

2016 NYS Senior District Dairy Quiz Bowl Contest

Senior Packet 1, Phase A

1) Which part of the digestive system is affected by Cryptosporidiosis?

- Small intestine

2) What is the inflammation of the uterine lining called?

- Endometritis

3) What strong odor organic acid is produced when grass or alfalfa silages are not ensiled properly?

- Butyric acid

4) What nutritional disorder in calves does Vitamin D help prevent?

- Rickets

Senior Packet 1, Phase B

1) Name three diseases that can cause abortions in dairy cattle.

Brucellosis
Vibriosis (Campylobacteriosis)
Chlamydia
IBR
Leptospirosis
Listeriosis
Neospora
Trichomoniasis

2) With regard to farm business management, one of the major categories of cost is fixed costs. What are the five fixed costs referred to by the acronym DIRT?

- Depreciation, Interest, Repair (also accept Rent) Taxes, Insurance

3) Name 4 reasons why a dairy animal can be disqualified from being in the show ring.

- Blind quarter
- Freemartin
- Permanent Lameness
- Tampering to conceal faults
- Total blindness

4) Name two minerals that if fed in increased levels to your pre-fresh and or dry cows, can lead to increased incidences of milk fever.

- Potassium
- Calcium
- Phosphorus

Senior Packet 1, Phase C

1) Dairy cows typically reach their mature weight in which lactation?

- Third

2) Name the master gland that controls the estrous cycle.

- Pituitary Gland

3) In the dairy cow, where are B-complex vitamins and Vitamin K produced?

- Rumen

4) When using an ELIZA test for checking for pregnancy it looks for the presence of PSPB. What does PSPB stand for?

- Pregnancy Specific Protein B

5) What is the name of the genetic recessive trait known as syndactylism?

- Mule foot

6) What is the scientific term for forcing a cow to consume a nutrient in quantities smaller than normal?

- Hypo alimentation

7) What is the term used to describe the percentage of cows eligible to become pregnant in a given time frame that actually become pregnant?

- Pregnancy rate

8) Where in the cow's body would you find most of the body's reserves of phosphorus?

- Bones

9) What is the general name for any dairy product that has had bacteria added as part of its process?

- Cultured

10) Retained placenta's in cows and white muscle disease in calves has been associated with a deficiency in which Mineral?

- Selenium

11) What does the Secretary of Agriculture regulate?

-
- Federal Milk Marketing Orders

12) What is the name of the by-products of the rumen bacteria that give the cow energy?

- Volatile fatty acids or VFA's

13) What hormone does the corpus luteum produce?

- Progesterone

14) How much is the annual administrative fee that the producer is required to pay for each of coverage for the Margin Protection Program (MPP)?

- \$100.00

15) What is the condition being described by the thickened or jagged ring of keratin around the teat end?

- Hyperkeratosis

16) Allowing corn silage to ensile for 3 to 5 months before feeding has been shown to improve the digestibility of what carbohydrate by 10 to 15 %?

- Starch

2016 NYS Senior District Dairy Quiz Bowl Contest

Senior Packet 2, Phase A

1) The total amount of energy that a feed contains can be determined in the lab by using a bomb calorimeter. What is the term for this amount of energy?

- Gross energy

2) A deficiency of which vitamin in the lactating cow's diet causes an oxidized flavor in their milk?

- Vitamin E

3) What metabolic disease is indicated when the cow has a noted smell of acetone on her breath and often times goes "off" feed?

- Ketosis

4) What is the function of the hormone progesterone?

- Maintains pregnancy

Senior Packet 2, Phase B

1) Name the two fluid amounts that frozen semen is packaged in.

- ½ cc
- ¼ cc

2) What two nutrients make up the main sources of energy for the cow?

- Carbohydrates
- Fat

3) Name 4 management practices that could be done to **improve heat detection** on a dairy.

- Use prostaglandin or synchronization programs
- Improve footing
- Improve foot health
- Improve body condition scores
- Spend more time detecting or watching for heats
- Resynch cows

4) Give three common chemical agents used in footbaths to prevent warts and other diseases from being spread.

- Copper Sulfate
- Tetracycline
- Zinc
- Formaldehyde

Senior Packet 2, Phase C

1) A normal healthy rumen should turn over how many times per minute?

- 2 to 3 times per minute

2) A group of genetically engineered Holstein-Jersey cross dairy cattle has been genetically engineered with human DNA so that their bodies produce human antibodies against what disease?

- Ebola

3) When referring to harvesting corn silage, what does TLC stand for?

- Theoretical length of cut

4) What is the most common metabolic disorder that causes down cows?

- Milk Fever

5) What is the common name for traumatic reticuloperitonitis?

- Hardware disease

6) In the USDA, which Act regulates standards for human care and treatment of certain animals?

- Animal Welfare Act

7) The protein percentage of first milking colostrum is approximately how many times more than that found in whole milk?

- 5

8) What is the name of the plant component within the neutral detergent fiber fraction which is indigestible?

- Lignin

9) What are the hereditary units that are passed on to the offspring via the sperm and egg, which influence the expression of specific traits?

- Genes

10) What is the name of a cost that does not change with the level of output, such as insurance and taxes?

- Fixed cost

11) What would a dairyman most likely feed to the cows to help correct or prevent the build-up of acid in the cow's stomach?

- Buffer or Sodium bicarbonate

12) In regards to dairy cattle digestion, what do the initials HBS stand for?

- Hemorrhagic bowel Syndrome

13) What is enteritis?

- Scours

14) New farm technology has been developed to protect bunker silos in the form of OTR plastics. What does OTR stand for?

- Oxygen Transmission Rates

15) What must be fed with water to help with the rumen development in calves?

- Calf starter

16) What is the scientific name for the pregnancy test performed by placing a fist on the cow's right flank and pushing against her to create a fluid wave to feel the fetus bump back and is also called "bumping the calf"?

- The Ballotement test

2016 NYS Senior District Dairy Quiz Bowl Contest

Senior Packet 3, Phase A

1) The fetal component of the placental attachment is called what?

- Cotyledons

2) In managing dairy nutrition, feed changes should be made gradually to allow growth of what structure in the digestive system?

- Rumen Papillae

3) When comparing fertility in groups of dairy cows and heifers, which group is usually most fertile?

- Heifers

4) What is the term for how well cows convert feed into milk?

- Feed efficiency

Senior Packet 3, Phase B

1) Name 4 management procedures you can institute on your dairy to minimize the spread of BLV, Bovine Leucosis Virus.

- Freeze colostrum
- Only feed colostrum from test negative dams
- Use needles only once
- Dehorn with burning verses cutting
- Disinfect tattoo devices, hoof knives, etc. or anything that is used between animals that may transfer blood cells from one animal to the next
- Use one rectal sleeve per animal
- Test for positive animals and don't feed their milk or colostrum to other calves
- Have a good ectoparasite control program

2) Once a calf has been born, what are **4 immediate** steps you can take to help the calf adjust to life outside the womb and survive long term?

- Place the calf upright on its sternum
- Help clear calf's airway by poking a straw or finger in its nose or mouth
- Clear fluid from the nose and mouth
- Vigorously rub the calf all over with clean bedding or towel
- Use hair dryer to dry and stimulate the calf
- Use a hand held respirator to promote respiration of calves of difficult births
- Dip navel with iodine or approved disinfectant
- Deliver first dose of colostrum
- Move to a heated calf box in cold weather

3) Name 2 things that can happen to a lactating cow that is overfed a diet high in starch and low in NDF.

- Low rumen pH
- Reduced fiber digestion
- Milk fat depression

4) Which countries are the three largest suppliers in the global dairy export market?

- New Zealand
- United States
- European Union

Senior Packet 3, Phase C

1) Which nutrients are classified as either water soluble or fat soluble?

- Vitamins

2) The Bt gene that has been inserted into corn in the process called transgenic protects the corn plant from what?

- European Corn borer

3) The chromosomes are found where in the cell?

- Nucleus

4) What is the term used to describe the drying up of a dead fetus?

- Mummification

5) The amount of cheese that can be manufactured from 1 lb. of milk is most affected by which component of the milk?

- Protein

6) When reading a seed bag tag, what do the letters VNS stand for?

- Varieties Not Stated

7) In the United States, what is the highest grade of butter sold?

- U.S. Grade AA

8) What else makes up the hindgut of the digestive system besides the cecum and rectum?

- Colon

9) The production of what in the rumen is a result of the fermentation of starch?

- Propionate

10) In working with the milking system what is the term that describes the milk-mineral deposits on milk handling equipment?

- Milkstone

11) The New York State Department of Ag and Markets is alerting all NY dairy producers of the increase presence of what bacteria that is resistant to most antibiotics and is zoonotic?

- Salmonella Dublin

12) What is the name of the practice that is a financial incentive from the state or federal government to help farmers pay for equipment or practices that reduce pollution?

Cost Share

13) What is the term that refers to the number of days that pass between two calving's of the same animal?

- Calving interval

14) In reference to milk processing, what is the procedure that removes solid impurities from the milk prior to pasteurization called?

- Clarification

15) When an animal is releasing greater amounts of nonesterified fatty acids (NEFA's), she is responding to what metabolic state?

- Negative energy balance

16) In February of 2015 Starbucks added what non-dairy product to their coffee drinks that competes with dairy products?

- Coconut milk

2016 NYS Senior District Dairy Quiz Bowl Contest

Senior Packet 4, Phase A

1) What does morbidity rate refer to?

- Number of sick animals in a specific amount of time

2) What is the name of the funnel-shaped opening at the end of the oviduct which gathers the ovum at ovulation?

- Infundibulum

3) What is the scientific term for the act of giving birth?

- Parturition

4) What hormone is found in a CIDR vaginal insert?

- Progesterone

Senior Packet 4, Phase B

1) Name two management practices a dairy producer can utilize to help prevent animals from becoming persistently infected or PI animals.

- Test for and remove PI Animals
- Vaccinate properly prior to breeding so dams are properly protected

2) If your corn silage is 65 percent moisture, how many pounds of dry matter are in 100 pounds of silage?

- 35 pounds

3) Name 3 variables that can affect the quality of a silage when making it.

- Hybrid selection
- Soil fertility
- Soil conditions
- Pests
- Weather
- Planting date
- Herbicide usage
- Chopping length
- Use of inoculants
- Packing density
- Bunk cover

4) What two blood plasma metabolites can be used as markers of negative energy balance and ketosis?

- NEFA(nonesterfied fatty acids)
- BHBA(beta-hydroxybutyrate)

Senior Packet 4, Phase C

1) What is the term used to describe calves that do not achieve a specific concentration of immunoglobulin G in blood serum?

- Passive transfer failure or Failure of passive transfer

2) What counteracts the acid produced from the digestion of starches and sugars by stimulating saliva production to buffer the rumen?

- Chewable or effective fiber

3) What is the name for the mechanical or pneumatic means that facilitates cooling and provides a uniform product mixture in the bulk tank for sampling?

- Agitator

4) About how many days does it take for the reproductive tract to return to its normal state after calving?

- 30 to 45 days

5) What is the financial term that is figured when you subtract total current farm liabilities from total current farm assets?

- Working capital

6) What is the name for the new, more convenient packaging of butter by Land O Lakes and other butter manufacturers?

- Half Sticks

7) What term is used when a calf dies within 24 hours of birth or is born dead?

- Stillbirth

8) What is a farmer trying to calculate when counting the number of times per minute the pulsator opens and closes?

- Pulsation rate

9) Which organ secretes a digestive enzyme into the small intestine?

- Pancreas

10) What is common name for the disease caused by clostridium bacteria?

- Blackleg

11) As of January 2015, workplaces under Federal Occupational Safety and Health Administration (OSHA) jurisdiction must report work-related inpatient hospitalization, amputations, or loss of an eye within how many hours?

- 24 hours

12) What is the term for a cow-side technique used to determine the exact rumen pH?

- Rumenocentesis

13) What is the name of the law that many states are passing to prevent the taking of videos and photos on a farm without the owner's permission?

- AG-Gag law

14) Which type of nitrogen-fixing bacteria is hosted in legume roots?

- Rhizobia

15) The formation of dangerous silo gases peak how soon after filling a silo?

- 1 to 2 days

16) What is the term used to describe an animal that is infected with a disease but has no clinical signs?

- Carrier

2016 NYS Senior District Dairy Quiz Bowl Contest

Senior Packet 5, Phase A

1) In the dairy cow, the hormone prolactin initiates or signals the beginning of what?

- Lactation

2) Which element commonly found in air negatively impacts the quality of silage both as it is being ensiled and fed?

- Oxygen

3) What disease is caused by the organism Mycobacterium Para tuberculosis?

- Johne's disease

4) Which dairy breed has the lowest incidence of dystocia?

- Jersey

Senior Packet 5, Phase B

1) If you were performing routine fresh cow exams, name 4 things you would do.

- Take temperature
- Pulse and respiration
- Listen for DA
- Check for ketosis
- Check for mastitis
- Listen for rumen turns
- Check dehydration and body condition
- Check for lameness
- Rectal palpation to check manure and for metritis

2) The Trans-Pacific Partnership could create new trade opportunities for 12 nations that border the Pacific Ocean, but dairy is a sticking point for which two nations because of their domestic quotas and strong import tariffs?

Japan and Canada

3) The 2014 Farm Bill established a program that will purchase dairy products during periods of low margins and then these dairy products will be donated to organizations that provide nutritional assistance to low income populations. The acronym for this program is DPDP. What does DPDP stand for?

- Dairy Product Donation Program

4) In the new Margin Protection Program for Dairy, the production margin is calculated in part by using the national average dairy feed cost. Name 2 of the 3 commodities or feeds used to calculate the national average feed cost.

- Corn
- Soybean Meal
- Alfalfa hay

Senior Packet 5, Phase C

1) Which U.S. Company has a dairy institute in Harbin, China?

- Nestle

2) Dairy marketing organizations or cooperatives must have all of their farm suppliers enrolled in what program by January 2017?

- FARM (Farms Assuring Responsible Management)

3) The mineral elements which have a negative charge are called what?

- Anions

4) What is the most prevalent cause of infectious lameness in cattle worldwide?

- Digital dermatitis

5) Studies have shown that some BMR (brown midrib) corn hybrids are particularly susceptible to disease that affects which part of the plant?

- Leaves

6) Name the process by which white blood cells engulf microorganisms.

- Phagocytosis

7) What is the best way to get uniform drying of a hay crop silage?

- Wide swath windrowing

8) With the Farm Bill's new Margin Protection Program, about what percent of the nation's milk will be covered by the program?

- 60 %

9) What country is poised to pass Canada as the 2nd largest purchaser of U.S. Dairy Products?

- China

10) Dairy Management Inc. has partnered with the largest beverage company Coca Cola and developed a new fluid milk product called what?

- FairLife

11) In what country did the world's largest fresh milk facility officially open in May of 2014?

- England

12) What is a soil penetrometer used to measure?

- Soil compaction

13) What do we call the long-term storage of carbon in the soil or plant biomass?

- Carbon Sequestration

14) What is being calculated by taking the total amount of grown or purchased feed minus the amount that is actually consumed or fed to the cows?

- Feed shrink

15) How many days does it take an egg to go through the oviduct of a cow?

- 4 days

16) When it comes to colostrum, what class of IG's is most important to passing on immunity and is found in the largest quantity?

- IgG

2016 NYS Senior District Dairy Quiz Bowl Contest

Senior Packet 6, Phase A

- 1) Which feed will be more digestible for the dairy cow: one with 10% lignin or one with 13% lignin?
 - 10% lignin

- 2) What mineral is required to establish legumes in the soil?
 - Phosphorus

- 3) What other metabolic disease in dairy cows is associated with acidosis?
 - Laminitis

- 4) Lameness can be caused by many different factors on the dairy farm. In general, are back hooves or front hooves more often affected by lameness?
 - Back hooves or feet

Senior Packet 6, Phase B

- 1) Give 4 observations your dairy nutritionist should observe and take note of when visiting your farm.
 - Manure consistency
 - Body condition score of cows
 - Cud chewing
 - Foot health
 - Barn conditions
 - Resting behavior
 - Water vat access and condition of water(cleanliness)
 - Amount and condition of feed in the bunch

- 2) Name the branch of biology that deals with the process, activities, and phenomena of life and living organisms.
 - Physiology

- 3) Name 4 external factors affecting the quality and health of the hoof on the dairy cow.
 - Cow Comfort
 - Heat stress
 - Walking surfaces
 - Handling
 - Hygiene and foot baths
 - Trimming

- 4) Name 4 areas on the dairy farm that are a concern in regards to animal welfare and there should be protocols in place to help insure proper practices are being used.
 - Maternity pen
 - Colostrum feeding
 - Transportation
 - Calving procedures
 - Dehorning
 - Tail docking
 - Castration
 - Euthanasia
 - Sick cow treatment
 - Sanitation
 - Lameness
 - General cow handling
 - Feeding practices
 - Ambulatory animals or down cow handling

Senior Packet 6, Phase C

- 1) When talking about evaporative cooling in a dairy operation, what does the acronym DEC stand for?
 - Direct evaporative cooling
- 2) FSH and bovine somatotropin are secreted from which gland that is located at the base of the brain?
 - Pituitary gland
- 3) What milk component is broken down by proteases?
 - Protein or casein
- 4) Approximately 27% of U.S milk production is used to manufacture what dairy product?
 - Cheese
- 5) What is the most widely used forage ingredient in dairy cow rations?
 - Corn silage
- 6) What percent of the U.S. corn crop production is utilized for ethanol production?
 - 38 to 42%
- 7) What is the term used to define the time from first tactical interaction, or the start of stimulation, to attaching the milking unit?
 - Lag or prep time
- 8) What is the term for the fetal membrane which immediately surrounds the developing calf?
 - Amnion

9) Where would the point of entry be in the dairy animal's body for the pathogen coccidia protozoa that causes coccidiosis?

- Mouth

10) What is the name of the internet based dairy discussion group?

- Dairy-L

11) How many chromosomes does each parent contribute to a dairy cattle embryo?

- 30 Chromosomes

12) In the estrous cycle, which part of the cow's reproductive system does the egg move to after ovulation?

- Oviduct

13) How is a subcutaneous injection given?

- Under the skin

14) What may happen when pregnant heifers are vaccinated with a live or modified live virus for IBR?

- Abortion may occur

15) What procedure must typically be done when removing manure from a manure pit to minimize solids accumulation and helps create a uniform fertilizer for field application?

- Agitate the manure

16) How many hours after calving does subclinical hypocalcemia usually occur?

- 24 to 72 hours

2016 NYS Senior District Dairy Quiz Bowl Contest

Senior Packet 7, Phase A

- 1) What part of the calf works as an insulator by trapping air and creating a boundary between the body and chilly outside air?
 - Hair coat

- 2) What disease can cause the birth of “dummy” calves with brain infections?
 - Neosporosis

- 3) Do progesterone levels in heat stressed dairy cows increase or decrease?
 - Decrease

- 4) What are the small projections in the small intestine that are in contact with chime?
 - Villi

Senior Packet 7, Phase B

- 1) Of the following, what tool can be used to determine the pathogen that is causing mastitis for an animal: a) somatic cell count, b) a strainer, c) milk culture, or d) California Mastitis test (CMT)?
 - Milk culture

- 2) Name a cow's two sources of amino acids.
 - Rumen microbes
 - Rumen undegradable proteins

- 3) Name 2 of the functions of the hormone oxytocin for the dairy animal.
 - Milk letdown
 - Uterine contraction

- 4) A common footbath substance used on the dairy farm is copper sulfate. What is the chemical formula for Copper Sulfate?
 - CuSO_4

Senior Packet 7, Phase C

- 1) If a cow is getting adequate fiber in her diet, how many times will she on average chew her cud before swallowing it?
 - 40 to 65 times
- 2) According to the Dairy Calf and Heifer Association a 90 pound calf should receive how many quarts of colostrum in the first hour of life?
 - 4 quarts
- 3) What do the initials RMS stand for in regards to milking systems?
 - Robotic Milking System
- 4) What is the muscle layer of the uterus called?
 - Myometrium
- 5) A productive dairy cow may experience heat stress when the Temperature Humidity Index is what degree Fahrenheit or greater?
 - 68°F (EDB, Jan 2016)
- 6) Which vitamin is essential for the efficient use of calcium and phosphorus in bone growth?
 - Vitamin D
- 7) An infection of the lungs is called what?
 - Pneumonia
- 8) What pregnancy status of a cow is associated with a low level of progesterone?
 - Cow is not pregnant or is near heat

9) When a cow cures herself of mastitis without the use of antibiotics or drugs, what is the two word term for this?

- Spontaneous recovery

10) What is the most prevalent form of external parasites in milking age dairy cows?

- Mange

11) What is the name for an area of grassland between cropland or feedlots and waterways which takes up nutrients and prevents them from running off into waterways?

- Buffer strip

12) What is another name for the hip bone?

- Hook

13) Which enzyme reacts with the fat in milk, releasing fatty acids and results in rancidity?

- Lipase

14) What is the term used to describe the period of increased growth rate that follows a growth restriction imposed earlier in a heifer's life?

- Compensatory growth

15) What was the flavor of the largest scoop of ice cream that was served at Kemps dairy in Wisconsin and weighed over 3,000 pounds?

- Strawberry

16) Given the nitrogen content of a feed what number do you multiply by to get the protein content?

- 6.25

2016 NYS Senior District Dairy Quiz Bowl Contest

Senior Packet 8, Phase A

- 1) What hormone secreted from the follicle triggers a luteinizing hormone surge from the pituitary gland?
 - Estrogen

- 2) What is the unit of measurement that is used when injecting vaccines in dairy cattle?
 - CC or millimeter

- 3) In order for milk sales to qualify for the international market, somatic cell counts must be below how many cells per milliliter?
 - 400,000 cells per milliliter

- 4) What are you estimating when you use the on-farm tool known as the Brix refractometer?
 - Colostrum quality

Senior Packet 8, Phase B

1) Name the two gases that are associated with the condition of bloat in a dairy cow.

- Methane
- Carbon dioxide

2) Name the 3 parts of the teat in which the milk passes through.

- Teat cistern
- Sphincter muscle
- Streak canal

3) Name 3 of the 4 primary areas or sources that can cause diseases.

- Environmental
- Infectious
- Genetic
- Metabolic

4) The condition of the atmosphere near the surface of the earth, which includes the observation of temperature, pressure, sunlight, clouds, rain, and wind, are characteristics of both weather and climate. What is the main difference between weather and climate?

- Weather is generally a snapshot of the atmosphere at a single time or over a few days
- Climate usually refers to conditions of the atmosphere spanning from months, years and even centuries.

Senior Packet 8, Phase C

- 1) What is the name of the process in which the nucleus is removed from an unfertilized oocyte and replaced by a nucleus of another cell?
 - In-vitro fertilization

- 2) What nutrient is like antifreeze for alfalfa and will help reduce winterkill rates?
 - Potassium

- 3) What is the name for a crop that is planted to shield the soil from erosion, adds organic matter, and captures nutrients that otherwise would be lost to runoff?
 - Cover crop

- 4) What is the term for a completely hydrogenated fat that contains no double bonds?
 - Saturate fat

- 5) Which fast food chain switched from using margarine to use butter in 2015 and will be equivalent to using 500 to 600 million pounds of milk annually?
 - McDonalds

- 6) What country placed a ban on dairy product imports from 28 nations in the European Union which includes the U.S, Australia, Canada, Norway, and the Ukraine?
 - Russia

- 7) Dividing the total dollars a dairy has in assets by the number of cows allows you to determine which economic indicator?
 - Total investment per cow

- 8) What term is defined as dividing the number of cows you have by the number of stalls or headlocks?
 - Stocking density

9) Which specific area of the small intestine does Johne's infections occur?

- Ileum

10) What is defined as the distance from the udder floor to the point of the hock?

- Udder depth

11) What is the name of the campaign that was started in April of 2014 and has led to the donation of over 45,000 gallons of milk into our nation's food banks?

- Great American Milk Drive

12) What is the key characteristic over cover crops like alfalfa that are used to help restore the subsoil that has been compacted?

- Deep-rooted

13) How many weeks are usually required for corn silage to ferment?

- 8 to 10 weeks

14) Where in a cow's daily environment is she in the most need of heat abatement with a freestall or parlor set-up?

- Holding area

15) What state won the 2015 National 4-H Quiz Bowl championship?

- New York

16) What hormone should a cow with a luteal cyst be treated with?

- Prostaglandin or Lutalyse or Estrumate

Extra Questions for 2016 NYS Senior District Dairy Quiz Bowl Contest

1) What does DIM stand for when evaluating a cow's production performance?

- Days in Milk

2) What will you be treating your cows for if your veterinarian recommends you treat them with an anthelmintic?

- Internal parasites or worms

3) What metabolic disorder would you be treating if you gave your animal propylene glycol?

- Ketosis

4) What month is national grill cheese month?

- April

5) What is the name for the type of protein that passes through the rumen and is unchanged by microbes?

- Rumen undegradable protein or RUP (also accept bypass protein)

6) What is the term for a substance that when introduced into the body, brings on an immune response by a specific antibody?

- Antigen

7) What is the standard milk fat percent of whole milk in most states?

- 3.25

8) Which mycotoxin found in feedstuffs is carcinogenic and the only one regulated by the Food and Drug Administration?

- Aflatoxin

9) What nutrient might producers need to start adding to their fertilizer in the future due to fact of emissions regulation greatly lowering the amount of this nutrient in the precipitation?

- Sulfur

10) What percentage of cows should be pregnant after two services if the herd's conception rate is 50%?

- 75%

11) In a milking system what is the function of the plate cooler?

- Cooling the fresh milk prior to entering the bulk tank

12) Where will the largest amounts of nitrate be found in drought-stunted corn?

- In the stalk...mostly the bottom

13) During HTST (high temperature short time) pasteurization, milk is held for 15 seconds at what temperature in degrees F?

- 161 degrees F

14) If you purchase 100 pounds of 10-15-20 fertilizer, what does the number 20 mean?

- The fertilizer contains 20 percent potassium or potash

15) When can an animal become persistently infected with BVD?

- First 125 days of gestation or first trimester

16) What Greek yogurt company is the official yogurt provider to TEAM USA for the 2016, 2018 and 2020 Olympic Games?

- Chobani

17) What disease in dairy cattle is caused by the bacteria Moraxella Bovis?

- Pinkeye

18) What condition is being treated when a producer administers diuretic drugs after calving?

- Udder Edema

19) What is the largest cost associated with the production of milk?

- Feed cost

20) What dairy product posted a new record of 11.4 billion pounds produced for the 23rd year in a row?

- Cheese

21) Some milk sold at grocery stores is called shelf-stable and is sold on the grocery store shelves and not in the refrigerated section. This milk is labeled UHT. What does UHT stand for?

- Ultra-High Temperature Pasteurization

22) What is the name for the type of corn silage that is made by shredding the entire corn plant longitudinally while shattering the kernel and has a longer chop length?

- Shredlage

23) What is the DHI Hot sheet used for in dairy herd management?

- To help producers manage herd SCC(somatic cell counts)

24) In regards to a dairy replacement program, what does the acronym DCHA stand for?

- Dairy Calf and Heifer Association

25) The Margin Protection Program offers dairy producers catastrophic coverage and product buy up coverage and is replacing what program?

- MILC(Milk Income Loss Contract)

26) What is the condition called when the fetal membranes do not pass from the cow within 12 hours of calving?

- Retained placenta

27) The decline in value over time of a capital asset due to wearing out, becoming obsolete, age, etc. is called what?

Depreciation

28) Over conditioned transition cows tend to eat less before and after calving which can lead to feed intakes dropping and greater mobilization of body fat that accumulates where in the cow?

- Liver

29) What becomes the physiologically limiting factor for feed intake as a cow moves into later lactation?

- Rumen fill

30) What gas is the largest contributor to the total greenhouse gas emissions from the dairy sector?

- Methane

31) Name three nutritional and/or dietary changes that can be made to help calves meet their caloric demands during the colder winter months.

- Boost milk feeding volume
- Feed milk more frequently
- Elevate energy intake by adding supplemental fat

32) Macro minerals are generally required in large quantities and are stated as a percent of the rations dry matter. Name 4 of the 7 macro minerals.

- Calcium
- Chloride
- Magnesium
- Phosphorus
- Sodium
- Sulfur
- Potassium

33) If you herd is averaging 80 pounds of milk and you receive \$20 per hundred weight and it cost \$8 per day to feed your cows, what is your income of feed cost?

- \$8.00

34) OSHA inspectors began inspecting dairy farms in 2014. Name 3 areas on the “Dairy dozen” list that inspectors look at.

- Manure storage and collection facilities
- Bull/cow handling facilities
- Electrical systems
- Skid steer operations
- Tractor operation
- PTO guards
- Power transmission/functional component guards
- Hazardous energy control during equipment maintenance
- Posted warnings of farm hazards
- Confined spaces
- Bunker silos
- Noise

35) Name three tests that milk plants use to determine the quality of raw milk.

- Acid degree value
- Antibiotic test
- Flavor
- Freezing point
- Leukocyte or somatic cell count
- Preliminary incubation (PI) count
- Sediment test
- Standard plate count

36) ADF consists of 2 components and NDF consists of 3 components: What are the 2 components in ADF and what are the 3 components in NDF

- ADF-Cellulose and lignin
- NDF-Hemicellulose, cellulose and lignin