

2010 NYS District Senior Dairy Quiz Bowl Contest

Senior Packet 1, Phase A

1) It is estimated that 65% of U.S. Dairy Herds have which disease: Tuberculosis, Johne's or BVD?

Johne's disease (HD, Dec 08, pg. 783)

2) 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 which of the following: acidosis, bloat, nitrogen excretion to the environment, or metritis?

Nitrogen excretion to the environment (Virginia study materials)

3) Which of the following describes Biotin: an amino acid, a B-vitamin, a source of fiber, or a trace mineral?

B-vitamin (Virginia study materials)

4) Which of the following is caused by clostridium bacteria: blackleg, acidosis, nitrate poisoning, or ketosis?

Blackleg (Virginia study materials)

Senior Packet 1, Phase B

1) One of the key financial indicators in a farm business analysis is the ROA. What does ROA stand for and how is it determined?

Return on Assets (ROA). ROA is net income minus interest divided by ownership equity. (HD Jan. 09, pg. 51)

2) In typical milk replacer, the primary ingredients are whey, whey protein concentrate, animal fat, and supplemental trace minerals and vitamins. What are the two major sources of energy in this replacer?

Whey and fat (HD, 10/25/08, p.674)
Whey protein but do not accept protein

3) When evaluating conditions for manure runoff, there are five high risk manure spreading conditions that should be considered before you spread. Name two of them.

Weather, wet ground, slope, buildings nearby, water sources
Field geology
Type of manure
Application method
Field conditions
Location of drain tiles ditches, etc. (HD, 06/08, p.14)

4) Name the 4 elements used to calculate DCAD (dietary cation-anion difference) in a dairy ration.

Sodium (+)
Potassium (+)
Chlorine (-)
Sulfur (-) (Virginia study materials, pg. 11)

Senior Packet 1, Phase C

1) What technology destroys 90% of BST found in milk?

Pasteurization

2) One milking robot should be able to handle about how many cows?

50 to 60 cows (HD, pg. 152)

3) What by-product has been banned in ruminant rations in the US because of the link to the animal disease BSE?

Ruminant Meat and Bone Meal (Virginia Study materials, pg. 10)

4) What is the pH range for well-preserved corn silage?

3.7 to 4.2

5) What is it called when a cow's uterus turns inside out and protrudes from the vulva after calving?

Prolapsed uterus (HD, 07, pg. 834)

6) What organization brings together producers, scientists, students, educators and others who share a desire to preserve dairy heritage? It was founded in 1949, the visitor center and museum is located in Ft. Atkinson, WI.

National Dairy Shrine (HD, Oct.)

7) What group represents the nation's dairy manufacturing and processing companies?

Dairy Foods Association (DFA)(HD, Dec, pg. 834)

8) What organ secretes a digestive enzyme into the small intestine?

Pancreas

9) What financial figure are we calculating when we subtract total liabilities from total assets?

Net Worth or equity

10) What is the most common NPN (non-protein nitrogen) source fed to dairy cows?

Urea

11) GnRH causes the release of LH and FSH. What does F.S.H. stand for?

Follicle Stimulating Hormone

12) Cows exposed to sunlight will readily make which vitamin on their own?

Vitamin D (HD, pg. 767)

13) The I-9 form is used to be in compliance with what law?

Immigration law

14) What act of 1922 allows farmers to work together to negotiate a higher price for their products through a cooperative agreement?

Capper-Volstead Act

15) Name the protein that passes through the rumen of a ruminant animal and is unchanged by microbes.

Rumen undegradable protein (by pass protein) (Virginia materials, pg. 8)

16) On a DHIA record, the number of days from calving until first breeding date is describing what specific terminology?

Days to first service

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Senior Packet 2, Phase A

1) If the fermentation process in a silo full of corn silage is proceeding correctly, what happens to the pH of the corn silage?

It decreases (Virginia study materials)

2) Coliform mastitis has become the predominant form of severe clinical mastitis in well-managed herds that have effectively controlled contagious mastitis. What is the main bacterium that is causing these infections?

E-Coli (HD, 2/10/08, pg. 106)

3) The practice of vaccinating on a dairy farm is a management tool most often used to develop what type of immunity for cattle?

Active immunity

4) What is the name of the most desirable acid produced during corn silage fermentation that functions to preserve the silage when the silage is stored in a silo?

Lactic acid

Senior Packet 2, Phase B

1) List 4 positive things a manure digester can do for a farm.

- Produce Biogas
- Reduce Farm Odors
- Make electricity
- Reduce farm waste
- Create a sale of carbon credits
- Methane production
- Sell compost for landscaping
- Makes a Bedding source
- Heat water
- Spreading liquids will produce less Nitrogen on fields (HD, 1/09, p. 21)

2) In reference to the 2009 PDCA Unified Scorecard, which major evaluation category does the Holstein Breed make note of being different, and within this category be specific about the difference that exists between Holsteins and other dairy breeds.

Udder Category, the Holstein breed has equal weight for the fore and rear udder attachments, both at 7 points.
In the other breeds they weight the rear udder with 9 points and the fore udder with 5 points.

3) Name 4 hormones used by the female reproductive tract.

- Gonadotropin Releasing Hormone
- Follicle Stimulating Hormone (FSH)
- Estrogen
- Lutenizing Hormone(LH)
- Progesterone
- Prostaglandin
- Oxytocin(Virginia study materials, pg. 18)

4) Name the two cells that are counted in SCC (Somatic Cell Count).

- White Blood Cells or Leukocytes
- Epithelial Cells
- Myoepithelial cells (Virginia study materials, pg. 16)

Senior Packet 2, Phase C

1) What is the term that refers to how wide the row of hay is when it is cut?

Swath Width (HD, 3/25/08, p.209)

2) Preliminary Incubation (PI) counts are a measure of milk quality. This count is sensitive to psychotropic bacteria. What is special about this particular bacteria?

Bacteria is capable of growing at colder temperatures(NEDB, 11/08, p.6)

3) What breed has individuals that can carry a recessive gene that causes milk to have a fish odor?

Ayrshire (HD, 2/10/09, p.104)

4) Which housing type supports the least hock abrasions according to a 2008 Hoard's article?

compost bedded pack (HD, 2008, pg. 665)

5) Defining milk production in terms of pounds of milk per pound of dry matter intake is called what?

Feed efficiency

6) In a newborn calf, in which part of the digestive system are the immunoglobulins in colostrum absorbed into the bloodstream?

Small intestine

7) What does the term "sex linked lethal" mean?

Females transmit sex-linked recessive causing death of male zygotes
(Dairy Cattle 4P book, pg. 66)

8) What is the name of the current US Secretary of Agriculture?

Tom Vilsack

9) A mature dairy cow produces how much saliva per day?

50 to 80 quarts or 12 to 20 gallons (Virginia Study materials, pg. 32)

10) In milk labeling, milk that contains 5 grams of fat and 120 calories per cup, would be labeled as what?

Reduced fat milk (2%) (Virginia Study materials, pg. 35)

11) What is the condition called when a male animal's testes remain in the body cavity and do not descend into the scrotum?

Cryptorchid

12) What is the biggest "red flag" for animal welfare organizations associated with dairy farming?

Tail docking (HD, 07, pg. 207)

13) What is the human health risk that arises from cows being fed feed contaminated with mycotoxins?

The mycotoxins can be transferred into the milk having the potential to be carcinogenic (HD, 06/2008, p.408)

14) Back in 1986 the average cost of metritis was \$106 per case. According to research done between the University of Minnesota and Georgia, the average cost of metritis today is about how much per case?

\$358 (accept anything between \$300 and \$400) (DHM Mar. 2009, pg. 14)

15) What is another name for an examination that is called a post-mortem exam or an autopsy, and when done correctly involves looking at the animal as a whole and looking at each individual organ within the body?

Necropsy (DHM, May 08, pg. 32)

16) What is the name of the condition that impairs blood circulation to the horn producing tissues of the hoof and is caused by an excessive amount of fermentable carbohydrates in the cows' diet?

Laminitis or founder

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Senior Packet 3, Phase A

1) It is least efficient for a dairy cow to regain body condition during this stage of the lactation cycle; early lactation, late lactation, dry period, or in the first month after calving?

Dry period (Virginia study materials)

2) When raising dairy heifers, which of the following stages of growth is the most costly period; 100 to 200 pounds, 300 to 400 pounds, 700 to 800 pounds, or 1,200 to 1,300 pounds?

100 to 200 pounds

3) Which of the following best describes the lining of the rumen; a mucous covered lining to protect it from the hydrochloric acid that is secreted, honeycomb, or covered with papillae for nutrient absorption?

Covered with papillae for nutrient absorption

4) Which of the following diseases are zoonotic: BVD, Tetanus or Tuberculosis?

Tuberculosis (HD, Dec, pg.758)

Senior Packet 3, Phase B

1) 1) List 5 important qualities to look for in potential employees?

- Positive attitude
- Willingness to learn
- A beginner's mind
- Coachable
- Motivated
- Willingness to work on a team
- Get along well with others
- Open to change
- Leadership skills
- Cleanliness or appearance
- Responsibility
- Honesty
- Work ethic
- Skills/ability
- References
- Not illegal immigrants
- Education
- Experience (DHM, 10/05)

2) Name at least 3 factors that can help determine a herd's conception rate.

- Heat detection accuracy, nutrition, footing, breed, season
- Cow fertility, age at first breeding
- Semen fertility
- Technician competency (Virginia Study materials, pg. 18)

3) Name 4 different sizes, in cc, that disposable syringes generally come in.

3cc, 5cc, 6cc, 10cc, 12cc, 20cc, 35cc, and 60cc (DHM, 2/09, p. 54)

4) Name 4 factors to consider before including a by-product feed into a ration.

- Nutrient composition
- Cost
- Availability
- Palatability
- Storage
- Consistency
- Ability to feed (use)
- Safety-handling
- Where it came from (Virginia study materials, pg. 10)

Senior Packet 3, Phase C

1) In the dairy cow, glucose can be formed from this volatile fatty acid produced in the rumen. What is the name of this VFA ?

Propionate (Virginia Study materials)

2) Which milk pricing system takes into consideration protein, butterfat, somatic cell, and volume when figuring milk price?

Multiple Component Pricing (HD, 1/25/08, p.53)

3) Calves should be fed grain so that they start producing volatile fatty acids (VFA's) to help in digestion. What stomach structure do VFA's help stimulate growth of?

Papillae (HD, 7/08/p466)

4) What is the process of germ cell formation?

Meiosis (HD, 05/25/08)

5) For optimum performance, cows need how many hours of rest per day?

10-14 hours (HD, pg. 133)

6) The field of science that deals with the study of insects is called what?

Entomology

7) What does the word Anoxia refer to?

Lack of Oxygen (HD, 1/10/09, pg.10)

8) This measurement of energy in feedstuffs is defined as the total energy in a feedstuff minus the energy lost in feces.

Digestible energy (Virginia study materials, pg. 9)

9) What is the proper name for milk fever?

Parturient Paresis (Virginia Study materials, pg. 27)

10) If you purchased 100 pounds of 10-15-20 fertilizer, how many pounds of potassium are in this fertilizer?

20 pounds

11) What are placentomes?

They are the button-like structures found on the placenta that are made up of both the dam and fetus's tissues (Skills for Life, book 3)

12) Necropsies should be performed within how many hours of death?

24-48 hours (DHM, May 08, pg. 34)

13) What do the initials EQUIP stand for?

Environmental Quality Incentive Program

14) What is the name of the manufacturing process that distributes the fat evenly throughout milk?

Homogenization (Virginia study materials)

15) What is the name of the bacteria that causes the disease known as "circling disease" in cattle?

Listeria (Virginia study materials)

16) What type of fat is described by a completely hydrogenated fat that contains no double bonds?

Saturated fat (Virginia study materials)

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Senior Packet 4, Phase A

1) Surveys indicate that the most common reason that farm owners adopt rotational grazing is to reduce costs. What are the two main costs cited as being reduced?

Feed and labor (Virginia Study materials, pg.12)

2) Presynch helps synchronize cows before starting them on the Ovsynch program. Cows are given 2 injections of what hormone during the presynch phase?

Prostaglandin

3) Describe morbidity rate in reference to dairy herd management.

The number of sick animals in a certain period of time (Virginia study materials)

4) In a dairy cow, where are dietary starches broken down by bacteria?

Rumen

Senior Packet 4, Phase B

1) Fresh cows are important to dairy operations. Please list three reasons why it pays to give close attention to fresh cow health.

- Decreased losses from fresh-cow diseases
- Fewer culls in early lactation
- Increased milk quantity and quality
- Greater reproductive performance
- Decrease incidences of disease

2) What are two mycoplasma bovis associated diseases?

- Pneumonia
- Ear infections (otitis)
- Arthritis
- Mastitis (HD, 06/2008, p.406)

3) Where is the naturally occurring hormone Progesterone produced and what does this hormone do?

- Produced in the Corpus Luteum
- Responsible for maintaining pregnancy by suppressing heat and preventing uterus muscles from contracting (Skills for life, book 3)

4) What are the three ways that Bovine Leukosis can be spread to non-infected animals?

- Use of common needles for injections
- Use of common Palpation sleeves
- Feeding colostrum from infected cows to newborn calves
- Use of tattooing equipment without disinfecting
- Use of dehorning equipment without disinfecting
- Biting or blood sucking insects
- Fecal if doing rectal exams.(DHM, 8/02p42)

Senior Packet 4, Phase C

1) Long-day lighting has been shown to enhance heifer growth prior to puberty and later on in their first lactation. How many hours of total lighting should these heifers get in a 24 hour period?

16 to 18 hours (DHM, April 09, pg. 14)

2) What condition is indicated by a yellowish-brown staining on a stillborn calf?

Lack of oxygen or Meconium staining

3) In regards to published bull proofs, what do the initials EFI stand for?

Expected Future Inbreeding (HD, 2008, pg. 782)

4) What is the goal of the Dairy Animal Well-Being Initiative or DAWBI?

To provide assurance that the entire industry is meeting obligation to provide appropriate care for dairy animals or increase animal husbandry. (DHM, 6/08, pg.10)

5) What was the initial use of the SNP (single nucleotide polymorphisms) test in cattle?

Parentage of an animal (HD, 1/10/09, pg.12)

6) Where is GnRH secreted in the dairy cow?

Hypothalamus (Virginia Study materials, pg. 18)

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

Retained placenta

8) Dairy cows digest fat differently than non-ruminants. What are fats also known as?

Lipids

9) Name the dairy feed that is high in protein, fat and energy and when the fuzz or lint is removed the protein levels rise.

Whole Cottonseed

10) What Index is one of the best techniques for making manure management decisions?

The Phosphorus Index (Website)

11) What type of wild animal is responsible for spreading Mycobacterium avium paratuberculosis (MAP) experimentally to calves and could cause this disease to be spread from farm to farm?

Rabbits (HD, 10/25/08, p.689)

12) As a percent of dry matter, what is the range of rumen undegradable protein we should shoot for in our cow's diet?

5 % to 7 % (DHM, Sept. 08, pg. 56)

13) What is the cancer-like disease in dairy cattle that is spread by shared syringes and needles, and to a lesser extent rectal palpation sleeves.

BLV(bovine leukosis virus)(Eastern Dairy Business, March 09, pg. 19)

14) Beginning in the fall of 2008, which fast food restaurant offers low fat Nesquik milk and "Yogurt Squeezers"?

Wendy's (DHM, Nov. 08, pg. 41)

15) What type of credits can farmers buy through the Chicago Climate Exchange that certify reduction in greenhouse gas emissions?

Carbon credits

16) In addition to ammonia and carbon dioxide, what gas with the chemical structure CH₄ is produced in the rumen?

Methane

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Senior Packet 5, Phase A

1) You send a sample of corn silage from your trench silo to the lab for nutrient analysis. The report lists the dry matter of the silage at 50%. Calculate the pounds of dry matter in one ton (2000 pounds) of the silage.

1000 pounds of dry matter

2) In the reproductive system of a dairy cow, which organ is responsible for producing estrogen?

Ovary or follicle

3) A deficiency of this mineral has been associated with retained placenta in cows and white muscle disease in calves. What is the name of this mineral?

Selenium

4) What is the process called in which the udder tissue reverts to a non-milk producing state after drying off?

Involution

Senior Packet 5, Phase B

1) Name 3 of the 5 functions of saliva.

Moistens food.
Lubricates food.
Acts as buffer.
Provides fluid base for many nutrients.
Provide proper environment for bacterial growth
Begins digestion (Virginia Study materials, pg. 12)

2) Name 4 factors that determine nutrient requirements of a lactating cow.

Body Weight, Age, Milk Production Levels, Fat Test, Stage of Lactation,
Reproductive Status, Body Condition, Environmental Temperature, breed
Of cattle (2008 Virginia 4-H Dairy Quiz Bowl Study Materials)

3) Name two types of organisms that are in the gram positive group for causing mastitis?

Staph. Aureus
Staph species
Strep ag
Strep species (HD, 7/08, pg. 455)

4) List 3 reasons why one might not use the dam's colostrum for her newborn calf?

Dam positive for Johne's.
Colostrum is bloody.
Dam's colostrum shows positive for mastitis on CMT paddle
Dam is positive for other diseases that can be transmitted via colostrum like leukosis.
Dam's colostrum may have high concentration antibiotics due to re-treatment in late dry period
Quality low
Disease known
Dam is sick
Mastitic colostrum

Senior Packet 5, Phase C

1) Aflatoxin is a mycotoxin that can grow on moldy feed. What organism produces aflatoxin?

Fungus (HD, 6/08/p408)

2) What is the streak canal?

The opening in the end of the teat (Virginia study materials, pg. 13)

3) What are you monitoring when you calculate pounds of milk produced per pound of dry matter consumed?

Feed efficiency (DHM, Aug/08, p.17)

4) Beta-hydroxybutyrate is the predominate and stable circulating ketone body in the blood and is produced as part of normal ruminant metabolism in response to high milk production and decreased dry matter intake. What metabolic disorder are you detecting when you measure beta-hydroxybutyrate in the blood?

Ketosis (NEDB, 07/08, p.30)

5) What is the science called that deals with hormones and their actions

Endocrinology

6) Low temperature long time or LTLT, also known as batch method, heats milk at what temperature for how long?

145°F for 30 minutes (HD, 7/08, pg 452)

7) If you treat a sick cow with Hypertonic saline, what should be provided immediately after administration?

Fresh water to drink or pumping the rumen with water
(HD, 1/10/09, pg.19)

8) What organ stores and releases bile in the cow?

Gall bladder

9) In the context of feeds and feeding what does PFM stand for?

Precision Feed Management (NEDB, Dec 08, pg. 15)

10) What is the most rapid and least expensive type of test for Johne's disease?

ELISA(Enzyme-linked immunosorbent assay)

11) What hormone facilitates the dilation of the birth canal?

Relaxin

12) In the area of dairy nutrition, bypass-proteins are highly digestible in which part of the digestive system?

Small intestine (DHM, Sept 08, pg. 56)

13) In the dairy cow's digestive system, which compartment of the cow's stomach is responsible for squeezing fluid out of the digesta?

Omasum

14) What is the country code in the National Animal Identification System for the United States?

840

15) What is the number of amino acids that are considered to be essential in the dairy cow?

10

16) What is the term used to describe an animal that is born without horns?

Polled

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Senior Packet 6, Phase A

1) Which is more detrimental to milk production, Gram Positive or Gram Negative Mastitis?

Gram Negative

2) What is the term for an FSH-induced increase in the number of ova produced in anticipation of embryo transfer?

Super ovulation

3) What is the function of a plate cooler or tube cooler?

Cool the milk prior to entering the bulk tank

4) What are the two most limiting amino acids in dairy cattle nutrition?

Lysine and Methionine

Senior Packet 6, Phase B

1) What are 3 animal welfare issues that are faced by dairy producers in the industry?

Tail docking, dehorning practices, confinement housing,
lameness, down cow handling, vaccinations,
hormones/injections, calf hutches

2) List two benefits of using ionophores as feed additives.

Improve feed efficiency
Control coccidiosis
Lower costs for growing animals

3) Controlling high operating costs helps improve profitability on the farm. Feed is the highest cost associated with dairy farming. Give 3 examples of how to control feed cost by controlling feed shrink;

Improve silage packing in bunks to decrease spoilage
Improve bunk face management to decrease spoilage and waste
Store commodities in bins or tanks to minimize losses
Use Ag bags rather than piles on the ground
Limit feed exposure to consuming agents like wind, rodents and birds
Limit feed heifers

4) Name the three VFA (votile fatty acids) that are produced in the rumen

Acetic
Butyric
Propionic acid

Senior Packet 6, Phase C

1) Alexander Fleming discovered what 80 years ago?

Penicillin

2) What toxin does wilted Cherry tree leaves and frosted sedan grasses have in common?

Cyanide

3) What is tarsal hygroma?

Swollen hocks

4) What is the name of the poisonous acid found in sorghum grass after it frosts?

Prussic Acid

5) What does DCHA Stand for?

Dairy Calf and Heifer Association

6) What percent of heifers are born with supernumerary teats?

30 to 40%

7) What is the name of the instrument used to test the freezing point of milk to determine if water has been added?

Cryoscope

8) A low blood level of which mineral causes Grass Tetany?

Magnesium

9) What dairy magazine celebrates its 125th anniversary in 2010?

Hoard's Dairyman

10) Who is the president and CEO of the National Milk Producers Federation?

Jerry Kozak

11) What percent of a cows ration contains fat?

3-7%

12) Forages which are ensiled with too much moisture results in the formation of which undesirable organic acid?

Butyric acid

13) What is an anthelmintic?

Dewormer

14) What is the primary component of dried whey?

Lactose

15) To the nearest tenth, how many pounds of non-fat milk powder be made from 100 pounds of milk?

8.6 pounds

16) Under CAFO and CNMP programs, how often do soil samples need to be taken and tested from each field?

Every 3 years

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Senior Packet 7, Phase A

1) At what age does a calf begin to chew it's cud?

2 - 3 weeks

2) Luteinizing Hormone is secreted by the pituitary gland and soon after the onset of estrus, it increases in concentration 24 hours prior to ovulation. What does LH do?

LH causes the follicle to rupture

3) What is the name of the hormone used in reproduction management that functions to destroy or regress the corpus luteum?

Prostaglandin or Prostaglandin F2 Alpha

4) What is the name of the protein substance produced by the body in response to an antigen?

Antibody

Senior Packet 7, Phase B

1) In order to accurately calculate the Dry Matter Intake (DMI) per cow per day there are five key numbers that are needed to make these calculation. Please name 2 of these.

Weight of feed offered

Dry Matter percentage of feed offered

Weight of feed refused

Dry Matter percentage of feed refused

Number of animals fed with the feed offered

2) What are 3 ways in which the study of genomics will allow for more genetic progress in the dairy industry?

Much less time to prove a bull

Can test heifers to see which have the most desirable traits

Identify elite individuals

Identify lethal recessive and disease-causing genes

Cloning of elite or more desirable animals

3) Cheese is classified according to its consistency. What are the four types of cheese classifications?

Soft

Semi-soft

Hard

Very Hard

4) What are the four classes of immunoglobulins?

IgA

IgE

IgG

IgM

Senior Packet 7, Phase C

1) During which season of the year is milk in the greatest demand?

Fall

2) BT corn hybrids were genetically engineered to provide resistance to what pest?

European corn borer

3) What is an ambue bag used for?

To aid newborn calf respiration at birth.

4) Botulism attacks which organ system of the cow?

Nervous system

5) What term is defined as the study of nucleotide sequences in the chromosomes of an organism to determine its genetic potential?

Genomics

6) When treating udder edema, what class of drugs are used?

Diuretics

7) In what organ of the male reproductive tract does sperm maturation take place?

Epididymis

8) What is the oldest known cheese?

Gorgonzola

9) What does the lipase enzyme do during digestion?

Breaks down fat or lipids

10) How much crude protein is in an accelerated milk replacer program?

26-30%

11) Which breed has the largest percentage of genomic evaluations and the greatest reliability?

Holstein

12) What is the limiting nutrient in manure applications under CNMP regulations?

Phosphorus

13) What does DNA stand for?

Deoxyribonucleic acid

14) Within 30 minutes after milking, milk should be cooled to what temperature?

38 degree F

15) Typical milking unit inflations have a useful life of about how many milkings?

1,200 (accept 1,000 to 1,200)

16) How many pounds of hard cheese would you yield from 600 pounds of milk?

60 Pounds of hard cheese

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Senior Packet 8, Phase A

1) Which of the following is NOT a good source of energy for dairy cows: Corn gluten feed, Corn grain, Fish meal, or Barley grain?

Fish meal

2) Which of these is not an essential fatty acid: Acetic, Methionine, Tryptophan, or Leucine?

Acetic

3) Which one of the following vitamins is NOT a B-vitamin: Niacin, Biotin, Carotene, or Folic acid?

Carotene

4) When calculating somatic cell counts in milk, what type of cells are being counted?

White blood cells

Senior Packet 8, Phase B

1) Name 3 external insect which are parasites of cattle.

Lice
Ticks
Mites
Heel flies
Black flies
Horn flies
Mosquitoes
Horse flies
Deer flies

2) There are both noninfectious and infectious diseases that cause lameness in dairy cow hooves. Name one of each.

Noninfectious: white line disease, sole ulcer, sole bruising, toe ulcer, corkscrew claw, horizontal, vertical, and axial fissures, interdigital hyperplasia (corn), thin sole

Infectious: digital dermatitis(hairy heel warts), heel erosion, interdigital dermatitis, foot rot

3) Name 3 micro minerals (also known as trace minerals) that are needed in a cow's diet.

Cobalt
Copper
Iodine
Iron
Manganese
Selenium
Zinc

4) Name three of the six udder traits that go into computing the udder composite index.

Udder depth
Udder width
Udder height
Teat placement
Fore udder attachment
Udder cleft

Senior Packet 8, Phase C

1) What group of lactating cows are we referring to with the term primiparous?

First lactation cows

2) What is the period of increased growth rate that follows a growth restriction imposed early in a heifer's life called?

Compensatory growth

3) To what length is corn silage cut when using a crop processor?

$\frac{3}{4}$ inch

4) When breeding cows using Artificial insemination, most organizations recommend that inseminators should place the semen in what section of the reproductive tract?

Uterine body

5) What is the name of the volatile fatty acid produced by the rumen that is used to form glucose?

Propionate

6) What is the common name of the condition when the pH of a cows rumen drops to a low level?

Acidosis

7) What term describes a calf that is born dead?

Stillbirth or Stillborn

8) Manure digesters convert what gas into electricity?

Methane

9) Who invented the continuous cream separator in 1878?

Dr. DeLaval

10) Which volatile fatty acid is a major precursor of milk fat?

Acetic

11) A New York State Department of Environmental Conservation General Permit for a Concentrated Animal Feeding Operation is referred to as a SPDES (pronounced speedies) permit. What does SPDES stand for?

State Pollutant Discharge Elimination System

12) Above what Somatic Cell Count is a cow considered to have mastitis?

200,000 Cells/ml

13) A financial measure of rate of production is calculated by dividing the total pounds of milk sold by number of full time workers. What are we calculating?

Pounds of milk sold per worker

14) What type of muscle cells are responsible for milk let-down?

Myoepithelial

15) Why would you feed the additive Poloxalene to cow that are grazing alfalfa or clover?

To prevent bloat

16) Which compartment of the ruminant stomach functions to squeeze fluid out of the digesta & is also known as 'manyplies'?

Omasum

2010 NYS District Dairy Quiz Bowl-Extra Questions

1) Give two reasons why installing a Variable Speed Drive (VSD) on your vacuum pump for your parlor can pay off?

Can reduce energy by 50%
Bearings and other internal components last longer
Require less maintenance because VSD operates the vacuum pump at reduced rotations per minute (DHM, Dec.08, pg.23)

2) Please list 2 advantages to impermeable lagoon covers.

Cuts down on odor
Keeps rain water out
With some types of covers they may be part of a system that collects methane from the lagoon for use as a biogas (NEDB, Dec. 08, pg. 8)

3) What are the two protein components of dietary crude protein?

Rumen degradable protein
Rumen undegradable protein

4) What do the initials FPT stand for in the area of newborn calves and what does it mean?

FPT=Failure of passive transfer and it means the absorption of IgG was not adequate

5) One method to evaluate the health of your herd is to calculate your turnover rate. What is the formula that is used to determine this number?

Turnover rate= # of cows that leave/average # of cows in the her over a given period of time X 100 (DHM, 11/07, pg. 25)

6) What does it mean if a calf is persistently affected with BVD?

She had the virus present in her body when her immune system started working. Her body recognizes it as a normal part of her body, usually shows no signs but sheds large amounts of the virus

7) How is organic milk different from conventional milk?

It is different in the way it is produced, handled and processed but the safety and nutrition is the same.

8) What type of mastitis is the vaccine J-5 used to immunize cow's against?

Coliform mastitis

9) Milkmedia launched a new website that used music and action sports entertainment to reach kids about health, nutrition and exercise. What is this called?

Milk Rocks

10) What is endotoxin overload in calves caused by?

Reactions to vaccines or a vaccination shortly after inoculation

11) Which component of Net Merit calculations is a measure of longevity?

Productive Life

12) What is the difference between an intensified milk replacer and a conventional milk replacer?

More protein in the intensified milk replacer (DHM, 10/07, pg. 56)

13) Hood found an innovative, natural technique called ultra-filtration that removes some of the liquid that makes fat free milk look and taste watery. What is this milk manufactured from HP Hood called?

SimplySmart (HP website)

14) What vitamin is produced by the rumen microbes?

Vitamin B (NEDB, 10/07, pg. 15)

15) In certain situations, dairy cattle nutritionists may recommend feeding a certain type of a DCAD(Dietary Cation Anion Difference) diet for close-up dry cows. Would the nutritionists recommend feeding an anionic or a cationic diet to help prevent milk fever?

Anionic diet (Virginia Study materials)

16) What substance from grains improves rumen development and provides the most energy to a calf?

Starch (HD, 7/08, pg. 466)

17) For total milk production in the U.S, where is New York Ranked?

3rd

18) What is the name of the class of chemicals used to kill internal parasites in cattle?

Anthelmintics (Virginia study materials)