

## Dairy Cattle Evaluation Exam

- 1) What does NMPF stand for?
  - a. Northern Milk Producers Formulation
  - b. New Mexico Producers Funding
  - c. National Milk Producers Federation**
  - d. National Milk Protein Foundation
  
- 2) What does NFO stand for?
  - a. National Feed Organization
  - b. National Farmers Order
  - c. National Farmers Organization**
  - d. National Food Organization
  
- 3) What is the BFP?
  - a. Basic Formula Preparation
  - b. Basic Formula Price**
  - c. Basic Foundation Price
  - d. Butter Fat Price
  
- 4) What percentage of whole milk is fat when compared on a dry matter basis?
  - a. About 10 percent
  - b. About 50 percent
  - c. About 25 percent**
  - d. Exactly 100 percent
  
- 5) In a study of milk parlors conducted by researchers at the University of Florida, how did parallels perform when compared to herringbones?
  - a. Parallels were 50% slower
  - b. Parallels out performed herringbones by nearly 8 percent**
  - c. They performed the same
  - d. Herringbones out performed parallels by nearly 8 percent
  
- 6) What is GATT?
  - a. General Alien Tariff and Trade
  - b. General Agricultural Tariffs and Trades
  - c. General Agreement on Trades and Tariffs
  - d. General Agreement on Tariffs and Trade**
  
- 7) What does NFDM stand for?
  - a. Nonfat Dry Milk**
  - b. New Federal Dairy Mandate
  - c. Nonfat Dairy Milk
  - d. National Forum of Dairy Milkers

- 8) What is the CCC?
- Caring Cats Corporation
  - Commodity Credit Corporation**
  - Cow Chemistry Center
  - Crazy Cow Corporation
- 9) What is the USDEC?
- United States Dairy Export Corporation
  - United States Dairy Export Center
  - United States Dairy Export Company
  - United States Dairy Export Council**
- 10) When using a body condition scoring system of 1 to 5, what does a score of 5 mean?
- Extremely thin
  - Average body condition
  - Extremely fat**
  - Below average body condition
- 11) What is the FAS?
- Finland Agriculture Service
  - Final Agriculture Service
  - Foreign Agricultural Service**
  - Food and Agriculture Service
- 12) What are ways to avoid milk fever in cows?
- Feed low-potassium hay and/or silage to dry cows
  - Adding anionic salts to the dry cow ration
  - Fasting dry cows two weeks before calving
  - Both a and b**
- 13) What should the pH of a “close up” Holstein’s urine be?
- Between 1.0 and 2.0
  - Between 2.0 and 3.0
  - Between 6.0 and 6.5**
  - Between 11.0 and 12.0
- 14) When feeding close-up cows a calcium deficient diet, which gland is stimulated?
- Pituitary Gland
  - Parathyroid gland**
  - Hypothalamus Gland
  - Mammary gland

- 15) What is intravenous injection?
- It is administered in the muscle
  - It is administered under the skin
  - It is administered via the blood vessels**
  - It is administered intradermal
- 16) What is intra muscular injection?
- It is administered in the muscle**
  - It is administered under the skin
  - It is administered via the blood vessels
  - It is administered intradermal
- 17) What is subcutaneous injection?
- It is administered in the muscle
  - It is administered under the skin**
  - It is administered via the blood vessels
  - It is administered intradermal
- 18) Regarding feed formulation, what does CAD stand for?
- Cation-Anion Degree
  - Cation-Anion Difference**
  - Cation-Amonia Difference
  - Carbohydrate- Amino Degradation
- 19) What is a cation?
- A negatively charged ion
  - A negatively charged electron
  - A positively charged electron
  - A positively charged ion**
- 20) What is an anion?
- A positively charged ion
  - A negatively charged electron
  - A positively charged electron
  - A negatively charged ion**
- 21) What is NAFTA?
- North American Forage Trade Association
  - North American Free Trade Agreement**
  - North American Free Trade Association
  - North African Free Trade Association

- 22) What is the USAHA?
- U S Animal Housing Association
  - U S Animal Health Award
  - U S Agricultural Health Administrator
  - U S Animal Health Association**
- 23) What is the USDA's AIPL?
- Animal Improvement Program Library
  - Animal Import Program Liability
  - Animal Improvement Program Lab**
  - Animal Import Processing Language
- 24) How many days into a pregnancy can a fetus be sexed by ultrasound?
- Before 14 days
  - Between 14 and 30 days
  - Between 40 and 50 days
  - After 55 days**
- 25) What is another term for the lowest lateral regions of the abdomen, near the groin?
- Gubernaculum
  - Dorsal
  - Abomasum
  - Inguinal**
- 26) How many days after breeding can a pregnancy be detected by ultrasound?
- Between 28 to 30 days**
  - Before 14 days
  - Between 14 and 28 days
  - Between 30 and 55 days
- 27) At how many days can pregnancy be detected by palpation?
- Before 14 days
  - Between 14 and 35 days**
  - Between 40 to 55 days
  - Between 60 and 95 days
- 28) On average, how many weeks after freshening does a cow's dry matter intake peak?
- 1-2 weeks
  - 2-4 weeks
  - 12-14 weeks**
  - 40-42 weeks

- 29) What is the accepted standard length for a lactation record in dairy cattle?
- a. 200 days
  - b. 305 days**
  - c. 365 days
  - d. 100 days
- 30) Heart girth measurements of cows may be used to estimate:
- a. Age
  - b. Milk production
  - c. Calving date
  - d. Body weight**
- 31) In regards to pedigrees, what is a RHA?
- a. Rolling Herd Average
  - b. Registered Herd Ancestry
  - c. Registered Holstein Ancestry**
  - d. Registered Herd Average
- 32) Milk should be below what temperature before it is transferred to a milk truck?
- a. 60 degrees F
  - b. 20 degrees F
  - c. 30 degrees F
  - d. 40 degrees F**
- 33) When referring to milk test used at the processing plant, what is a DMC?
- a. Direct Microscopic Counts**
  - b. Direct Microscopic Cells
  - c. Direct Micro Compatibility
  - d. Direct Measurement Control
- 34) How much water can a lactating cow consume in one day?
- a. 5 gallons
  - b. 15 gallons
  - c. 35 gallons
  - d. 25 gallons**
- 35) What percent of milk is water?
- a. 82 percent
  - b. 87 percent**
  - c. 93 percent
  - d. 50 percent

- 36) What units are used to measure energy?
- Calories**
  - Grams
  - Liters
  - Micro Farads
- 37) What ration ingredients contain the highest concentration of energy?
- Carbohydrates
  - Fats**
  - Sugars
  - Minerals
- 38) When evaluating dairy rations what do the letters NE stand for?
- Net Equivalence
  - Non Essential
  - Non Edible
  - Net Energy**
- 39) When evaluating a dairy ration, what do the letters TDN stand for?
- Total Dietary Needs
  - Tested Digestible Nutrients
  - Total Digestible Nutrients**
  - Total Dietary Nitrogen
- 40) What percent of dry matter in plants is made of carbohydrates?
- 50 percent
  - 65 percent
  - 75 percent**
  - 85 percent
- 41) Where are structural carbohydrates found in the plant?
- In the cell wall**
  - In the cell nucleus
  - In the cell organelles
  - In the cell membrane
- 42) What are structural carbohydrates made of?
- Cellulose, fructose, and saccharin
  - Lignin, sucrose, and cellulose
  - Cellulose, hemicellulose, lactose
  - Cellulose, hemicellulose, and lignin**

43) What kinds of relationship do cattle and the microorganisms in their rumen share?

- a. Electrostatic
- b. Parasitic
- c. A-Biotic
- d. Symbiotic**

44) What structural carbohydrate component makes older plants less digestible than younger plants?

- a. Lignin**
- b. Cellulose
- c. Fructose
- d. Sucrose

45) What does NSC stand for?

- a. Nonstructural Carbons
- b. Nitrogen Standard Calculation
- c. Nonstructural Carbohydrates**
- d. Nitrogen Substitute Calories

46) What do nonstructural carbohydrates consist of?

- a. Proteins, Acids, and Alkalis
- b. Plant proteins, Pectin, and Sugar
- c. Plant sugars, Lactic Acid, and Potassium
- d. Plant starch, Pectin, and Sugar**

47) What acid is formed when nonstructural carbohydrates are digested in the rumen?

- a. Lactic acid
- b. Citric acid
- c. Propyl-hydro chloride
- d. Propionic acid**

48) How much more energy do fats contain per unit than carbohydrates and proteins?

- a. 3.0
- b. 2.25**
- c. 2.0
- d. 3.25

49) Which cows have higher protein requirements?

- a. High-producing open cows
- b. Low-producing pregnant cows
- c. High-producing pregnant cows**
- d. Low-producing open cows

- 50) Where are degradable proteins broken down?
- Reticulum
  - Abomasum
  - Omasum
  - Rumen**
- 51) Where are non-degradable proteins absorbed?
- Large intestine
  - Rumen
  - Small Intestine**
  - Liver
- 52) If there are large numbers of flies around the dairy barn, what should be the first thing to be examined in an attempt to solve the fly problem?
- Cow feeding procedures
  - Milking procedures
  - Manure handling procedures**
  - Calf feeding procedures
- 53) When referring to rations, what do the letters NFC stand for?
- Not for Consumption
  - Non-fungus Colony
  - Non-Fat Concentration
  - Non-forage Carbohydrates**
- 54) In a cow, where would you find an alveolus?
- Intestine
  - Udder**
  - Brain
  - Skin
- 55) When discussing lactation records, what does the term “fat corrected milk” mean?
- Fat has been added to the milk to the correct level
  - Fat has been extracted from the milk to the correct level
  - Lactation records have been adjusted to the same milk fat percentage**
  - The lactation record has an average amount of milk fat
- 56) What percent non-fiber carbohydrate should a ration contain for high producing cows?
- 35 to 40 percent**
  - 10 to 20 percent
  - 56 to 61 percent
  - 22 to 27 percent



- 57) What does GnRH stand for?
- Gestation Repression Hormone
  - Genotype Reflection Hormone
  - Genuine Recessive Hormone
  - Gonadotropin Releasing Hormone**
- 58) What is the approximate time of ovulation in cattle after the beginning of heat?
- 60 hours
  - 90 hours
  - 30 hours**
  - 3 hours
- 59) What hormone is responsible for maintaining pregnancy?
- Progesterone**
  - Lutalyse
  - Prostaglandin
  - Oxytocin
- 60) What is the scientific term for birth?
- Delivery
  - Parturition**
  - Calving
  - Dystocia
- 61) In reference to reproduction, what does CL stand for?
- Cattle Lutalysin
  - Cervix Lymphocyte
  - Compound Lepto
  - Corpus Luteum**
- 62) To the hundredth, how many pounds of milk are in one gallon?
- 8.52 pounds
  - 8.72 pounds
  - 8.92 pounds
  - 8.62 pounds**
- 63) What pathway in young calves directs milk into the abomasum, bypassing the rumen, reticulum, and omasum?
- Rumen bypass groove
  - Masticulas passinomis
  - Esophageal groove**
  - Rumen passinomis

- 64) Milk fever is also (scientifically) known as what?
- Postpartum paresis
  - Mamogenesis
  - Masticular Paresis
  - Parturient paresis**
- 65) What is Milk Fever paresis caused by?
- Low blood levels of ionized calcium**
  - Low blood levels of ionized sodium
  - Low blood levels of ionized zinc
  - Low blood levels of ionized vitamin-D
- 66) According to the NRC, what percent calcium should a dry cow ration contain?
- 1 percent
  - 2 percent
  - 10 percent
  - .39 percent**
- 67) High potassium intake will decrease a cows ability to mobilize what?
- Bone phosphorus
  - Lymphocytes
  - Bone calcium**
  - Immunoglobulins
- 68) Cows that are at risk of developing ketosis can be fed what vitamin to help prevent ketosis?
- Niacin**
  - Zinc
  - B-complex
  - Vitamin-C
- 69) Hairy Heel Wart is scientifically known as what?
- Digital Divide
  - Digital Dermatitis**
  - Intraheel laminitis
  - Digital phlegmon
- 70) Foot Rot is Scientifically known as what?
- Intraheel laminitis
  - Digital Dermatitis
  - Interdigital phlegmon**
  - Digital Divides

71) When discussing feed mixers, what is the range of manufacturers recommended mixing times?

- a. 1-2 minutes
- b. 3-6 minutes**
- c. 10-15 minutes
- d. 7-9 minutes

72) The letters FSIS stand for what?

- a. Food Service and Inspection Safety
- b. Free State Inspection Service
- c. Food Sanitation and Inquiry Service
- d. Food Safety and Inspection Service**

73) What do the letters FARAD stand for?

- a. Food Animal Resistance Activity Database
- b. Food Animal Residue Avoidance Data
- c. Food Animal Resistance Activity Data
- d. Food Animal Residue Avoidance Databank**

74) What bacterium causes cattle tuberculosis (TB)?

- a. Mycobacterium canine
- b. Mycobacterium ovius
- c. Mycobacterium avious
- d. Mycobacterium bovis**

75) How frequently should an average cow freshen?

- a. Once every 24 months
- b. Once every 12 months**
- c. Once every 20 months
- d. Only once in her lifetime

76) What do the letters NRC stand for?

- a. National Research Company
- b. National Research Council**
- c. National Research Chapter
- d. National Research Center

77) When discussing nutrition, what does NPN stand for?

- a. Nonprotein nitrogen**
- b. Normal protein nitrogen
- c. Natural protein nitrogen
- d. Neutral protein nitrogen

78) Corn silage, stored in upright, top-unloading silos, should be chopped at what percent moisture?

- a. **62 to 65 percent moisture**
- b. 72 to 75 percent moisture
- c. 82 to 85 percent moisture
- d. 92 to 95 percent moisture

79) Corn silage stored in sealed upright silos should be ensiled at what moisture?

- a. No less than 30 percent moisture
- b. No less than 40 percent moisture
- c. No less than 50 percent moisture
- d. **No less than 60 percent moisture**

80) What percent moisture should corn silage be chopped at when stored in horizontal bunker silos or bags?

- a. 30 percent moisture
- b. 50 percent moisture
- c. **70 percent moisture**
- d. 90 percent moisture

81) What do the letters FSA stand for?

- a. **Farm Service Agency**
- b. Farm Study Agency
- c. Farm Sales Agency
- d. Farm Safety Administration

82) What does BVD stand for?

- a. Bovine Viral Distress
- b. Bovine Viral Disease
- c. Bovine Viral Defecation
- d. **Bovine Viral Diarrhea**

83) Neospora caninum is a major cause of what in pregnant cows?

- a. **Abortion**
- b. Parturition
- c. Nutrition deficiency
- d. Chronic diarrhea

84) When referring to vaccinations, what do the letters MLV stand for?

- a. Milk Line Vaccination
- b. **Modified Live Virus**
- c. Modified Limited Vaccine
- d. Model Linked Viruses

- 85) When the environmental temperature falls below 30°F, the normal diet of a young calf should be supplemented with \_\_\_\_\_?
- Protein
  - Energy**
  - Vitamin A
  - Warm Fresh Milk
- 86) After a bulk tank is washed and rinsed, beading of water droplets is a sign of \_\_\_\_.
- Protein residue
  - pH buffer residue
  - Fat residue**
  - Milk residue
- 87) When looking at DHI records, what do the letters RHA stand for?
- Rolling Herd Average**
  - Registered Holstein Ancestry
  - Registered Herd Ancestry
  - Regional Holstein Associations
- 88) How is a dairy's RHA calculated?
- By dividing the total amount of milk produced in the past 365 days by the total number of cow years in the herd this year.
  - By dividing the total amount of milk produced in the past 365 days by the total number of cow years in the herd last year.**
  - By multiplying the total amount of milk produced in the past 365 days by total number cow years in the herd this year.
  - By adding the total amount of milk produced in the past 365 days to the total number of cow years in the herd last year.
- 89) When examining feed rations, what do the letters NDF stand for?
- Normal Detergent Fiber
  - Normally Digestible Fiber
  - Neutral Directing Fiber
  - Neutral Detergent Fiber**
- 90) What bacterium causes Johne's disease in cattle?
- Mycobacterium Paratuberculosis**
  - Johne's Virus
  - Colostridium
  - E-Coli.
- 91) What are two methods for shortening udder hair?
- Clipping and straight razor shaving
  - Clipping and singeing**
  - Singeing and waxing
  - Electrolysis and waxing

- 92) What do the letters EU stands for?
- Eastern Union
  - Eastern Understanding
  - European Union**
  - European Underline
- 93) PTAT stands for what?
- Predicted Transforming Ability-Type
  - Progeny Transforming Ability-Type
  - Progeny Testing At Time
  - Predicted Transmitting Ability-Type**
- 94) %DBH stands for what?
- Percentage of Difficulty Breeding in Heifers
  - Percentage of Dead Breathing Heifers
  - Percentage of Dead Born Heifers
  - Percentage of Difficult Births in Heifers**
- 95) What do the letters IDFA stand for?
- International Dairy Food Act
  - International Dairy Foods Association**
  - International Dairy Finance Administrators
  - International Dairy Farmers Association
- 96) What breed is known to produce milk over a greater number of years than all other breeds?
- Brown Swiss**
  - Guernsey
  - Jersey
  - Milking Shorthorn
- 97) Which of the compartments of a cow's four-compartment stomach acts as the true stomach?
- Omasum
  - Rumen
  - Abomasum**
  - Reticulum
- 98) What percent of crude protein should a calf starter be?
- 6-8
  - 10-12
  - 16-18**
  - 22-24

- 99) Which dairy breed's milk is golden-yellow in color?
- a. Jersey
  - b. Milking shorthorn
  - c. Guernsey**
  - d. Ayrshire
- 100) Which trait is worth the most points according to the Dairy Cow Unified Score Card?
- a. Body capacity
  - b. Dairy character
  - c. Frame
  - d. Udder**
- 101) A perfect score for a cow according to the Dairy Cow Unified Score Card is:
- a. 50
  - b. 100**
  - c. 500
  - d. 1000
- 102) What is a TMR to a dairy person?
- a. Time Management Recommendation
  - b. Typical Managed Ration
  - c. Total Mixed Ration**
  - d. Texas Milk Requirement
- 103) Brucellosis is also known as:
- a. Bangs**
  - b. Mastitis
  - c. Milk fever
  - d. Ketosis
- 104) Dry cows need 0.8 percent K in their diet. What element is K?
- a. Potassium**
  - b. Calcium
  - c. Phosphorus
  - d. Lead
- 105) Alfalfa is an example of \_\_\_\_ in a dairy ration.
- a. Concentrate
  - b. Roughage**
  - c. Probiotic
  - d. Energy Supplement

- 106) A rolling herd average (RHA) is based on how many months?
- One
  - Twelve**
  - Twenty four
  - Lifetime of the cow
- 107) What does the term freshen mean in relation to dairy production?
- To become pregnant
  - To give birth**
  - To stop producing milk
  - Exhibits signs of extreme agitation or freshness
- 108) Protein is a combination of amino acids. The amino acids are unique among compounds involved in nutrition because they contain what element?
- Nitrogen**
  - Copper
  - Calcium
  - Phosphorous
- 109) Body condition scores from 1 to 5 are used to track herd health and nutrition. Dry cows should have a body score from:
- 0.5-1.0
  - 2.0-2.5
  - 2.5-3.0
  - 3.5-4.0**
- 110) Which part of the digestive tract is responsible for absorbing excess water?
- Omasum
  - Rumen
  - Small intestines
  - Large intestines**
- 111) The first feeding of colostrum should equal about \_\_\_\_ percent of the calf's body weight?
- 1
  - 2
  - 5**
  - 10
- 112) All U.S. dairy farms are inspected by state inspectors through a program coordinated by the Food and Drug Administration. Inspectors follow a publication called the PMO. What does PMO stand for?
- Primary Milking Operations
  - Pre-milking Options
  - Post-Milking Options
  - Pasteurized milk ordinance**



113) After insemination, how long do sperm live in the cow's reproductive tract?

- a. 20 minutes
- b. 6 hours
- c. 24 hours**
- d. 2 days

114) What describes the fraction of the ration proteins, which is broken down by digestive enzymes and utilized by rumen bacteria?

- a. % Bacterial Protein
- b. % Water Dissolvable Protein
- c. % Total Digestible Protein
- d. % Degradable proteins**

115) What are the two types of ovarian cysts?

- a. follicular and luteal**
- b. follicular and horn
- c. ovum and luteal
- d. follicular and ovum

116) Colostrum has approximately \_\_\_\_\_ calcium, as does regular milk.

- a. Two Times**
- b. Three Times
- c. Four Times
- d. The Same

117) Which reproductive condition results when the fetal membranes remain within the uterus for an extended period following parturition?

- a. Prolapsed uterus
- b. Retained ovum
- c. Retained placenta**
- d. Ruptured follicle

118) What percent of the cows feed intake is consumed during the daylight hours?

- a. 90%
- b. 70%**
- c. 65%
- d. 50%

119) When is the best time to feed anionic salts to dairy cows?

- a. The day before calving
- b. Two weeks prior to calving**
- c. While the cow is calving
- d. Immediately after calving

120) What are the four composite indexes calculated by the Holstein Association?

- a. Udder, feet and legs, body color, & dairy character
- b. Teats, feet and legs, body form, & dairy character
- c. Udder, feet and legs, body form, & dairy quality
- d. **Udder, feet and legs, body form, & dairy character**

121) Approximately how many gallons of blood pass through the udder for each gallon of milk produced?

- a. 100-200 gallons
- b. 200-300 gallons
- c. 300-400 gallons
- d. **400-500 gallons**

122) The standard length of the dry period in dairy cattle is \_\_\_\_\_?

- a. 30 days
- b. **60 days**
- c. 100 days
- d. 283 days

123) What machine is used to determine if water has been added to milk?

- a. Water Monitor
- b. Acme Milk Saver
- c. **Cryoscope**
- d. Antioscope

124) The two main problems that effect reproduction are:

- a. Heat detection and heat stress
- b. **Heat detection and conception rates**
- c. Heat detection and cold stress
- d. Heat detection and ovarian cancer

125) Name the three common places Coliforms are found.

- a. **Mud, water, and manure**
- b. Laboratories, hospitals, and offices
- c. Milk, mucus, and water
- d. Mud, water, and blood

126) What type of mastitis is the easiest to cure?

- a. Staph Aureus
- b. Coliforms
- c. **Streptococcus agalactae**
- d. Paratuberliocsis

- 127) When can a heifer calf born twin to a bull be registered?
- As soon as she is born
  - As soon as she is weaned
  - When she is 6 months old
  - When it is proven that she will breed**
- 128) When does the greatest mammary tissue growth occur during a cow's life?
- Before she is born
  - At puberty
  - During the first pregnancy**
  - During the second pregnancy
- 129) Each animal inherits certain genes from both parents. What percentage of genes does a calf receive from its sire?
- 25 percent
  - 50 percent**
  - 75 percent
  - 85 percent
- 130) What is the hormone that causes Uterine contractions to assist in parturition?
- Estrogen
  - Progesterone
  - Prostaglandin
  - Oxytocin**
- 131) Coccidia infection can occur when calves are 4 to 8 weeks old. Coccidia causes:
- BVD
  - Pneumonia
  - IBR
  - Enteritis**
- 132) Which major dairy breed association was the first to use computers to maintain breed registry records?
- Guernsey**
  - Holstein
  - Jersey
  - Milking Shorthorn
- 133) Reduced gestation length and retained placenta typically are the first symptoms of \_\_\_\_\_ vitamin deficiency
- Vitamin K
  - Vitamin D
  - Vitamin A**
  - Vitamin B

134) Generally, high-producing Holsteins eat \_\_\_\_\_ pounds of dry matter per day?

- a. 10-20
- b. 25-30
- c. **45-55**
- d. 75-100

135) What is the most essential nutrient in animal feeding animals and maintaining health?

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

136) Why is fat added to dairy rations?

- a. To increase milk fat %
- b. To help fight BVD
- c. **To add a concentrated form of energy**
- d. To increase the volatile fatty acid level

137) A Milking herd's TMR should be available to cows how many hours throughout the day?

- a. 5 to 9
- b. 10 to 12
- c. 15 to 18
- d. **20 to 24**

138) The most common pathogen found in raw milk is:

- a. Cryptosporidia
- b. ***Escherichia coli***
- c. Campylobacter
- d. Salmonella

139) In what year did the Holstein Association start its program of recording carriers of Undesirable Recessive Traits?

- a. 1974
- b. 1969
- c. **1957**
- d. 1986

140) A free martin is considered a

- a. Virgin heifer that has not yet been bred
- b. Sterile bull born twin to a heifer
- c. Cow that has just weaned a calf
- d. **Sterile heifer born twin to a bull**

141) A mutation where a calf is born with a single toe on one or more feet is called

- a. **Mule-foot**
- b. Single-foot
- c. Ungulate Toe
- d. Cloven-hoof

142) A mutation where calves have little or no control over the movement of their legs is called

- a. Bovine leukocyte adhesion deficiency
- b. Weaver syndrome
- c. **Limber leg**
- d. Mule-foot

143) Limber leg is found most often in the \_\_\_\_\_ dairy breed?

- a. Brown Swiss
- b. **Jersey**
- c. Holstein
- d. Guernsey

144) Mule-foot is found most often in \_\_\_\_\_ dairy breed?

- a. Jersey
- b. Guernsey
- c. **Holstein**
- d. Brown Swiss

145) Bovine Progressive Degenerative Myeloencephalopathy (BPDME) is better known as Weaver Syndrome@ because of

- a. The name of the person that first detected it
- b. The location where it was first detected
- c. **The weaving gait of affected cattle**
- d. The regenerative process used to treat symptoms

146) "Weaver Syndrome" is most often found in the \_\_\_\_\_ dairy breed?

- a. **Brown Swiss**
- b. Guernsey
- c. Jersey
- d. Holstein

147) What is lactogenesis?

- a. The initiation of estrus
- b. The cessation of milk production
- c. **The initiation of milk secretion**
- d. The initiation of mastitis

148) Fear can disrupt milk letdown in a cow. The hormone released that causes this disruption is:

- a. Progesterone
- b. Epinephrine**
- c. Oxytocin
- d. Prostaglandin

149) Lactation is unique to \_\_\_\_\_.

- a. Reptiles
- b. Insects
- c. Mammals**
- d. Crustaceans

150) Endocrinology is the science dealing with \_\_\_\_\_.

- a. Lipids
- b. Hormones**
- c. Carbohydrates
- d. The lymphatic system

151) The hormone BST is given to dairy cows:

- a. In the first 45 days of lactation
- b. 100-199 days after calving
- c. After 200 days of lactation**
- d. Right before the dry period

152) For best results calves should be fed colostrum within \_\_\_ hours of calving:

- a. 1st hour
- b. 3 hours
- c. 6 hours**
- d. First day

153) Abortion in the last trimester of pregnancy is often caused by\_\_\_\_\_.

- a. Milk fever
- b. Bovine virus diarrhea
- c. Hardware disease
- d. Brucellosis**

154) A condition of low blood calcium, which results in partial paralysis of the cow is known as \_\_\_\_\_.

- a. Milk fever**
- b. Bovine virus diarrhea
- c. Hardware disease
- d. Brucellosis

155) When a small metal object punctures the stomach wall and causes an infection, the resulting disease is called\_\_\_\_\_.

- a. Milk fever
- b. Mastitis
- c. Hardware disease**
- d. Black leg

156) A disease transmitted through natural mating which causes abortion, low conception rates, and irregular heat cycles is \_\_\_\_\_.

- a. Milk fever
- b. Vibriosis**
- c. Hardware disease
- d. Black leg

157) A disease causing air bubbles under the skin and usually results in rapid death is \_\_\_\_\_.

- a. Milk fever
- b. Vibriosis
- c. Hardware disease
- d. Black leg**

158) The condition in which the cow is giving more milk than nutrients that she is consuming in feed is called:

- a. Negative net energy balance**
- b. Positive net energy balance
- c. Over Milked
- d. More milk than feed

159) As a rule of thumb when milk production \_\_\_\_\_, the milk fat content \_\_\_\_\_.

- a. Decreases, increases**
- b. Decreases, decreases
- c. Increases, increases
- d. Stops, increases

160) Feeding bulky feeds during the dry period and gradually bringing fresh cows back on grain are ways to prevent:

- a. Milk fever
- b. Displaced abomasum**
- c. Ketosis
- d. Mastitis

161) The two U.S. dairy breeds that originated in the Channel Islands off the coast of France are:

- a. Jersey and Holstein
- b. Guernsey and Jersey**
- c. Milking Shorthorn and Guernsey
- d. Ayrshire and Milking Shorthorn

162) \_\_\_\_\_ represents the largest daily input cost in producing milk.

- a. Labor
- b. Water
- c. Animals
- d. Feed**

163) The breed of dairy cattle that can be roan, all red, all white, or even spotted red and white is:

- a. Holstein
- b. Ayrshire
- c. Guernsey
- d. Milking Shorthorn**

164) What state agency regulates waste management?

- a. Texas Health Commission
- b. Texas Commission on Environmental Quality**
- c. Environmental Preservation Agency
- d. Texas Animal Health Commission

165) What manure waste management puts solids in a bin and lets it degrade?

- a. Slurry
- b. Composting**
- c. Solid
- d. Lagoon

166) What manure waste management method runs manure across a press and squeezes the water out?

- a. Lagoon
- b. Slurry
- c. Liquid
- d. Solids removal**

167) Which mineral functions in maintaining osmotic pressure, acid-base balance, and body fluid balance?

- a. Sodium**
- b. Selenium
- c. Sulfur
- d. Zinc



- 168) Which mineral is found in high concentrations in soft tissues such as the pancreas, liver, and kidney?
- Sulfur
  - Sodium
  - Zinc**
  - Selenium
- 169) What is a nonfunctional mammary gland called?
- Absent quarter
  - Nonproductive quarter
  - Blind quarter**
  - Bulging quarter
- 170) When doing classification scoring, a cow given the numerical value of 85-89.9 is classified as:
- Excellent
  - Very good**
  - Fair
  - Poor
- 171) What is the most abundant mineral in the body?
- Cobalt
  - Copper
  - Calcium**
  - Iodine
- 172) What mineral is necessary for hemoglobin formation?
- Zinc
  - Copper**
  - Selenium
  - Iodine
- 173) A bovine female which has not had a calf is a:
- Filly
  - Pullet
  - Gilt
  - Heifer**
- 174) How many days after parturition should you wait before breeding a cow back?
- 10 days
  - 60 days**
  - 120 days
  - 365 days

- 175) What trait with the only positive genetic correlation to milk production?
- Body capacity
  - Dairy character**
  - Feet and legs
  - Udder
- 176) Which dairy breed has a restriction for disallowing black markings?
- Jersey
  - Guernsey
  - Ayrshire
  - Milking Shorthorn**
- 177) What numerical value does a Holstein cow get when given the classification excellent?
- <70
  - 70-74.9
  - 80-84.9
  - 90-100**
- 178) What is the classification for a Holstein cow given the numerical value 80-84.9?
- Good plus**
  - Good
  - Fair
  - Poor
- 179) What numerical value does a Holstein cow get when given the classification good?
- <70
  - 75-79.9**
  - 85-89.9
  - 90-100
- 180) What is the classification for a Holstein cow given the numerical value of less than 70?
- Good plus
  - Good
  - Fair
  - Poor**
- 181) What is the reasonable score for body condition at mid-lactation?
- 1.0
  - 2.0
  - 3.0**
  - 4.5

- 182) The rear quarters produce \_\_\_\_\_% of the daily milk yield.
- a. 20%
  - b. 40%
  - c. 60%**
  - d. 80%
- 183) BST is the acronym for what compound?
- a. Bovine Somatotropin**
  - b. Bovine Special Tincture
  - c. Barn Somatotropin
  - d. Black Sodium Tapestry
- 184) At what isoelectric point (point at which proteins have net zero charge) do caseins precipitate?
- a. pH 4.6**
  - b. pH 5.2
  - c. pH 7.5
  - d. pH 8.1
- 185) How many grams of lactose are in an 8 oz. glass of milk?
- a. 10**
  - b. 17
  - c. 21
  - d. 25
- 186) Bulk tanks must be emptied and cleaned every \_\_\_\_ hours.
- a. 48
  - b. 72**
  - c. 84
  - d. 120
- 187) If you add sugar to a milk product, you must \_\_\_\_ the minimum pasteurization temperature by \_\_\_\_ °F.
- a. Decrease, 5
  - b. Increase, 5**
  - c. Decrease, 10
  - d. Increase, 10
- 188) Cheddar cheese accounts for \_\_\_\_ % of American type cheeses made in the U.S.
- a. 65
  - b. 72
  - c. 78
  - d. 80**

189) The source of rennet (a substance used in cheese making) is:

- a. A tropical plant
- b. Sugar beets
- c. The abomasum of a milk fed calf**
- d. Insect Larvae

190) Legally you cannot make cottage cheese from raw milk, but you can make \_\_\_\_\_ from raw milk.

- a. Yogurt
- b. Cheddar cheese**
- c. Ice cream
- d. Sour cream

191) \_\_\_\_\_ is a compound that is fermented for flavor in buttermilk and sour cream.

- a. Lactose
- b. Citrate**
- c. Glucose
- d. Phosphatase

192) 98% of somatic cells are:

- a. Red blood cells
- b. Lymph nodes
- c. Leukocytes**
- d. Plasma

193) Cows have \_\_\_\_ streak canals per teat.

- a. 1**
- b. 2
- c. 3
- d. 4-8

194) Crude fiber in a dietary ration must be at least \_\_\_% or milk fat percent will decrease.

- a. 5
- b. 8
- c. 12
- d. 18**

195) Which body part is located more towards the front of the animal?

- a. Stifle
- b. Switch
- c. Tail head
- d. Flank**

196) The topline of a cow is made up of the:

- a. Chine and flank
- b. Loin and stifle
- c. Loin and chine**
- d. Chine and stifle

197) Which part of an animal touches the ground if he/she is walking on a correct set of feet and legs?

- a. Knee
- b. Pastern
- c. Sole**
- d. Dewclaw

198) The top most part of a cow's head is called the:

- a. Hook
- b. Knoll
- c. Pin
- d. Poll**

199) A switch on a cow is:

- a. A fluff of hair on the forehead
- b. The area directly behind the withers
- c. The bottom most part of the tail**
- d. Located beneath the heart girth

200) The hooks and pins on an animal relate most closely to the:

- a. Thigh
- b. Feet and legs
- c. Rump**
- d. Udder

201) What is the average production lifetime of a dairy cow?

- a. 6 months
- b. 3 years**
- c. 10 years
- d. 20 years

202) An average Holstein cow should give \_\_\_\_\_pounds per day for each lactation.

- a. 8.5
- b. 50**
- c. 165
- d. 400

203) A cow's gestation period is \_\_\_\_\_ long?

- a. 1 day
- b. 114 days
- c. 282 days**
- d. 365 days

204) HTST is a \_\_\_\_\_

- a. Milking parlor design
- b. Pasteurizing system**
- c. Genetic Marker in Holstein Cattle
- d. Breed of dairy cow

205) What combines the Predicted Transmitting Ability for protein, fat, type and udder composite index and ranks the animal on its ability to transmit a balance of these four traits

- a. Herd Type Production Index
- b. Pedigree Type Production Index
- c. Type Production Index
- d. Total Production Index**

206) Jersey cattle are characterized by having a \_\_\_\_\_ face:

- a. Long face
- b. Dished face**
- c. Mottled face
- d. Masculine face

207) Milk sugars are not very soluble. Some people have difficulty hydrolyzing them in their bodies. This problem is called \_\_\_\_\_.

- a. Lactose indigestibility
- b. Lactose intolerance**
- c. Lactose irritability
- d. Lactose adjustment

208) Fermented forage plants relates to:

- a. Flash grazing
- b. Strip grazing
- c. Hay
- d. Silage**

209) What does the acronym IPM stands for?

- a. Integrated pest management**
- b. Internal pest management
- c. International pest management
- d. Insect Problem Management

210) In the standard protocol for cleaning milking equipment, which of the following is not one of the four phases of cleaning?

- a. **Back flushing**
- b. Pre-rinse
- c. Chlorinated alkaline wash
- d. Acid rinse

211) Feeding proper rations during the summer is important for both cow comfort and maintaining milk production. Which nutrient is most important during the summer months?

- a. Protein
- b. Fat
- c. **Water**
- d. Vitamins

212) What percent of lactating dairy cows have oxytocin in their bloodstreams during milking?

- a. 50%
- b. 60%
- c. 75%
- d. **100%**

213) The medical name tarsal hygroma, a common ailment of dairy cows is commonly called::

- a. **Swollen hock**
- b. Dehydration
- c. Acidosis
- d. Foot Wart

214) This bacteria causes "Circling Disease" in cattle:

- a. Salmonella
- b. Mycoplasma
- c. **Listeria**
- d. Leucosis

215) Fumonsin and zearalenone are examples of:

- a. Vitamins
- b. Minerals
- c. **Mycotoxins**
- d. Carbohydrates

216) Which of the following is a compartment of the dairy cow's stomach?

- a. **Abomasum**
- b. Duodenum
- c. Jejunum
- d. Ileum

217) When using sexed semen, conception rates are \_\_\_\_\_ percent of the conception rates achieved when using unsexed semen under the same conditions?

- a. 10% or less
- b. 15-40%
- c. **50-80%**
- d. 90-95%

218) According to recent USDA surveys, what is the most popular age to wean dairy calves?

- a. 2 weeks
- b. 4 weeks
- c. 7 weeks
- d. **9 weeks**

219) In the reproductive tract of a dairy cow, how many uterine horns are there?

- a. None
- b. One
- c. **Two**
- d. Three

220) The number one reason for culling in U.S. dairy herds is:

- a. **Reproductive failure**
- b. Mastitis
- c. Lameness
- d. Age

221) Which of the following is **not** a commonly used estrus synchronization program for dairy cattle?

- a. CIDR
- b. **Post-synch**
- c. Heat-synch
- d. Pre-synch

222) In which breed of cow is the incidence of milk fever most common?

- a. Ayrshire
- b. Brown Swiss
- c. **Jersey**
- d. Guernsey

223) Milk with over \_\_\_\_\_ somatic cell count cannot legally be shipped in the United States?

- a. 200,000
- b. 400,000
- c. 500,000
- d. **750,000**



- 224) This vitamin plays a role in the coagulation of blood:
- Vitamin A
  - Vitamin B12
  - Vitamin K**
  - Vitamin C
- 225) Manure digesters convert \_\_\_\_\_ fuel into electricity.
- Propane
  - Methane**
  - Ethanol
  - Biodiesel
- 226) What is a common name for infectious kerato conjunctivitis?
- Pink eye**
  - Ringworm
  - Acidosis
  - Johne's Disease
- 227) Which one of the following is not classified as a fat-soluble vitamin?
- Vitamin D
  - Vitamin K
  - Vitamin B**
  - Vitamin A
- 228) Which compartment of a dairy cow's stomach is located closest to the heart and it is a spot where hardware disease occurs?
- Rumen
  - Reticulum**
  - Omasum
  - Abomasum
- 229) Which purebred dairy breed association introduced a "dairy price stabilization" program in 2009?
- Ayshire
  - Jersey
  - Guernsey
  - Holstein**
- 230) In a sire's proof, daughters' calving ease measures \_\_\_\_\_.
- A bull's tendency to sire calves that are born easily
  - The cow's calving ease
  - The influence of the sire of the cow on calving ease**
  - The calving ease of the first calf heifers from the sire

231) To maintain margins, you should be monitoring and making decisions based on your herd's IOFC. What do the initials IOFC stand for?

- a. Income over forage cost
- b. Income over finance cost
- c. Income on feeding cows
- d. **Income over feed costs**

232) Which of the following diseases is not caused by a virus?

- a. **Laminitis**
- b. BVD
- c. Warts
- d. Cow pox

233) How many chromosomes does the nucleus of each reproductive cell have in dairy cattle?

- a. 15
- b. 24
- c. **30**
- d. 32

234) If a dairy bull has been genetically tested to determine his genomic make-up, this will be indicated on his pedigree by what letters?

- a. DNA-TPI
- b. **GTPI**
- c. GTTPI
- d. TPI-G

235) The most costly form of mastitis is?

- a. **Subclinical**
- b. Chronic
- c. Clinical
- d. Acute

236) Which of the following is the most popular type of cheese in the United States?

- a. Swiss
- b. Mozzarella
- c. **Cheddar**
- d. Colby

237) "Thurl position" is a trait evaluated in the \_\_\_\_\_ category on the PDCA Unified Scorecard?

- a. Frame
- b. Udder
- c. **Rear feet and legs**
- d. Dairy strength

238) The only aspect of milk quality that can be completely controlled on the farm is \_\_\_\_\_.

- a. Bacteria counts
- b. **Drug residue**
- c. Milk protein
- d. Milk flavor

239) The Global Dairy Agenda for Action is a pledge to reduce \_\_\_\_\_ emissions in an attempt to address global warming?

- a. Manure odor
- b. Nitrous oxide
- c. Sulfur
- d. **Carbon**

240) Dairy Management Inc. introduced the \_\_\_\_\_ social media program for dairy advocates?

- a. Dairy goddess
- b. Dairy farming today
- c. **myDairy**
- d. Facebook

241) Milk that is low in SCC has more casein, which is a primary component in \_\_\_\_\_?

- a. **Cheese**
- b. Milk
- c. Cream
- d. Butter

242) Which hormone produced by the uterus causes regression of the corpus luteum?

- a. **PGF**
- b. FSH
- c. LH
- d. GnRH

243) When a cow comes into heat every few days, she is referred to as?

- a. Gestation
- b. Lactation
- c. Anestrus
- d. **Cystic**

244) Fats are broken down by a dairy cow in what part of her body?

- a. Rumen
- b. Pancreas
- c. **Small intestine**
- d. Large intestine

245) Which dairy breed originated in the central part of the European continent?

- a. Ayrshire
- b. **Brown Swiss**
- c. Guernsey
- d. Milking Shorthorn

246) Which system of the cow's body is most affected by paratuberculosis?

- a. Circulatory
- b. Respiratory
- c. Reproductive
- d. **Digestive**

247) What is the sex chromosome configuration of a male calf?

- a. XX
- b. YY
- c. **XY**
- d. FX

248) On the PDCA Unified Dairy Score Card, the category "dairy strength" accounts for how many points?

- a. 10
- b. 15
- c. 20
- d. **25**

249) On the PDCA Unified Dairy Score Card, the category "feet and legs" accounts for how many points?

- a. 10
- b. 15
- c. **20**
- d. 30

250) Which one of the following is the largest dairy milk marketing cooperative in the U.S.?

- a. Maryland and Virginia Milk Producers
- b. Land O'Lakes
- c. **Dairy Farmers of America (DFA)**
- d. California Dairies

251) When comparing bulls for artificial insemination, what does "SCR" stand for?

- a. **Sire conception rate**
- b. Service conception rate
- c. Sibling conception rate
- d. Sperm conception rate

252) Which one of the following is NOT classified as a water soluble-vitamin?

- a. Biotin
- b. Folic acid
- c. Niacin
- d. **Vitamin A**

253) In the ruminant digestive system, which to the following is the name of first section of the small intestine that is connected to the abomasum?

- a. Omasum
- b. Jejunum
- c. **Duodenum**
- d. Ileum

254) Research has shown that by formulating lactating cow rations with proper amounts of certain amino acids, we can decrease the crude protein content of the ration and reduce \_\_\_\_\_?

- a. **Nitrogen excretion**
- b. Bloat
- c. Phosphorus
- d. Acidosis

255) In order to prevent bloat, the feed additive Poloxalene is often added to feed rations for cows that are grazing. Which of the following grazed forages are most likely to cause bloat?

- a. Fescue and orchard grass
- b. Wheat and barley
- c. Turnips and Sudan grass
- d. **Alfalfa and Clover**

256) Rumen bacteria enable dairy cattle to utilize which feed supplement?

- a. Sodium bicarbonate
- b. **Urea**
- c. Calcium carbonate
- d. Defluorinate phosphate

257) Heritability for milk production in dairy cattle is:

- a. 5%
- b. **30%**
- c. 50%
- d. 80%

258) If the heat detection rate is 30% and the conception rate is 30%, what is the pregnancy rate?

- a. **9%**
- b. 15%
- c. 30%
- d. 60%

259) Which of the following is an infectious disease?

- a. Milk fever
- b. Hardware disease
- c. **Ringworm**
- d. Bloat

260) What female hormone causes follicles to begin to develop?

- a. Luteinizing hormone
- b. **Follicle stimulating hormone**
- c. Prolactin
- d. Estrogen

261) In dairy cows, what is the name of the disease caused by the organisms Staph Aureus, Strep Uberis, and Klebsiella?

- a. Metritis
- b. Listerosis
- c. **Mastitis**
- d. Brucellosis

262) What stomach compartments are not developed in a newborn calf?

- a. Abomasum and omasum
- b. Abomasum and rumen
- c. Rumen and omasum
- d. **Rumen and reticulum**

263) When compared to normal corn silage, brown mid-rib corn silage has more energy and high digestibility. This is due largely to its lower content of\_\_\_\_\_.

- a. Starch
- b. **Lignin**
- c. Fat
- d. Potassium

264) Which one of the following describes biotin?

- a. An amino acid
- b. A source of energy
- c. A trace mineral
- d. **A B-Vitamin**

- 265) A material used in a footbath for cows with foot rot problems is:
- Copper sulfate**
  - Calcium carbonate
  - Sodium chloride
  - Monosodium phosphate
- 266) Milking time is best reduced by:
- Increasing vacuum
  - Decreasing vacuum
  - Speeding up pulsators
  - Preparing cows properly**
- 267) The CWT programs stands for Cooperatives Working Together. Which of the following describes the function of this program?
- An international program used to market whey proteins
  - A national dairy farmer-funded program that is used to help stabilize milk prices**
  - A state-wide program that addresses the cost of dairy feeds
  - The world-wide cooperative network for agricultural products
- 268) Which one of the following is the name of the part of the cow's back that lies between the withers and the loin?
- Rump
  - Thurl
  - Poll
  - Chine**
- 269) What is the name of the term for a farm's unique identification number that is part of the National Animal Identification System?
- Zip Code
  - RFID
  - Registration ID
  - Premis ID**
- 270) Dairy Farmers frequently place a stomach magnet into their cows to:
- Improve the absorption of iron when the cows are drinking soft water
  - Prevent arthritis from settling in the hock and knee joints
  - Prevent ingested metal objects from interfering with the digestive tract or the respiratory system**
  - Help improve the mineral content of the milk
- 271) The rumen of a cow is located:
- Left side of the body**
  - Right side of the body
  - Rear of the animal
  - Along the top of an animal

272) The rumen of a mature cow will hold approximately:

- a. 5 gallons
- b. 10 gallons
- c. 20 gallons
- d. 40 gallons**

273) The portion of the ruminant digestive system which is known as and functions as the “true” stomach is the:

- a. Abomasum**
- b. Reticulum
- c. Omasum
- d. Proventriculus

274) One of the highest heritability traits for milk is:

- a. Volume
- b. Milking Rate
- c. Total solids
- d. % Protein**

275) The typical lactation curve shows a dairy cow reaching her peak production about \_\_\_\_\_ days into the lactation cycle.

- a. 5-10 days
- b. 20-30 days
- c. 50-70 days**
- d. 120-180 days

276) Cows treated with BST typically show an increase in milk production of:

- a. 2%
- b. 10%**
- c. 25%
- d. 50%

277) Dairy producers are particularly watchful for zoonotic diseases in their herd. Zoonotic diseases are defined as those that:

- a. Pass from animal to animal of the same species
- b. Pass from animal to animal among different species
- c. Pass from animals to humans and vice versa**
- d. Have no known cures and as such, are especially feared

278) A dairy expects to cull approximately \_\_\_\_\_% of their herd each year.

- a. 10
- b. 25-30**
- c. 50
- d. 70



- 279) A Babcock test may be used to measure the \_\_\_\_\_ % of milk.
- Protein
  - Fat**
  - Somatic cell count
  - Beta carotene
- 280) Almost 95% of the dairy cows in the U.S. are:
- Jersey
  - Brown Swiss
  - Angus
  - Holstein**
- 281) The dairy breed which produces the highest volume of milk is the:
- Holstein**
  - Milking Shorthorn
  - Brown Swiss
  - Aryshire
- 282) Dairy heifers need to be bred at \_\_\_\_\_ of age assuming they are at least 65% of their adult weight at that time.
- 6 months
  - 12 months
  - 15 months**
  - 18 months
- 283) Producers using BST must give their cows an injection of it every:
- Day
  - 7 days
  - 14 days**
  - 30 days
- 284) Most dairies in Texas are considered to be CAFO's. A CAFO is:
- Confined Animal Feeding Operation
  - Concentrated Animal Farming Operation
  - Confined Animal Farming Operation
  - Concentrated Animal Feeding Operation**
- 285) Dairy cattle were first successfully cloned in the\_\_\_\_\_.
- 1880's
  - 1950's
  - 1980's
  - 2000's**

286) Milk traits, i.e. fat, protein, SNF and etc., tend to have a heritability of about:

- a. 10% or less
- b. 20-30%**
- c. 40-50%
- d. 51% or more

287) Normal presentation of a calf for parturition will have:

- a. Front feet toward rear of the cow with head, nose first, between them**
- b. One front leg towards rear of the cow along side head, other front leg down
- c. Hind legs towards rear of the cow with head and front legs facing down
- d. Buttocks of the calf toward rear of the cow with all 4 legs and head facing down

288) One ejaculation from a bull typically contains \_\_\_\_\_ sperm

- a. 500,000
- b. 1,000,000
- c. 5,000,000**
- d. 50,000,000

289) Dairy herds have historically used artificial insemination. Currently approximately \_\_\_\_\_% of all dairy pregnancies results from A.I.

- a. 10
- b. 50
- c. 85**
- d. 95

290) The annual sale of dairy semen exceeds \_\_\_\_\_ straws.

- a. 500,000
- b. 1,000,000
- c. 10,000,000
- d. 20,000,000**

291) The portion of the ruminant digestive system which consists of many folds of tissue is the:

- a. Abomasum
- b. Gizzard
- c. Reticulum
- d. Omasum**

292) Dairy cows produce milk that is relatively high in B complex vitamins. Because they are ruminants:

- a. It is necessary to supplement the intake of Vitamin B complex
- b. It is not necessary to supplement the intake of Vitamin B complex**
- c. Vitamin A will be converted to the Vitamin B complex in the rumen
- d. Vitamin D will be converted into the Vitamin B complex in the rumen

293) Dairy cattle frequently develop milk fever shortly after calving. They become immobile, comatose, and may die without treatment. The treatment typically involves:

- a. Intravenous injection of calcium gluconate**
- b. Adding additional salt to their feed to supply extra calcium and phosphorus
- c. Injection of Vitamin B-12
- d. Using a stomach pump to administer adequate water to keep them hydrated

294) A \_\_\_\_\_ gene in Black and White Holsteins is responsible for the red and white color being expressed at times:

- a. Dominant
- b. Co-dominant
- c. Incomplete Dominant
- d. Recessive**

295) A \_\_\_\_\_ is usually necessary when feeding Dairy Cows TMR rations.

- a. Feed trough or bunk feeder in milk barn
- b. Auger system in parlor
- c. Mixer box on a truck or trailer**
- d. Vertical concentrate bin

296) Young dairy calves frequently suffer and may die due to scours. The chief cause of deadly scours at this age is:

- a. Excessive colostrum intake
- b. The bacteria Escherichia Coli**
- c. Internal parasites, primarily the roundworm
- d. Excessive intake of milk replacer

297) Dairy cows need roughage to concentrate ratio of approximately \_\_\_\_\_ to maintain the desired fat content in the milk.

- a. 25/75
- b. 40/60**
- c. 50/50
- d. 60/40

298) A calf's birth weight is approximately \_\_\_\_\_% of its' mature weight.

- a. 1
- b. 5**
- c. 10
- d. 20

299) The circulatory system of a dairy cow is very important to milk production. A dairy cow must circulate about \_\_\_\_\_blood for each pound of milk produced.

- a. 8 pounds
- b. 50 pounds
- c. 200 pounds
- d. 400 pounds**

300) Blood vessels that transport blood away from the heart are called:

- a. Veins
- b. Arteries**
- c. Capillaries
- d. Lymphes

301) A dairy cow that has all 8 permanent incisor teeth can be considered to be a minimum of \_\_\_\_\_old.

- a. 1 year
- b. 2 years
- c. 3 years
- d. 4 years**

302) Milk let down in a dairy cow may be stimulated by:

- a. Stressing the cow
- b. Feeding the cow**
- c. Hollering at the cow
- d. Electric shock applied to the cow

303) The hormone \_\_\_\_\_stimulates milk let down and may be administered via injection, when necessary after parturition.

- a. BovaTec
- b. Estrogen
- c. Oxytocin**
- d. Progesterone

304) A cow with high lactation persistence is important for a dairy's economic success. Lactation persistency is:

- a. Cows ability to milk for 500 or more days
- b. Tendency for a cow to milk for more than 30 minutes/milking
- c. Cows Milk production this month divided by production last month X 100**
- d. Cows Ability to maintain production under adverse climatic conditions

305) To dairymen, the most harmful disease impacting milk production and their economic bottom line is:

- a. BSE
- b. BUV
- c. Mastitis**
- d. Vibriosis

306) A dairy cow may not reach her highest milk yield until she is:

- a. 3-4 years old
- b. 4-5 years old
- c. 5-9 years old**
- d. Over 10 years old

307) Colostrum given to a baby calf more than \_\_\_\_\_hours old is NOT absorbed and thus does little good.

- a. 6
- b. 12
- c. 24**
- d. 48

308) Normal body temperature for a dairy cow is \_\_\_\_\_.

- a. 98.5 degrees F
- b. 99.5 degrees F
- c. 101.5 degrees F**
- d. 107.5 degrees F

309) Cows produce pheromones which:

- a. Attract the opposite sex**
- b. Increase levels of milk production
- c. Ward off infections
- d. Prevent pregnancy

310) Allelomimetic behavior is defined as:

- a. The tendency for animals to flee
- b. The tendency for animals to separate from the herd
- c. The tendency for animals to produce young with the characteristics of their parents
- d. The tendency for a group of animals to do the same thing at the same time**

311) Dairy cattle have a \_\_\_\_\_ field of vision to their front.

- a. Less than 90 degree
- b. 90-180 degree
- c. 180-270 degree
- d. 300 + degree**

312) Many dairymen “dock” the tail on their cows much to the chagrin of Animals Rights groups. They believe this is necessary to:

- a. Avoid injury to their milk hands
- b. Reduce the incidence of mastitis**
- c. Insure the milking unit can be properly attached
- d. Prevent the accidental, early detachment of the milking unit

313) Manure management is a major concern for most modern, large-scale dairies. The newest management techniques being used involve:

- a. Storing the manure in lagoons until it is applied to fields as irrigation water and nutrients
- b. Collecting the methane gas being produced and using it as an energy source on the dairy**
- c. Scraping into huge piles and drying before it is shipped offsite
- d. Manure management is NOT a problem since we all know this is a natural process

314) Proponents of global warming having accused cows of being a major factor. This is due to their release of:

- a. Argon Gas
- b. Carbon Dioxide Gas**
- c. Gaseous Oxygen
- d. Chloride Gas

315) The breed of dairy cow generally credited with producing the highest % of both milk fat and protein is the:

- a. Holstein
- b. Jersey**
- c. Brown Swiss
- d. Ayrshire

- 316) About 90% of U.S. dairies use a \_\_\_\_\_ milking schedule.
- Once/day
  - Twice/day**
  - Three times/day
  - Milk on Demand
- 317) A dairy cow that has her feet too far forward (under her belly) is said to be:
- Sickle hocked**
  - Cow hocked
  - Post legged
  - Splay footed
- 318) Cow comfort has been linked to milk production in numerous research studies. Which of the following is NOT an example of a way to improve cow comfort used by dairymen:
- Providing air mattresses for the cows to lay on
  - Allowing them access to their new born calf for the 1<sup>st</sup> 30 days**
  - Providing wading pools allowing them to cool off during hot weather
  - Reducing air flow through the barn during cool weather
- 319) Adequate consumption of long fiber roughage is important to both milk production and herd health. A long fiber roughage is one that is:
- Less than 1 inch long
  - Longer than 1.5 inches**
  - Longer than 6 inches
  - Longer than 12 inches
- 320) A dairyman may milk in a rapid exit barn. This simply means that:
- The cows leave the milkers via an alley wide enough to allow 2 or more cows side by side**
  - The barn was constructed with adequate exits to facilitate safe removal of all cows in the event of a fire
  - The barn has NO sidewalls and this allows all the cows access to the outside immediately upon release
  - The barn has NO individual milking stalls but has long hoses allowing the milkers to be placed on the cow wherever she is standing in the barn
- 321) The portion of the milker unit that first receives the milk as it is withdrawn from the cow is the:
- Claw**
  - Receiver jar
  - Milk meter
  - Low line

322) The \_\_\_\_\_ is the device responsible for regulating both the vacuum level and the proportion of the vacuum for the front and rear quarters.

- a. Claw
- b. Inflation
- c. Milk meter
- d. Pulsator**

323) Recent research traits have shown that dairy cows prefer to be milked \_\_\_\_\_ times/day if they are able to choose.

- a. One
- b. Two
- c. Three times
- d. Four or more times**

324) New computerized robotic milk stations are becoming a reality today. They have different names but one common one is MOD system. MOD means:

- a. Move on Down
- b. Milk on Demand**
- c. Money on Deposit
- d. Magnificent Overall Design

325) Many dairy bulls have their nose pierced with a ring in it. This allows for:

- a. Individual identification information
- b. Training of the bull to an electric fence
- c. Restraint and control of the animal**
- d. Operation of the magnetic latch used for the self feeder

326) The milk produced on a dairy must be moved through a system of components and piping made from:

- a. Fiberglass
- b. High carbon steel
- c. Galvanized steel
- d. Stainless steel**

327) Fresh milk, at a dairy, is required to be cooled to a minimum of 50 degrees F within 4 hours time after milking. However many larger dairies are using a \_\_\_\_\_ to accomplish this within minutes.

- a. Refrigeration unit
- b. Tanker truck
- c. Plate chiller**
- d. Dry ice



328) Rotary Parlors or Carousel milk barns have the advantage of being \_\_\_\_\_ when compared to other type barns.

- a. Cheaper
- b. Faster**
- c. Safer
- d. More Versatile

329) The major advantage of a “low-line” milk line as compared to the older “high-line” is:

- a. You don’t hit it with your head while walking
- b. It has a lower vacuum requirement**
- c. It can be a smaller I.D., so it is cheaper
- d. It is easier to dump waste milk

330) Texas dairies normally must be permitted by the \_\_\_\_\_ before they begin operations.

- a. Environmental Protection Agency
- b. Texas Commission on Environmental Quality**
- c. Texas Farm Bureau
- d. Dairy Herd Improvement Association

331) Many dairies place bands on their cows necks or feet, with black boxes containing electronic I.D. , production, and management information. These units are called:

- a. I boxes
- b. Black boxes
- c. Foot drives
- d. Transponders**

332) Parallel milk barns typically have several cows on each side. The cows are arranged in a \_\_\_\_\_ fashion in this barn.

- a. Diagonal
- b. Head to tail
- c. Slanted
- d. Side by side (head out)**

333) All milking equipment must be sanitized:

- a. After each use**
- b. Daily
- c. Weekly
- d. Monthly

334) One form of biological pest management is a predator insect, that can be bought and released to help control flies at a dairy. Which of these is NOT true about these predators:

- a. They are FDA approved for mass release
- b. They are shipped during their pupal stage and begin to control flies ones adults
- c. They may be bothersome to livestock and other animals**
- d. They attack the flies at the egg stage

335) Pest Predators will travel up to \_\_\_\_\_yards to find their food source (fly pupae).

- a. 40
- b. 50
- c. 60
- d. 80**

336) If the freezing point of a sample of raw milk is above 30 degrees F this indicates:

- a. Normal Sample
- b. High butterfat %
- c. Low butterfat %
- d. High % of water**

337) A very popular dairy management software in Texas is:

- a. Dairy Comp 305**
- b. Dairyhelp4U
- c. Basic Dairy 101
- d. Dairy Power vs. 2

338) Dairy rations, especially those for high producing cows, may be buffered to maintain a desirable rumen pH. The most common buffering agent for this is:

- a. Calcium
- b. Magnesium
- c. Sulfates
- d. Sodium Bicarbonate**

339) It is widely acknowledged that a calcium/phosphorus ration of about \_\_\_\_\_ is best for a dairy ration since this mirrors that of the cows' body.

- a. 1:1
- b. 2:1**
- c. 5:1
- d. 10:1

340) Grass Tetany may occur in early lactation cows grazing lush, heavily, fertilized pastures. Grass Tetany is caused by a \_\_\_\_\_ deficiency.

- a. Calcium
- b. Magnesium**
- c. Vitamin E
- d. Thiamine

341) Quality forage is critical for a cow's milk production. Many people evaluate hay based upon its green color; others think the color is a poor indication of nutrient composition. However, green colored hay is generally considered to have a higher \_\_\_\_\_ content than more bleached out colored forage

- a. Beta-carotene**
- b. Vitamin B3
- c. Total Digestibility Nutrients
- d. Net Energy

342) Nutritionists have developed a test to compare one alfalfa sample to another, determining the RFV of each. RFV stands for:

- a. Real Food Value
- b. Risk for Value
- c. Regulative Free Velocity
- d. Relative Forage Value**

343) Some Texas dairymen are placing Bermuda and/or corn forage into \_\_\_\_\_ for fermentation and silage production.

- a. Large Plastic Bags**
- b. Long Metal Trays
- c. Large Horizontal Cement Pipes
- d. 4'X4'X8' bales

344) How often will HACCP inspect each Dairy Farm?

- a. A minimum of every 6 months**
- b. A minimum of once each year
- c. A minimum of once each month
- d. A minimum of every 2 years

345) When sanitizing milking equipment with water, the temperature must be a minimum of 170 degrees F and the utensils are to be under the flow of water for \_\_\_\_\_ minute(s).

- a. 1
- b. 5**
- c. 10
- d. 15

- 346) According to the American Veterinary Medicine Association, the preferred method of dehorning young calves is\_\_\_\_\_ .
- a. Caustic paste
  - b. Cauterizing veins
  - c. Gouging
  - d. Disbudding**
- 347) What is the largest cost on most U.S. dairy farms?
- a. Feed**
  - b. Fuel
  - c. Labor
  - d. Veterinary fees
- 348) In cows, salmonellosis infections are most common in those that have calved within \_\_\_\_\_.
- a. 2 days
  - b. 10 days**
  - c. 20 days
  - d. 50 days
- 349) In regards to dairy production RHA refers to:
- a. Registered Herd Ancestry
  - b. Rollover Her Amplitude
  - c. Reckless Herdsman Attitude
  - d. Rolling Herd Average**
- 350) Cattle grazing stressed on wilted hybrid sorghum/Johnson grass type pasture, may die as a result of \_\_\_\_\_.
- a. Nutrient overload
  - b. Nutrient starvation
  - c. Intestinal tract abrasions
  - d. Prussic acid poisoning**