2012-2015 TEXAS FFA MILK QUALITY AND PRODUCTS CDE
SENIOR TEST QUESTIONS

1) The milk fat differential used in paying for raw milk is:

a. **The price to be added or subtracted per 1/10 % of milk fat above or below a set percentage**
b. A value established to penalize milk producers who have too much fat in their milk
c. A value set to penalize milk producers who have too little fat in their milk
d. The price to be added or subtracted per 50 percent of milk fat above or below a set percentage

2) The form of mastitis that is hidden from sight is known as ________________.

a. Infectious
b. Clinical
c. Acute
d. **Sub-Clinical**

3) Which of the following will best control contagious mastitis?

a. Pre-milking teat dip
b. Barrier type teat dip
c. **Antibiotic teat dip**
d. Germicidal teat dip

4) The Standard Plate Count (SPC) has a prescribed incubation time of ____ hours at ____ ºC.

a. 24 hours at 32°C
b. 48 hours at 45°C
c. **48 hours at 32°C**
d. 12 hours at 45°C

5) One type of test for antibiotics, common adulterants of milk, is based upon the principle that the growth of bacteria is __________ by them.

a. Stimulated
b. Enhanced
c. Magnified
d. **Inhibited**

6) The __________ test is used to detect if milk has been pasteurized properly.

a. Lipase
b. Coliform
c. Standard Plate Count
d. **Phosphatase**

7) Milk provides __________ and ____________ in approximately the same ratio as found in bone.

a. Calcium and Magnesium
b. **Calcium and Phosphorus**
c. Calcium and Iron
d. Phosphorus and Magnesium
8) Which of the following is not a cause of coliform mastitis?
   a. Cracked or split inflations
   b. **Milking too soon after calving**
   c. Using excessive water in washing udders
   d. Slightly damp, warm bedding

9) About __________ percent of the calcium available in the food supply is provided by milk and milk products.
   a. 66%
   b. **76%**
   c. 86%
   d. 96%

10) Which of the following directly influence(s) the total supply of milk?
   a. **Prices paid milk producers**
   b. Manufacturing plants
   c. Costs of fat production
   d. Foreign exports

11) The pasteurized Milk Ordinance regulates what?
   a. **Grade A milk**
   b. Manufacturing grade milk
   c. Grade B milk
   d. Grade C milk

12) Dairy farmers can buy and sell dairy futures on what exchange?
   a. New York Stock Exchange
   b. National Dairy Exchange
   c. Coffee, Sugar, Coca Exchange
   d. **Chicago Mercantile Exchange**

13) According to the Food & Nutrition Board of the National Academy of Sciences, all people need at least ________ milligrams of calcium per day.
   a. 100
   b. **1000**
   c. 10,000
   d. 100,000

14) The cheese price series is based on 63 U.S. cheese plants that make 80-85 percent of the bulk Cheddar. What is the price series called?
   a. NASS Cheese Price Survey
   b. **NASS Cheddar Cheese Price Survey**
   c. NASS Swiss Cheese Price Survey
   d. U.S. Cheddar Cheese Price Survey

15) What marketing tool would be used in the futures market by someone who owns a commodity such as milk and intends to sell it sometime in the future?
   a. Basis contract
   b. Pooling contract
   c. **Short Hedge**
   d. Speculating buyer
16) Farm water supplies must be protected from surface contamination. Water is usually tested for ________ as an indicator of possible sewage contamination.

   a. Proteolytic bacteria
   b. Lipolytic bacteria
   c. **Coliform bacteria**
   d. Psychotropic bacteria

17) Specific gravity of milk at 60°F is ________.

   a. 1.022
   b. 1.032
   c. 1.033
   d. 1.042

18) The International Dairy Federations (IDF) mission is to promote __________.

   a. Scientific, cultural & economic progress
   b. Agricultural, technical & economic progress
   c. Technical, scientific & industrial progress
   d. **Scientific, technical & economic progress**

19) USDA reports net prices received by dairy farmers for milk, usually the prices are published on a map to show regional differences. The prices are referred to as __________.

   a. Blend prices
   b. Regional prices
   c. **Mailbox prices**
   d. BFP prices

20) The “set aside” of $0.15 per hundred pounds of milk from a milk producer’s check is used in programs that support _____.

   a. **Promotions & research**
   b. Research & testing
   c. Teaching & promotion
   d. Promotion & teaching

21) What is the most popular size container used for fluid milk?

   a. **Gallon**
   b. Half Gallon
   c. Quart
   d. Five quart bulk

22) Onion and garlic are responsible for the garlic/onion off-flavor in milk, and are more prevalent in pasture during ________.

   a. Fall
   b. Spring
   c. Early and late summer
   d. **Early spring and late fall**
23) Chemical sanitizers containing ________ are most widely used for sanitizing milking equipment.
   a. Bromine
   b. Saline
   c. Chlorine
   d. Iodine

24) Milk found in cows with a high somatic cell count would result in a decrease in ________.
   a. Butterfat
   b. Whey protein
   c. Casein
   d. Trace minerals

25) Milk is a good supplier of minerals except for ____.
   a. Magnesium-Iron-Manganese-Copper
   b. Riboflavin-Magnesium-Lactose-Manganese
   c. Phosphorus-Copper-Zinc-Calcium
   d. Potassium-Boron-Iron-Calcium

26) Adulterants of milk that are detrimental to human health are ____.
   a. Proteins
   b. Pesticides
   c. Water
   d. Minerals

27) Water added to milk is detected by checking the ____.
   a. Acid degree value
   b. Sediment content
   c. Titratable acidity
   d. Freezing point

28) Milk with low total solids will produce what off-flavor?
   a. Flat
   b. Malty
   c. Salty
   d. Acid

29) A cryoscopy is an important tool that test for ________ in milk.
   a. Butterfat
   b. Antibiotics
   c. Pesticides
   d. Added water

30) Milk is the only source of ________ in nature.
   a. Calcium
   b. Phosphorous
   c. Lactose
   d. Fatty acids
31) Which of the following is not an important reason for a five day-seven degree shelf life test?
   a. Psychotropic bacteria reproduce at this temperature
   b. Meaningful data can be available for control application in a reasonable time
   c. It lowers variability among cartons of milk
   d. The Temperature is at or near the maximum at which milk will be stored

32) The ideal cleaning material for removing milk stone from milking equipment surfaces is _____.
   a. Acidic detergent
   b. Phosphate
   c. Surfactant
   d. Chelate

33) The somatic cell count standard for Grade A raw milk is ____ or less per milliliter of milk.
   a. 500,000
   b. 750,000
   c. 1,000,000
   d. 1,500,000

34) The ability of lipase in milk to attack milk fat and produce a rancid off flavor is enhanced by:
   a. Excessive agitation of warm raw milk
   b. Poorly cleaned milking equipment
   c. Exposing milk to sunlight
   d. Feeding cows moldy hay

35) In _____ when the Capper-Volstead Act was enacted, cooperatives were given the right and power to organize producers of a farm commodity to its fullest extent.
   a. 1829
   b. 1959
   c. 1729
   d. 1929

36) The two most important etiologic agents of mastitis are __________.
   a. Streptococcus agaiaactiae and Staphylococcus aureaus
   b. Streptococcus uberis and Streptococcus dysgapactiae
   c. Pseudomonas aeruginosa and coliform bacteria
   d. Klebsiella and actinomycetes

37) __________ cause(s) off flavors in milk such as acid, high acid, or sour milk.
   a. Chemical adulterants
   b. Microorganisms
   c. Sediment
   d. Weeds

38) Aflatoxins sometimes found in dairy feeds are produced by:
   a. Protozoa
   b. Bacteria
   c. Mold
   d. Yeasts
39) With the exception of _______, all of the following off flavors of milk are caused by bacteria.

a. Bitter
b. Malty
c. Yeasty
d. **Salty**

40) The Grade A Pasteurized Milk Ordinance (PMO) specifies requirements for the production of Grade A raw milk for pasteurization and is recommended by __________.

a. The Food and Drug Administration  
b. The Small Business Administration  
c. The U.S. Department of Agriculture  
d. The National Committee on Milk

41) In Federal order markets, milk sold for consumption in fluid form is in __________.

a. Class IV
b. Class III
c. Class II
d. **Class I**

42) Milk covered by Federal milk marketing orders is __________.

a. Grade A  
b. Grade B  
c. Grade C  
d. Grade A, B, C

43) The largest percentage of the U.S. milk supply is utilized in the production of ____.

a. Cream and specialty sales  
b. Cheese  
c. Frozen dairy desserts  
d. Evaporated, condensed and dry products

44) Operating costs of Federal orders are paid by ____.

a. The State Department of Agriculture  
b. The Federal government  
c. The milk producers  
d. **The milk handlers**

45) One objective of a federal order is to ____________.

a. Assure all dairy farmers an adequate income  
b. **Assure consumers an adequate supply of pure, wholesome milk**  
c. Assure that all dairy plants receive an adequate supply of milk  
d. Prevent surpluses of milk in the marketplace

46) Federal Definitions and Standards of Identity specify that Whole Milk contain not less than ____.

a. 3.00 percent milk fat and 8.25 percent solids-not-fat  
b. 3.50 percent milk fat and 8.50 percent solids-not-fat  
c. 3.50 percent milk fat and 8.00 percent solids-not-fat  
d. **3.25 percent milk fat and 8.25 percent solids-not-fat**
47) Cheddar cheeses sold in the United States, which are not made from pasteurized milk, must be ripened at least _______ days.

- a. 30
- b. 60
- c. 120
- d. 150

48) The establishment of a Federal milk marketing order is generally initiated by ________.

- a. Dairy farmers, through their cooperative association
- b. Milk handlers in the market
- c. Consumers
- d. Dairy farmers, milk handlers and consumers

49) A milk order, including pricing and other provisions, becomes effective only after approval by __________.

- a. Consumers
- b. Dairy farmers
- c. Milk processors
- d. Secretary of Agriculture

50) Federal milk marketing orders give _______ an active voice in determining minimum milk prices through public hearings.

- a. Milk activists
- b. Milk handlers
- c. Milk processors
- d. Milk consumers

51) The rules States adopt to govern the production, processing, packaging and storage of Grade A milk are based on ________.

- a. The Code of Federal Regulations
- b. The Pasteurized Milk Ordinance and Code
- c. USDA Rules and Regulations
- d. The Pure Milk Act of 1937

52) Flavors of milk may be caused in general by ________________.

- a. Water content of the milk
- b. Temperature that milk is stored
- c. Feeds consumed by the cow
- d. Amount of sunlight the cow receives

53) The major cause of the salty flavor in milk is ____________.

- a. The large intake of salt by the cow
- b. Associated with sunlight exposure
- c. Mastitis
- d. Bacteria

54) ___________ is a test for rancidity.

- a. Acid degree value
- b. Cryoscope
- c. Disc assay
- d. Titratable acidity
55) Mastitis in milk ____________.
   a. **Has a direct effect on cheese yield**
   b. May cause increased rancidity
   c. Decreases calcium content
   d. Increases protein content

56) Which of the following is not one of the duties of the bulk milk hauler, who plays a critical role in milk handling?
   a. Checking milk temperature
   b. **Making sure equipment has been cleaned correctly**
   c. Examining milk to determine appearance
   d. Collecting a representative sample to be used for tests

57) Milk with an Acid Degree Value (ADV) of 1.0 or above will have a detectable _____ flavor.
   a. **Rancid**
   b. Malty
   c. Acidic
   d. Fruity

58) The four primary taste sensations are _________________.
   a. Bitter, metallic, sour, sweet
   b. **Bitter, salt, sour, sweet**
   c. Metallic, salt, sour, sweet
   d. Burnt, bitter, salt, sour

59) Lactose is the principal _____ in milk.
   a. Fat
   b. Protein
   c. **Carbohydrate**
   d. Mineral

60) The most effective and economical means of reducing the exposure of cows to mastitis causing microorganisms is to ________.
   a. Isolate animals with clinical mastitis
   b. Disinfect or sterilize milking machine inflation’s between cows
   c. Wear rubber or plastic gloves during milking and disinfect the gloves between cows
   d. **Use a bactericide for disinfecting the teats after milking**

61) Most farm bulk milk tanks are designed for every-other-day (EOD) pickup and must cool 25 percent of the volume of the tank to ___ degrees F within two hours after milking.
   a. 25
   b. **45**
   c. 60
   d. 70

62) A consumer found an off-flavor in milk packaged in transparent plastic and exposed to high intensity fluorescent light. The off-flavor probably was
   a. High acid
   b. Bitter
   c. **Oxidized**
   d. Rancid (lipolyzed)
63) Which group of flavors cannot be detected by odor?
   a. Bitter, salty  
   b. High acid, rancid  
   c. Feed, garlic/onion  
   d. Metallic/oxidized, malty

64) Milk used to make ice cream would be priced in what Federal Order class?
   a. Class I  
   b. Class II  
   c. Class III  
   d. Class IV

65) _______ is the time after processing during which a dairy product normally remains suitable for human consumption.
   a. Code date  
   b. Product life  
   c. Package date  
   d. Shelf date

66) The off flavor most likely to be found in milk that has not been cooled properly is:
   a. Sour  
   b. Rancid  
   c. Oxidized  
   d. Bitter

67) The Babcock test is a rapid, simple and accurate test for:
   a. Water in milk  
   b. Titratable acidity  
   c. Fat content  
   d. Nonfat milk solids content

68) To remove fat from milking equipment use:
   a. Alkaline cleaner in hot water  
   b. Alkaline cleaner in cold water  
   c. Acid cleaner in cold water  
   d. Acid cleaner in hot water

69) Quality of grade A milk is:
   a. Not controlled by Federal Orders  
   b. The first consideration in pooling milk  
   c. A part of the testing by Market Administrators  
   d. Only checked if there is excess milk

70) Federal Milk Marketing Orders provide or describe:
   a. Sanitary standards used for grade A  
   b. Milk purchased by dealers  
   c. Milk sold by farmers  
   d. Payment made to milk producers for milk
71) It takes approximately ______ lbs. of whole milk to make one pound of whole milk cheddar cheese.
   a. 5
   b. 10
   c. 13
   d. 22

72) Federal Milk Marketing Orders are a mechanism for:
   a. The most economical utilization of milk
   b. Finding a market for every producer’s milk
   c. Economical transportation of milk
   d. Market stabilization

73) Cow’s milk contains ____ percent lactose.
   a. Three
   b. Four
   c. Five
   d. Six

74) For the maximum intake of calcium, one should consume______.
   a. Whole Milk
   b. 2% Milk
   c. 1% Milk
   d. Skim Milk

75) While some extra-label drugs can be used by food-producing animals, others cannot. Which of the following is/are an illegal drug(s)?
   a. Clenbuterol
   b. Penicillin
   c. Tetracycline
   d. Ivomec

76) The fat in one serving of whole milk (8 ounces) provides ______ calories.
   a. 85
   b. 90
   c. 95
   d. 100

77) The most prevalent off flavor of fluid milk is ______.
   a. Malty
   b. Oxidized
   c. Flat
   d. Feed

78) The microbiological standard for Grade A raw from single procedure is ______ bacteria per millimeter of milk prior to co-mingling with milk from other producers.
   a. 200,000
   b. 150,000
   c. 100,000
   d. 50,000
79) Pasteurization is the process of heating every particle of milk and milk products to the minimum required _______ and holding it continuously for the minimum required _______ in equipment that is properly designed and operated.

a. Temperature and length
b. Time and temperature
c. **Temperature and time**
d. Time and length

80) The major reason milk from cows treated with antibiotics must be withheld from the milk supply is because _______.

a. **A large proportion of the human population is sensitive to antibiotics**
b. Antibiotics increase the somatic cell count of milk
c. Antibiotics cause an off-flavor in milk
d. Antibiotics kill some of the good bacteria found in milk

81) When cows have mastitis, the protein content of milk may be higher, but the cheese yield is lower because of a decrease in _______ protein.

a. Lysine
b. **Casein**
c. Tryptophan
d. Whey

82) Bacteria that survive specific heat treatment are said to be _____.

a. Psychotropic
b. Coliform
c. Psychrophilic
d. **Thermoduric**

83) _______ is exposure of hot milk or milk product to reduced pressure to affect the removal of volatile substances, especially those that enter milk from feed.

a. Vaporization
b. Infusion heater
c. **Vacuumization**
d. Vac Pac process

84) A high acid flavor (sour) in milk is caused by _______.

a. **Growth of bacteria in the milk**
b. Exposure of cows to acid rain
c. Drinking hard water
d. Absorption of acid from corn silage

85) The enzyme _______ is almost completely inactivated during pasteurization.

a. Lactose
b. Acid glycerol
c. **Alkaline phosphatase**
d. Free fatty acids
86) A pooling method, where by, handlers with higher than average utilization pay into and handlers with lower than average utilization receives payment from is called _______.
   a. Base excess pricing
   b. Louisville take out and pay back
   c. Individual handler pools
   d. **Producer settlement fund**

87) The absence of _____ and _____ is not an accident, because they would catalyze oxidation, their producing metallic or oxidized flavors.
   a. Lead-casein
   b. Boron-tin
   c. **Iron-copper**
   d. Zinc-brass

88) The CMT test results that indicate a somatic cell count of 400000 to 1500000 are _____.
   a. Mixture thickens with slight gelation
   b. Viscous gel forms, mass adheres to paddle
   c. **Distinct precipitate forms, but no gel**
   d. Slight precipitate forms and tends to disappear

89) Which of the following is not a part of the establishment of a federal marketing order?
   a. A public hearing is held for the producers-handlers and the public
   b. **Must be approved by 2/3 of the producers supplying 3/4 of the milk**
   c. Cooperative associations of milk producers petition the U.S. Secretary of Agriculture
   d. A producer cooperative may vote all its members who deliver milk during a certain period.

90) To reduce the feed flavor in milk to acceptable levels, cows should be removed from offending feeds _____ hours before milking.
   a. 1-2
   b. **2-4**
   c. 4-6
   d. 6-8

91) The only persons regulated by federal orders are _____.
   a. Farmers
   b. Truckers
   c. **Handlers**
   d. Retail store owners

92) The increased use of bulk cooling and storage equipment has made _____ bacteria the primary organisms in raw milk.
   a. **Psychrophilic**
   b. Coliform
   c. Staphylococcus
   d. Streptococcus
93) _____ is the cause of the rancid flavor in milk.
   a. Feeding high moisture corn
   b. Feeding haylage
   c. Storing milk in the sunlight
   d. Extreme agitation of raw milk

94) Which of the following does not promote metallic/oxidized off flavor in milk?
   a. Hypochlorite sanitizer
   b. Sunlight
   c. Fluorescent light
   d. Copper

95) Whole milk contains _____ percent protein.
   a. 1.5-2.5
   b. 2.5-3.5
   c. 3.5-4.0
   d. 4.0-4.5

96) Which of the following is not an objective of milk evaluation?
   a. Determining the presence of desirable characteristics
   b. Determining one brand of milk from another
   c. Determining whether one sample differs from another
   d. Determining presence and magnitude of undesirable characteristics

97) Mastitis infecting microorganisms almost invariably gain entrance to the mammary gland via the _____.
   a. Caudal base
   b. Blind quarter
   c. Streak canal
   d. Feed

98) A _____ cup is a cup with fine wire mesh on top used to detect the presence of abnormal milk.
   a. Striated
   b. Mesh
   c. Streak
   d. Strip

99) A _____ needs to be applied to the teat end in order for a milking machine to remove milk.
   a. Massaging action
   b. Pulsation
   c. Vacuum
   d. Pressure

100) Which of the following four primary taste sensations is correctly matched with the causal agent?
    a. Salty-sugar
    b. Bitter-quinine
    c. Sweet-lactic acid
    d. Sour-table salt
101) Some streptococci that produce lactic acid also produce certain aldehydes, which impart a _____ flavor.
   a. Malty
   b. Bitter
   c. Salty
   d. Metallic

102) By using a _____ with plastic beads of varying density, nonfat solids in milk can be rapidly estimated.
   a. Lactometer
   b. Hydrometer
   c. Humidoscope
   d. Polyscope

103) The two main proteins in milk are ___ and ____.
   a. Lactose, Lactalbumin
   b. Casein, Lactalbumin
   c. Ascorbic, Thiamin
   d. Colgate, Casein

104) Vitamin ____ was first discovered in milk fat and is important to eyesight.
   a. A
   b. B
   c. C
   d. D

105) Milk contains all the known vitamins and is an especially good source of ___
   a. Cyanocobalmin
   b. Riboflavin
   c. Ascorbic Acid
   d. Thiamine

106) Milk is a good source of all water-soluble vitamins except for ____.
   a. Cyanocobalmin
   b. Riboflavin
   c. Ascorbic Acid
   d. Thiamine

107) ________ is a milk process that makes milk more easily digested by those with a sensitive digestive system.
   a. Ionization
   b. Evaporation
   c. Pasteurization
   d. Homogenization
108) _______ amino acids are commonly found in milk proteins, including the essential amino acids.
   a. 7
   b. 12
   c. 14
   d. **19**

109) Summer milk has been estimated to contain 1.6 times as much vitamin ___ as winter milk.
   a. A
   b. B
   c. C
   d. D

110) The milk becomes the property of the buyer once….
   a. The transport truck reaches the plant
   b. **It is loaded into the transport truck on the farm**
   c. The transport truck leaves the farm
   d. It is unloaded into the processor’s bulk tanks

111) Cows with ___ have a higher incidence of mastitis because physical injury is more likely.
   a. Sickled hocks
   b. Horns
   c. Lower foot angles
   d. **Pendulous udders**

112) Which of the following is untrue concerning the federal milk marketing orders?
   a. They are legal instruments
   b. It is a uniform system of classified pricing
   c. Producers are not guaranteed a market
   d. **Sanitary restrictions on production are imposed on producers.**

113) The ___ or uniform price is determined by the proportion of the total delivery used in products of these classes.
   a. Classified
   b. Average
   c. Parity
   d. **Blend**

114) Under federal orders, dairy farmers receive their milk checks ___.
   a. **Once or twice monthly**
   b. Weekly
   c. Bi-monthly
   d. Directly from the FSA office

115) To defray the cost of federal orders, handlers are assessed ___ per hundredweight of milk received.
   a. 1-3 cents
   b. **2-5 cents**
   c. 3-4 cents
   d. 15 cents
116) Which is a true statement concerning federal milk marketing orders?
   a. Public hearings are held so that all interested parties may present their views.
   b. They remove the need for cooperatives.
   c. They are designed to weaken the bargaining power of single large dairy farmers.
   d. They assure the corrected weighting, testing and sanitary conditions of milk.

117) The hormone oxytocin is released by the ____ gland. This act stimulates the mammary gland.
   a. Pituitary
   b. Sweat
   c. Endocrine
   d. Vascular

118) Rubber parts readily absorb ____ and need to be cleaned in an alkaline detergent.
   a. Protein
   b. Carbohydrates
   c. Milk fat
   d. Minerals

119) The main objection to dirt and milk stone on parts is ____.
   a. Vacuum fluctuations
   b. Poor milkers function
   c. Poor looks
   d. Increased bacterial count

120) Badly dented or damaged milkers unit parts are caused by
   a. Strong chemicals
   b. Improper design
   c. Careless handling
   d. Solvents

121) By regulation, milk from cows treated with antibiotics usually must be withheld for ____ hours.
   a. 48 -72
   b. 30 -60
   c. 48 -108
   d. 72 -96

122) Rules developed by the ____ are designed to protect the health and welfare of consumers.
   a. United States Department of Agriculture (USDA)
   b. Protein and Lactose Organization (PLO)
   c. Future Farmers of America (FFA)
   d. Food and Drug Administration (FDA)
123) The standard plate count (SPC) estimates the total numbers of ____ microorganisms.
   a. Mild  
   b. Yeast  
   c. Anaerobic  
   d. Aerobic

124) The predominant bacteria of milk that produces lactic acid, which is responsible for the sour taste of milk are the:
   a. Streptococci  
   b. Psychrophilic  
   c. Coliform  
   d. Streptococcus

125) The traditional method of pricing milk has used a milk fat differential of one tenth of one percent from a milk fat base of ____ percent.
   a. 3.0  
   b. 3.2  
   c. 3.5  
   d. 3.7

126) The United States government purchases surplus ____ from the commercial market under the dairy price support program.
   a. Fluid milk products, butter, cheese  
   b. Cheese, nonfat dry milk, butter  
   c. Butter, evaporated milk, ice cream  
   d. Ice milk, yogurt, cottage cheese

127) The feed additive isoacid gives a ____ pound daily milk response, with maximum response in early lactation.
   a. 2 to 4  
   b. 4 to 6  
   c. 6 to 8  
   d. 8 to 10

128) Mixture of milk and cream containing not less than 10.5 percent milk fat, but less than 18 percent milk fat, is the definition of
   a. Light whipping cream  
   b. Light cream  
   c. Half-and-half  
   d. Heavy cream

129) One of the mechanisms used by the USDA to remove surplus dairy products from the supply is to subsidize manufacturers who sell overseas at a loss. This is called the
   a. Price Support Program  
   b. Butter-Powder Formula  
   c. Dairy Export Incentive Program  
   d. Commodity Credit Program
130) Under which of the following weather conditions would you expect to observe the greatest decrease in milk yield per cow?
   a. Cold and dry
   b. **Hot and humid**
   c. Cool and humid
   d. Warm and dry

131) Although milk from the cow is processed, it is not an engineered or fabricated food and contains about _______ % solids.
   a. 3.5
   b. **13**
   c. 76
   d. 87

132) Dairy cows need _______ day dry periods for rejuvenation of secretory tissue and restoration of body condition.
   a. 30
   b. **60**
   c. 90
   d. 120

133) Due to high leukocyte counts, farmers should not use the CMT before the _______ day after calving or test milk from cows that are being dried off.
   a. First
   b. Second
   c. **Third**
   d. Fourth

134) From the mid 1950’s until 2009, the size of the U.S. dairy herd has:
   a. **Decreased by 50%**
   b. Remained static
   c. Increased by 50%
   d. More than doubled mirroring the population growth

135) From the mid 1950’s until 2009, individual production per cow has:
   a. Remained static
   b. Increased by 50%
   c. **Increased by 100%**
   d. Increased by 400%

136) The first milk produced after parturition is called:
   a. **Colostrum**
   b. Celestial
   c. Serial
   d. Coliseum
137) Transitional milk is the label given to the milk produced in:
   a. One retail region and moved to another retail region for processing
   b. From the Colostrum stage to 11th milking which cannot be legally marketed for human consumption
   c. From the truck to the holding silos, not yet in the production cycle
   d. Produced at the end of a lactation but before the cow is transitioned into the dried state

138) It requires ______pound(s) of milk to produce one pound of butter.
   a. 1
   b. 11
   c. 22
   d. 33

139) It requires ______pound(s) of milk to produce one gallon of gourmet ice cream.
   a. 8
   b. 12
   c. 16
   d. 24

140) To prevent milk fat from separating itself from the fluid portion of the milk is:
   a. Homogenized
   b. Pasteurized
   c. Sterilized
   d. Thermalized

141) Fat globules in raw milk average about ____________________in diameter:
   a. 1/25,000 of an inch, more or less 1 micron
   b. 6/25,000 of an inch, more or less 6 microns
   c. 1/2,500 of an inch, more or less 100 microns
   d. 1/250 of an inch, more or less 1000 microns

142) Evaporated milk has been preheated to stabilize the protein, followed by the removal of:
   a. 30% of the water
   b. 60% of the water
   c. 90% of the water
   d. All of the fat

143) Condensed milk on the grocery shelf may have ______added.
   a. Salt
   b. Minerals
   c. Sugar
   d. Cream
144) The major difference between Evaporated and Condensed milk is:

a. Evaporated milk has less water than condensed milk
b. **Evaporated milk can be stored non-refrigerated, while condensed milk requires refrigeration**
   a. Condensed milk has a lower fat content than evaporated milk
   b. Condensed milk comes in smaller size containers than evaporated milk

145) Dry milk must have less than ________% moisture by weight.

a. 5%
b. 10%
c. 15%
d. 25%

146) Dry milk can be stored for long periods of time:

a. In refrigerated vaults
b. At temperatures above 150 degrees
   c. In an open container in the cabinet
   d. **In a sealed atmosphere of nitrogen or carbon dioxide**

147) "Cultured" in front of the name of a milk product indicates:

a. Product is older and more mature
b. Product is highly refined
   c. **Product has appropriate bacteria added to it**
   d. Product has been through a school and is more expensive

148) A "acidified" label on a milk product indicates that the product was produced by:

a. **Souring the milk**
b. Enriching the milk with added iron
c. Cows consumed acid rain water
d. Passing the milk through a reverse osmosis filtration system

149) Cottage cheese from the grocery shelf must contain no less than:

a. .5% fat
b. 1% fat
c. 2% fat
d. **4% fat**

150) Low fat cottage cheese must contain a maximum of:

a. .5% fat
b. 1% fat
c. **2% fat**
d. 4% fat

151) Curd is the ____________ during the cheese making process.

a. A region which supplies substantial components required
b. Material found in the stomach of young calves necessary
   c. Liquid portion at the bottom on the container that is hard to dispose of
   d. **Custard-like substance formed at the top of the container**
152) Butter is made from milk and/or cream and must contain a minimum of:
   a. 5% fat
   b. 20% fat
   c. 50% fat
   d. **80% fat**

153) Cottage cheese is a soft, unripened cheese with approximately ________ moisture content.
   a. 20%
   b. 50%
   c. **80%**
   d. 100%

154) Parmesan and/or Romano cheese are very hard grated/shaken cheese with __________ moisture content.
   a. 20%
   b. 30%
   c. **50%**
   d. 70%

155) Rennet is used in many milk products to produce a thicker bodied product. Natural rennet comes from:
   a. Mines in Eastern China
   b. Microscopic plants growing the ocean
   c. **Inside the stomach of young claves**
   d. Composted cow manure treated with UV rays

156) Cultured sour cream is required by Federal standards to have a minimum of __________.
   a. 3.25% fat
   b. 5% fat
   c. 10% fat
   d. **18% fat**

157) Sour Cream frequently develops a bitter flavor due to continued bacterial proteolytic enzyme activity when stored for more than:
   a. 1 week
   b. **3-4 weeks**
   c. 6-8 weeks
   d. 10-12 weeks

158) Yogurt is manufactured from fresh, whole, low fat or skim milk that is heated before fermentation. However, Federal standards require yogurt to have a minimum of ____ fat.
   a. .5%
   b. 1%
   c. 2%
   d. **3.25%**

159) Low-fat yogurt must have a minimum of ______ fat and a maximum of _______ fat.
   a. 1%, 4%
   b. .5%, 2.5%
   c. **.5%, 2%**
   d. 1%, 3.25%
160) Non-fat yogurt must have a maximum of ______ fat prior to the addition of bulky flavors.
   a. .5%
   b. 1%
   c. 2%
   d. 3.25%

161) Cream is a liquid milk product separated from the fluid milk that must contain a minimum of:
   a. 4% fat
   b. 10% fat
   c. 14% fat
   d. **18% fat**

162) Heavy cream (whipping cream) contains a minimum milk fat of:
   a. 10%
   b. 18%
   c. 30%
   d. **36%**

163) Dry cream is produced by removing the water from pasteurized milk and/or cream. Dry cream is required to contain a minimum of:
   a. 18% fat
   b. 30% fat
   c. **40% fat**
   d. 75% fat

164) Dry cream is produced by removing the water from pasteurized milk and/or cream. Dry cream will have a maximum milk fat of _______ for economic factors.
   a. 18%
   b. 30%
   c. 40%
   d. **75%**

165) Buttermilk is the product resulting from:
   a. Addition of extra fat to raw fluid milk
   b. **Removal of the butter (fat particles) from raw fluid milk**
   c. Heating of both butter and milk to facilitate the blending of them together
   d. Artificial product produced using non-saturated vegetable oils

166) Two states dominate the total U.S. cheese production. These two states are:
   a. Texas and California
   b. Texas and Florida
   c. New York and Wisconsin
   d. **Wisconsin and California**

167) Some soft serve frozen dairy products have replaced milk fat with:
   a. Peanut butter
   b. Honey
   c. Fruits
   d. **Vegetable oil**
168) By FDA definition of an imitation product, which of the following is NOT true:
   a. Taste like the real product it represents
   b. **Has the same nutritional value as the real product it represents**
   c. Looks like the real product it represents
   d. Imitation products are not regulated by the FDA

169) A substitute product by FDA definition meets all of the following statements except:
   a. Taste like the real product it represents
   b. Has the same nutritional value as the real product it replaces
   c. Looks like the real product it represents
   d. **Imitation products are not regulated by the FDA**

170) Some dairy food products have a “REAL” seal on the package. This seal cannot be placed on a package that does NOT adhere to the following standards.
   a. Produced from U.S. milk
   b. Meets federal and state standards
   c. Imitation or substitute foods
   d. **Produced from NON-organic sources**

171) Osteoporosis may be reduced by consuming adequate quantities of milk and/or milk products. Osteoporosis is the:
   a. Inflammation of the skin cells causing hair loss and scaling of the skin
   b. Deterioration of the soft tissue in the retina, leading to blurry vision and poor eye sight
   c. **Loss of bone mass due to decrease in the bone matrix and minerals**
   d. Development of a hard calloused layer of skin upon the sole of the foot

172) Properly processed UHT milk may be stored at room temperature for:
   a. 24-28 hours
   b. 10-15 days
   c. **Several weeks**
   d. 6 months

173) Milk sold through commercial outlets is certified to be from herds free of:
   a. B.S.T.
   b. Displaced Abomasums
   c. Broken Udder Suspensory Ligaments
   d. **Tuberculosis**

174) Humans may contract ___________ from using raw cows’ or goats’ milk, should the animals have brucellosis.
   a. Undulant fever
   b. Mumps
   c. Whooping cough
   d. Night blindness
175) Milk is produced from female’s mammary glands. These mammary glands are examples of a:
   a. Adrenal gland
   b. Excretory gland
   c. Absorbatory gland
   d. **Exocrine gland**

176) The secretory tissue within the mammary gland is a grapelike structure called:
   a. **Alveoli**
   b. Clitoris
   c. Glanu cistern
   d. Annular ring

177) The California Mastitis Test (CMT) asks that you used only __________ milk.
   a. Colostrum
   b. Milk after dry-off
   c. The first stream during milking
   d. **The 2nd stream during milking**

178) How many cc’s of milk is required for the CMT?
   a. 6 cc
   b. 4 cc
   c. **2 cc**
   d. ½ cc

179) The CMT should be read within __________.
   a. 10 sec
   b. **20 sec**
   c. 30 sec
   d. 40 sec

180) What is the healthiest range for somatic cell counts?
   a. 400,000-1,200,000
   b. 200,000-400,000
   c. **0-200,000**
   d. 5,000,000+

181) If the CMT has a somatic cell count of 1,200,000 to 5,000,000 what is the interpretation?
   a. **Serious mastitis**
   b. Subclinical mastitis
   c. Negative (healthy)
   d. None of the above

182) What does HACCP stand for?
   a. High Altitude Computer Control Protocol
   b. High Aptitude Critical Consideration and Punctuality
   c. Help Animals in Confined Conditions and Preserves
   d. **Hazard Analysis and Critical Control Points**
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183) Milk must be held at 191 degrees F for ______________ to be considered pasteurized

a. 30 minutes
b. 1 second
c. 2 seconds
d. 5 minutes

184) According to HACCP, what is a receiving station?

a. Where supplies are received
b. Where trucks receive milk
c. Anywhere raw milk is received, handled, stored, etc
d. Where cows enter to be milked

185) 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

186) 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 __________ minutes.

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

187) Milk protein allergies are a form of milk intolerance. These generally occur only in infants and is usually outgrown by:

a. 6 month of age
b. 12 months of age
c. 18 months of age
d. 24 months of age

188) Low levels of the enzyme lactase may lead to lactose intolerance. Symptoms of lactose intolerance include ALL of the following EXCEPT:

a. Headaches
b. Nausea
c. Diarrhea
d. Abdominal cramps

189) The maximum moisture content of Cheddar cheese is:

a. 12%
b. 23%
c. 30%
d. 39%

190) An example of an extra hard cheese is:

a. Parmesan
b. Muenster
c. Ricotta
d. Brie
191) To add the mold to the blue cheese it is mainly:
   a. **Injected into the cheese**
   b. Grown on the cheese
   c. Mixed in the whey mixture
   d. None of the above

192) What is the average fat content of Brie?
   a. 15%
   b. 30%
   c. 45%
   d. 65%

193) Cream cheese is different from cottage cheese because:
   a. Cream cheese is an acid curd and cottage cheese is not
   b. Cream cheese is made from cows’ milk and cottage cheese is not
   c. **Cream cheese requires a started culture of bacteria and cottage cheese does not**
   d. All of the above are true for both Cream cheese and cottage cheese

194) Gouda can be described by all of the following except:
   a. Semi-hard
   b. Yellow colored
   c. Rind coating
   d. **Tart flavor**

195) Monterey Jack cheese has a maximum moisture content of _________% 
   a. 24
   b. 36
   c. 44
   d. 60

196) To make Mozzarella cheese the pasteurized milk is curded at __________ degrees F.
   a. 45
   b. **88**
   c. 145
   d. 190

197) The advantage of making processed cheese is:
   a. Better taste
   b. Marketing
   c. **Extended shelf-life**
   d. All of the above

198) The current U.S. per capita consumption of milk is approximately _____ gallons per year.
   a. 15
   b. **20**
   c. 25
   d. 28
199) Today, an average dairy cow produces approximately ____ quarts of milk per cow annually.
   a. 5500
   b. 6500
   c. 6800
   d. **8800**

200) In what year were Federal milk-marketing orders reformed?
   a. 1995
   b. **2000**
   c. 2002
   d. 2004