and resulted in the destruction of almost 6 million animals or 12 percent of the total farm population?

- a. Brucellosis
- b. Foot Rot
- c. **Foot and Mouth Disease**

Livestock

d. Bovine Spongiform Encephalopathy

533 What disease is caused by a variety of bacteria, fungi, and other organisms that are found in a feedlot and can occur when sharp objects break or cut the skin of the foot?

- a. Bovine Spongiform Encephalopathy
- b. Blackleg
- c. Foot and Mouth Disease
- d. **Foot Rot**

534 What viral disease, also known as “red nose”, induces symptoms such as fever and nose and muzzle inflammation?

- a. Rhinotracheitis
- b. Foot Rot Blackleg
- c. Bovine Respiratory Syncytial Virus
- d. **Infectious Bovine**

535 Which of the following diseases can be transmitted between hogs and cattle and has symptoms of rapid breathing, loss of appetite, bloody urine, and potentially abortion?

- a. Calf Enteritis(Scours)
- b. **Leptospirosis**
- c. Blackleg
- d. Foot Rot

536 What disease is caused by a germ, has three forms, and can cause the animal to wander aimlessly in a circle?

- a. Lumpy Jaw
- b. Leptospirosis
- c. **Listeriosis**
- d. Malignant Edema

537 What disease affects the jaw and surrounding bony part of the head, causes tumors, and may be contracted through wounds as a result of sharp wire or barley beards?

- a. Malignant Edema
- b. Listeriosis
- c. Leptospirosis
- d. **Lumpy Jaw**

538 What disease is typically contracted during periods of maximum sunlight and may be transmitted from animal to animal via flies and other insects?

- a. **Pinkeye**
- b. Blackleg
- c. Foot Rot
- d. Trichomoniasis

Livestock

539 What disease is most common among young cattle at times of stress and has an early symptom of fever followed by depression, discharge from nose and eyes, and loss of appetite?

- a. **Shipping Fever**
- b. Pinkeye
- c. Blackleg
- d. Trichomoniasis

540 What venereal disease is caused by a protozoan, has no preventative vaccine, and has no treatment for infected bulls?

- a. Leptospirosis
- b. Listeriosis
- c. **Trichomoniasis**
- d. Blackleg

541 What disease formerly known as “vibrio” can cause conception rates to drop below 40 percent in newly infected herds?

- a. Trichomoniasis
- b. Listeriosis
- c. Leptospirosis
- d. **Campylobacteriosis**

542 What condition refers to growths on the skin caused by a virus?

- a. Lumpy Jaw
- b. **Warts**
- c. Trichomoniasis
- d. Foot Rot

543 Which of the following is not considered an external parasite?

- a. Face Fly
- b. **Roundworms**
- c. Lice
- d. Ticks

544 The condition known as scab, mange, or itch is caused by which of the following external parasites?

- a. Flies
- b. Lice
- c. Ticks
- d. **Mites**

545 Tapeworms and deer liver flukes are examples of what internal parasites that cause loss of weight, limping, and weakness in the hind quarters?

- a. **Flatworms**

Livestock

- b. Flies
- c. Roundworms
- d. Coccidia

546 What disease is caused by protozoan parasites which destroy red blood cells and are transmitted by various biting insects?

- a. Warts
- b. Trichomoniasis
- c. **Anaplasma**
- d. Shipping Fever

547 What condition occurs as a result of rapid fermentation in the rumen which causes a build up of too much gas?

- a. Brisket Disease
- b. Founder
- c. **Bloat**
- d. Hardware Disease

548 What heart condition is the result of the enlargement of the heart in cattle that cannot adapt to high altitude?

- a. **Brisket Disease**
- b. Fescue Foot
- c. Fluorosis
- d. Founder

549 What condition is a result of sudden changes in the ration or drinking too much water?

- a. **Founder**
- b. Fluorosis
- c. Bloat
- d. Bovine Pulmonary Emphysema

550 What disease occurs when sharp metal objects puncture the wall of the reticulum causing infection or damage to surrounding organs?

- a. Lumpy Jaw
- b. Wooden Tongue
- c. **Hardware Disease**
- d. Founder

551 What condition is a result of mineral deposits in the urinary organs that may occur when feeding rations high in phosphorus?

- a. Photosensitization
- b. Nitrate Poisoning
- c. Rumentitis
- d. **Urinary Calculi**

Livestock

- 552 Which of the following types of operations require the simplest of facilities and handling equipment?
- Confinement Operations
 - Cow-Calf Operations**
 - Commercial Feedlots
 - All of the answers listed
- 553 Which of the following are the two types of confinement barns?
- Fixed and Portable
 - Wood and Metal
 - Tall and Short
 - Warm and Cold**
- 554 Which of the following is not a type of floor system that is common in warm confinement barns?
- Slotted
 - Solid Bedding
 - Solid Flushing
 - Turf**
- 555 Open feedlots have all the following characteristics except which of the following?
- Windbreak fence and sunshades
 - Require less land and are paved**
 - Dirt mounds in pens
 - Good drainage and runoff control is important
- 556 Which of the following is not an advantage of having a coral system to handle cattle?
- Makes handling more dangerous for the workers**
 - Saves time and makes it easier to handle cattle
 - Reduces injury and weight loss when handling cattle
 - Reduces stress on cattle when they are handled
- 557 Sorting pens are smaller than holding pens and the crowding pen is designed for what purpose?
- Cut calves away from cows for weaning
 - Helps push cattle down to the working chute**
 - Separate sick cattle from other cattle
 - All of the answers listed
- 558 Which of the following is a device for restraining the animal in a horizontal position while it is being treated?
- Squeeze Chute
 - Tilting Table**
 - Dipping Vat
 - All of the answers listed

Livestock

- 559 Which of the following would be more likely to utilize a standard 3,000 gallon dipping vat?
- Larger Operations**
 - Small Operations
 - Both answers are correct
 - None of the answers listed
- 560 Which type of silos are the least expensive and best suited to the needs of small feeding operations?
- Sealed Upright Silos
 - Conventional Upright Silos
 - Horizontal Silos**
 - Bunker Silos
- 561 Which of the following silos are the most expensive to build, but do the best job of keeping feed?
- Bunker Silos
 - Horizontal Silos
 - Conventional Upright Silos
 - Sealed Upright Silos**
- 562 Which type of feed bunk is most commonly used in western United States?
- Portable lot bunks
 - Fenceline feed bunks**
 - Mechanical bunks
 - Covered bunks
- 563 What is one of the most important decisions to be made about cattle facilities?
- Weather
 - Loss
 - Profit
 - Location**
- 564 How much does the beef promotion and research act of 1985 checkoff for every head of beef that is sold in the United States?
- 1 dollar**
 - 50 cents
 - 3 dollars
 - 10 dollars
- 565 An analysis of the impact beef checkoff spending has had in the marketplace shows a net gain to cattle raisers of more than how many dollars for each dollar of checkoff money collected?
- 5 dollars**
 - 2 dollars

Livestock

- c. 8 dollars
- d. 13 dollars

566 The amount of a product that producers will offer for sale at a given price at a given time is referred to as which of the following?

- a. Demand
- b. Production
- c. **Supply**
- d. Consumption

567 The amount of a product that buyers will purchase at a given time for a given price is referred to as which of the following?

- a. Production
- b. Supply
- c. **Demand**
- d. Consumption

568 What is known as the fee charged for the use of stockyard facilities?

- a. Commission
- b. **Yardage**
- c. Consign
- d. Auction Markets

569 Which method of marketing utilizes stockyard companies to sort cattle into uniform lots then act as seller agents to negotiate the best price possible for the cattle?

- a. Direct Selling
- b. Auction Markets
- c. Private Treaty
- d. **Terminal Markets**

570 Which method of marketing utilizes public bidding with animals going to the highest bidder?

- a. **Auction Markets**
- b. Terminal Markets
- c. Private Treaty
- d. Direct Selling

571 The Packers and Stockyards Act is a federal law that is administered by the United States Department of Agriculture and regulates all cattle which...

- a. Are sold in public auction
- b. Are sold in Texas
- c. **Cross state lines**
- d. All of the answers listed

572 What is the term for the loss of weight that occurs as cattle are moved to market?

Livestock

- a. Yardage
- b. Shipping Fever
- c. Commission
- d. **Shrinkage**

575 According to USDA standards how many classes of sex are there in beef cattle?

- a. 2 Classes- Male, Female
- b. 4 Classes- Cow, Bull, Heifer, Steer
- c. **5 Classes- Cow, Bull, Heifer, Steer, Bullock**
- d. 6 Classes- Cow, Bull, Heifer, Steer, Calf, Yearling

580 By reducing the grain in a ration by one-half the day before shipping and not feeding grain the last 12 hours before shipping a producer can condition the cattle and reduce which of the following problems related to hauling?

- a. **Shrinkage**
- b. Shipping Fever
- c. Cold Stress
- d. All of the answers listed

581 What market is composed of a system of the trading in future contracts for delivery of cattle?

- a. Direct Selling
- b. Auction Markets
- c. Terminal Markets
- d. **Futures Market**

582 According to the text, which one of the following regions is the major swine producing area of the United States?

- a. **Corn Belt**
- b. Bread Basket
- c. Great Plains
- d. South West

583 Which of the following states leads all other states in total hogs produced?

- a. Kansas
- b. **Iowa**
- c. Ohio
- d. Oklahoma

584 Which one of the following is the most efficient converter of feed to meat?

- a. Sheep
- b. Goats
- c. **Swine**
- d. Cattle

Livestock

585 What white breed of down eared hogs originated in Denmark, and is known for their mothering ability and litter size?

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

587 What American breed of hogs originated from red hogs raised in the Eastern United States and where also called Jersey Reds?

- a. Berkshire
- b. Hampshire
- c. Chester White
- d. **Duroc**

588 What breed was developed in Pennsylvania through the mixing of Yorkshire, Lincolnshire, and Cheshire hogs?

- a. Landrace
- b. Duroc
- c. **Chester White**
- d. Hampshire

589 What popular breed of swine is known for its rustling or foraging ability and the white belt that encircles the forepart of the body?

- a. Yorkshire
- b. **Hampshire**
- c. Berkshire
- d. Tamworth

591 What breed of swine is white with black spots and has an exceptionally high lean to fat ratio?

- a. Hampshire
- b. Spotted Breed
- c. Poland China
- d. **Pietrain**

592 Which of the following breeds is black with six white points and has forward-drooping ears?

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

595 The science in livestock production that studies the way in which traits of parents are passed on to the offspring is

- a. **genetics**

Livestock

- b. hybrid vigor
 - c. heterosis
 - d. meiosis
- 596 Which species of livestock has a diploid number (number of pairs of chromosomes) of 19?
- a. **swine**
 - b. sheep
 - c. goats
 - d. cattle
- 597 What takes place when a sperm cell from the male reaches an egg cell from the female?
- a. cell coding
 - b. mitosis
 - c. **fertilization**
 - d. spermatozoa
- 598 Which trait for beef cattle has the highest heritability estimate?
- a. fat thickness
 - b. conformation score at weaning
 - c. birth weight
 - d. **rib eye area**
- 600 Genotype refers to the:
- a. placing of genes
 - b. **combination of genes**
 - c. number of genes
 - d. splicing of genes
- 603 Sperm cells are produced in the:
- a. epididymis
 - b. **testicles**
 - c. scrotum
 - d. vas deferens
- 604 The release of the egg cell from the ovary is called:
- a. fertilization
 - b. **ovulation**
 - c. parturition
 - d. fertilization
- 605 The average length of gestation sheep is:
- a. 283 days
 - b. 114 days
 - c. 220 days

Livestock

d. **148 days**

606 The length of the estrus cycle for sheep is:

- a. 21 days
- b. 28 days
- c. **16 days**
- d. 35 days

607 The diploid number (pairs of chromosomes) for sheep is:

- a. **27**
- b. 36
- c. 19
- d. 12

608 The average age for cattle to reach puberty is:

- a. 4-6 months
- b. **6-8 months**
- c. 10-12 months
- d. 12-14 months

609 The first successful cloning of a vertebrate organism from mature body cells occurred in 1996 with which species?

- a. **sheep**
- b. cow
- c. pig
- d. goat

610 Which is NOT a potential benefit of genetic engineering in livestock production?

- a. specifying the sex of an animal before conception
- b. developing disease resistant animals
- c. **developing new species of livestock**
- d. developing new drugs and vaccines

612 Porcine somatotropin (pST) is a protein produced in which gland of the pig?

- a. lymph
- b. **pituitary**
- c. reproductive
- d. endocrine

620 How many breeds of beef cattle are available to producers in the United States?

- a. 12
- b. 20
- c. 33
- d. **50+**

Livestock

622 Which breed of cattle was the first to be imported to the United States?

- a. Hereford
- b. **Shorthorn**
- c. Angus
- d. Charolais

623 What percent of cash income from livestock and crops come from beef in the United States?

- a. 7%
- b. **18%**
- c. 23%
- d. 31%