

1. Rennet is the crude preparation or extract obtained from this part of calf
  - (A) Rumen
  - (B) Reticulum
  - (C) Omasum
  - (D) Abomasum
  - (E) Answer not known
  
2. In Cheddar cheese preparation, addition of Calcium chloride favours
  - (A) Standardization process
  - (B) Rennet action
  - (C) Homogenisation
  - (D) Starter action
  - (E) Answer not known
  
3. Which one of the following cheeses is not a swiss-type cheese?
  - (A) Alpine Creamy cheese
  - (B) Appenzeller cheese
  - (C) Cottage cheese
  - (D) Emmental cheese
  - (E) Answer not known
  
4. Which one of the following cheeses does not belong to Pasta filata category?
  - (A) Mozzarella
  - (B) Provolone
  - (C) Cheddar
  - (D) Scamorza
  - (E) Answer not known
  
5. Which one of the following microorganisms is not used as a source of microbial rennet?
  - (A) Aspergillus Oryzae
  - (B) Rhizomucor Miehei
  - (C) Staphylococcus aureus
  - (D) Endothia Parasitica
  - (E) Answer not known

6. Cheese is the product obtained from milk by coagulating case in with the help of rennet in presence of
- (A) Sulphuric acid (B) Lactic acid  
(C) Hydrochloric acid (D) Malic acid  
(E) Answer not known
7. Which of the following cheese is not a bacterial ripened cheese?
- (A) Cheddar cheese (B) Swiss cheese  
(C) Cottage cheese (D) Roquefort cheese  
(E) Answer not known
8. Which of the following are referred as “Heart of Cheese”?
- (A) Rennet (B) Starter culture  
(C) Cheddaring (D) Curing process  
(E) Answer not known
9. Excessive heat treatment of cheese milk results in precipitation of a part of calcium salts and this can be compensated by the addition of calcium chloride at the rate of
- (A) 1 to 3% (B) 0.1 to 0.3%  
(C) 0.01 to 0.03% (D) 0.5 to 1%  
(E) Answer not known

10. The standard method for the detection of cow's milk in goat or sheep milk is based on the separation of \_\_\_\_\_ after digestion of the sample by plasmin.
- (A) Alpha casein peptide                      (B) Beta casein peptide  
(C) Gamma casein peptide                    (D) Delta casein peptide  
(E) Answer not known
11. The ideal acidity (%) of sweet dahi is
- (A) 0.5%    (B) 0.3%  
(C) 0.7%    (D) 1.2%  
(E) Answer not known
12. The kind of action exhibited by the yoghurt bacteria may be referred to as
- (A) Associative action                              (B) Parasitic action  
(C) Antibiosis                                        (D) Mutually neutral  
(E) Answer not known
13. In Acidophilus milk preparation the starter culture Lactobacillus Acidophilus inoculated at the level of
- (A) 1-2%    (B) 2-2.5%  
(C) 3-5%    (D) 6-7%  
(E) Answer not known

14. Shrikhand is prepared by using sweet buffalo milk which has been standardized to \_\_\_\_\_ % fat.
- (A) 4% (B) 5%  
(C) 6% (D) 7%  
(E) Answer not known
15. The type of yoghurt produced after fermentation in bulk and then the coagulum is broken prior to cooling and packaging is
- (A) Set yoghurt (B) Frozen yoghurt  
(C) Stirred yoghurt (D) Plain yoghurt  
(E) Answer not known
16. The compounds like esters, acetaldehyde and ketones are the cause for this defect in cheese
- (A) Bitter flavour (B) Fruity flavour  
(C) Rancid flavour (D) Unclean flavour  
(E) Answer not known
17. Excessive acidity and / or moisture in cheese before curing causes this defect in cheese
- (A) Rind rot (B) Mottled  
(C) Rubbery (D) Greasy  
(E) Answer not known

18. Atomization the process forming droplets fine enough to dry quickly is related with
- (A) Condensed milk (B) Ghee  
(C) Milk powder (D) Whey protein isolate  
(E) Answer not known
19. As per FSSR 2011, the Moisture content in milk powder should not exceed
- (A) 3% (B) 10%  
(C) 20% (D) 5%  
(E) Answer not known
20. Cooked flavour defect in dairy products are attributed to the following which are formed during heat treatment.
- (A) Sulfhydryl compound  
(B) Compounds containing hydroxyl group  
(C) Compounds containing - COOH group  
(D) Peroxides  
(E) Answer not known
21. 'Food grade' plastics are used for packing of milk and milk products to avoid
- (A) Spoilage by microorganism  
(B) Toxicity  
(C) Leakage  
(D) Contamination  
(E) Answer not known

22. \_\_\_\_\_ Technology is used as the enclosure of food product, in gas barrier materials
- (A) Modified Atmospheric Packaging (MAP)
  - (B) Vacuum packaging technology
  - (C) Poly Clip System
  - (D) All the (A), (B) and (C)
  - (E) Answer not known
23. Irradiation of packaging material may generate
- (A) Halogenated Polymers
  - (B) Oxygen
  - (C) Antioxidants
  - (D) Catalyzing compounds
  - (E) Answer not known
24. The most widely used plastic material for laminated films sheets is
- (A) Polymer – 10
  - (B) Polyamide – 6
  - (C) Nylon – 6
  - (D) Polymer – 1
  - (E) Answer not known
25. Example of a natural anti microbial polypeptide
- (A) E-Imazalil
  - (B) Parabean
  - (C) Chiteri
  - (D) E-Polylysine
  - (E) Answer not known

26. Example of a metallic oxide nano particles used to produce nano coatings on polymeric film
- (A) MgO (B) CaO  
(C) Na<sub>2</sub>PO<sub>4</sub> (D) CaO<sub>2</sub>  
(E) Answer not known
27. Whey Protein Isolate (WPI) along with \_\_\_\_\_ in the film matrix leads to reduction in maximum load without affecting water permeability.
- (A) Sodium Caseinate (B) Calcium Caseinate  
(C) Glycerol (D) Chitin  
(E) Answer not known
28. The Copolymer ethylene which has excellent oil and grease resistance and lower haze and high moisture vapour permeability is
- (A) Ethylene acrylic acid  
(B) Ionomer  
(C) Polystyrene  
(D) Low density polyethylene  
(E) Answer not known
29. The common components of intelligent packaging system is
- (A) EVOH Ethylene Vinyl Alcohol Copolymer  
(B) Immobilized Enzymes  
(C) Ethylene  
(D) Carbon di-oxide  
(E) Answer not known

30. The enzyme immobilized in conjunction with catalase for use as an oxygen scavenger is
- (A) Lactase (B) Xanthooxidase  
(C) Amylase (D) Glucose Oxidase  
(E) Answer not known
31. The adhesives used with ungammed of labels for high speed labelling of metal and glass container is
- (A) Sorbitate (B) Corn Syrup  
(C) Dextrine (D) Glucones  
(E) Answer not known
32. The Adhesive that remains permanently and aggressively taking in the dry form and has the ability to bond instantaneously to a wide variety of materials is
- (A) Solvent based adhesives  
(B) Pressure sensitive adhesives  
(C) Hot melt adhesives  
(D) Water borne adhesives  
(E) Answer not known
33. IMLS is differentiated from conventional glue on labels by the
- (A) Heat seal coat on the backside of IML stock  
(B) Cold seal coat on the backside of IML  
(C) Adhesive seal on the backside of IML  
(D) Solvent seal on the backside of IML  
(E) Answer not known



34. The Finger prints of flow refers to
- (A) Bingham model (B) Shear ratio  
(C) Young's modulus (D) Extensograms  
(E) Answer not known
35. The time of observation dividedly the time of deformation is termed
- (A) Deborah number (B) Maxwell number  
(C) Reynold's number (D) Faringraph number  
(E) Answer not known
36. Under turbulent conditions the flow behaviour of Newtonian and non Newtonian liquids tends to become indistinguishable and the number which indicates the onset of turbulence is termed
- (A) Critical Reynolds number  
(B) Critical Richmonds number  
(C) Critical Rectangles number  
(D) Critical Ritherdsons number  
(E) Answer not known
37. The hydrocolloid which has a long backbone of D-mannose as small side chains D-galactose making it highly stable and viscous in solution without precipitation is
- (A) Agar (B) Guar Gum  
(C) Locust Bean (D) Amylose  
(E) Answer not known

38. There is only one gum used in the food industry which is not a carbohydrate and is hydrophobic and it is
- (A) Algin (B) Quince  
(C) Tragacanth (D) Chicle  
(E) Answer not known
39. The sweetner which depresses the freezing point of mix twice as much as the same weight as sucrose is
- (A) Corn syrup (B) Glucose  
(C) Maltose (D) Rabinose  
(E) Answer not known
40. In concentrated milk the final size of the lactose crystals in one product should not exceed
- (A) 15  $\mu m$  (B) 20  $\mu m$   
(C) 8  $\mu m$  (D) 10  $\mu m$   
(E) Answer not known
41. Undermost conditions milk behaves as a Newtonian liquid which means
- (A) Shear stress is proportional to shear rate  
(B) Shear stress is inversely proportional to shear rate  
(C) Shear stress and rate are equal  
(D) Shear rate and shear stress is disproportional  
(E) Answer not known

42. Heat treatment of cheese milk to temperature of 65°C exerts a detrimental effect on curd and this is called
- (A) Syneresis (B) Hysteresis  
(C) Soft Curd (D) Tallowiness  
(E) Answer not known
43. Biological Oxygen Demand (BOD) removal by low rate trickling Filters is about
- (A) 30% (B) 60%  
(C) 70% (D) 85%  
(E) Answer not known
44. The substances that are added as water conditioners which help in dissolving scale and lime deposits and keeping the detergent solution clear are called as
- (A) Poly electrolytes (B) Chelating agents  
(C) Oxidizers (D) Fillers  
(E) Answer not known
45. Which one of the following statements is incorrect as far as iodophors as a sanitizing agent?
- (A) They are effective against yeast and mould  
(B) They are non irritating  
(C) Effective at alkaline pH and elevated temperatures  
(D) Low in toxicity  
(E) Answer not known

46. The etiological agent and components associated with the defect ropiness in milk are \_\_\_\_\_ and \_\_\_\_\_ respectively.
- (A) *Streptococcus lactis*; Fat and Protein  
 (B) *Escherichia coli*; Lactose and minerals  
 (C) *Alcaligenes Viscolactis*; Gums and mucins  
 (D) *Mycobacterium tuberculosis*; Fat and fat soluble vitamins  
 (E) Answer not known
47. The etiological agent for the disease Q fever is
- (A) *Coxiella burnetti* (B) *Campylobacter Jejuni*  
 (C) *Nocardia asteroides* (D) *Saccharomyces fragilis*  
 (E) Answer not known
48. The defect "Sweet Curdling" associated with mica and cream is due to the production of \_\_\_\_\_ enzyme by bacteria.
- (A) Rennin like (B) Pepsin like  
 (C) Amylase like (D) Trypsin like  
 (E) Answer not known
49. The fruity flavour defect in milk and butter held at low temperature is caused by \_\_\_\_\_ organism and the compounds responsible for the defective flavours are \_\_\_\_\_ and \_\_\_\_\_ respectively.
- (A) *Pseudomonas nigrifaciens*; acetaldehyde and glycol  
 (B) *Pseudomonas fragi*; butylene glycol and methyl butanol  
 (C) *Pseudomonas fragi*; ethyl butyrate and ethyl hexanoate  
 (D) *Pseudomonas aeruginosa*; ethyl butyrate and ethyl hexanoate  
 (E) Answer not known

50. Hotis test is used to differentiate which among the two organisms?
- (A) Streptococcus lactis and Streptococcus cremoris
  - (B) Staphylococcus aureus and Streptococcus agalactiae
  - (C) Lactobacillus acidophilus and lactobacillus bulgaricus
  - (D) Lactobacillus acidophilus and lactobacillus casei
  - (E) Answer not known
51. Which one of the following factor is incorrect with respect to ideal growing requirements for moulds?
- (A) Low pH
  - (B) Low water activity
  - (C) Absence of air
  - (D) High osmotic pressure
  - (E) Answer not known
52. Wet mount method of examining the microorganisms help in detecting \_\_\_\_\_ of microorganisms.
- (A) Fermentation ability
  - (B) Motility
  - (C) Pathogenicity
  - (D) Probiotic property
  - (E) Answer not known
53. Which one among the following bacteria have the shortest generation time?
- (A) Staphylococcus aureus
  - (B) Escherichia coli
  - (C) Bacillus megaterium
  - (D) Streptococcus lactis
  - (E) Answer not known

54. Which one of the following bacteria can be stained by Ziehl – Neelsen staining method?
- (A) Streptococcus (B) Mycobacterium  
(C) Bacillus (D) Clostridium  
(E) Answer not known
55. Which one of the following staining methods does not distort cells due to heat fixing?
- (A) Gram staining (B) Negative staining  
(C) Acid fast staining (D) Endospore staining  
(E) Answer not known
56. Which type of haemolysis is produced by staphylococcus aureus in blood agar plate?
- (A) Alpha haemolysis (B) Beta haemolysis  
(C) Gamma haemolysis (D) Delta haemolysis  
(E) Answer not known
57. Incorporated as a part of cleaning solutions, which one of the following substances possesses properties such as lower surface tension, have good wetting, penetrating, emulsifying, solubilizing and dispersing abilities
- (A) Builders (B) Surfactants  
(C) Enzymes (D) Oxidizers  
(E) Answer not known

58. The disease summer mastitis is caused by
- (A) *Staphylococcus aureus*                      (B) *Corynebacterium pyogenes*  
(C) *Streptococcus agalactiae*                (D) *Escherichia Coli*  
(E) Answer not known
59. In Horrell – Elliker test, (starter activity test) the quantum of inoculum, temperature and duration of incubation respectively are
- (A) 5%, 40°C and 3 h                              (B) 3%, 37°C and 3.5 h  
(C) 1%, 35°C and 5 h                              (D) 2%, 37°C and 3 h  
(E) Answer not known
60. Which one of the following methods facilitate phage attack in starter culture?
- (A) Growing starters in calcium rich medium  
(B) Rotation of starters  
(C) Immunizing starters by treatment with attenuated phages  
(D) Renneting milk within 30 minutes of infection  
(E) Answer not known
61. *Streptococcus thermophilus* can be fit into which one of the following groups?
- (A) Lactic    (B) Pyogenic  
(C) Viridans    (D) Enterococcus  
(E) Answer not known

62. Which one of the following substances is not used as a cryoprotective agent during freeze drying of starter culture?
- (A) Sucrose (B) Sorbitol  
(C) Amino acids (D) Sodium hydroxide  
(E) Answer not known
63. The alcohol content of Taette (Scandinavian ropy milk) is not more than
- (A) 1.5% (B) 5%  
(C) 3% (D) 0.3 to 0.5%  
(E) Answer not known
64. Which one of the following statement is correct?
- (i) Fat globule of colostrum are large and Irregular.  
(ii) Fat of colostrum contains eight times Vit-A than normal butter fat.  
(iii) Fat globule of colostrum and milk are same.  
(iv) Globulins of colostrum will be absorbed in the intestinal cell wall by newly borne calves within 24-36 hrs.
- (A) (i) is correct (B) (i), (ii) and (iii) are correct  
(C) (i), (ii) and (iv) are correct (D) (iv) only correct  
(E) Answer not known
65. Average lactose content in milk is \_\_\_\_\_%.
- (A) 4.0 (B) 3.5  
(C) 4.9 (D) 4.2  
(E) Answer not known



66. Hormone responsible for synthesis of milk in upper cells is
- (A) Adrenaline (B) Somatotropin  
(C) Oxytoxin (D) Insulin  
(E) Answer not known
67. Which of the following statements are not true about “Clean Milk”?
- (i) Milk produced and handled under hygienic conditions.  
(ii) Contains large number of bacteria.  
(iii) Free from hazardous chemical residues and possess good keeping quality.
- (A) (i) only (B) (i) and (ii) only  
(C) (ii) only (D) (ii) and (iii) only  
(E) Answer not known
68. Which one of the following is correctly matched?
- (A) Sunandini – Central Institute for Research on Cattle, Meerut  
(B) Frieswal – Indo-Swiss project, Kerala  
(C) Karan Swiss – National Dairy Research Institute, Karnal  
(D) Vrindavani – Livestock Development Board, Tamilnadu  
(E) Answer not known
69. The total milk solids content of Holstein – Friesian breed is
- (A) 12.2 (B) 13.1  
(C) 15.0 (D) 14.0  
(E) Answer not known

70. \_\_\_\_\_ is the lightest and variable constituent of milk.
- (A) Protein (B) Carbohydrate  
(C) Fat (D) Vitamins  
(E) Answer not known
71. Refractive index of milk at 20°C is
- (A) 1.35 (B) 1.10  
(C) 1.20 (D) 1.25  
(E) Answer not known
72. Choose the right matches among type based on the specific gravity.
1. Water – 0.93 – 0.95
  2. Cow milk – 1.028 – 1.030
  3. Buffalo milk – 1.030 – 1.032
  4. Skim milk – 1.038 – 1.040
- (A) 1 and 2 are correct (B) 2 and 4 are correct  
(C) 2 and 3 are correct (D) 1 and 4 are correct  
(E) Answer not known

73. Which of the following statement(s) is/are correct?
- (i) Freezing point of any solution is proportional to osmotic pressure.
  - (ii) Osmotic pressure and freezing point of milk is controlled by salts and lactose.
  - (iii) Addition of water will alter osmotic pressure and freezing point.
- (A) (i) and (ii) only correct                      (B) (i) and (iii) only correct  
(C) (i), (ii) and (iii) are correct              (D) (ii) and (iii) only correct  
(E) Answer not known
74. The principal constituent of milk that leads to freezing point depression is
- (A) Fat    (B) Casein  
(C) Whey proteins                                      (D) Lactose  
(E) Answer not known
75. The minimum weight to be attained by a cross breed animal for breeding is \_\_\_\_\_ kg
- (A) 200    (B) 220  
(C) 250    (D) 300  
(E) Answer not known
76. \_\_\_\_\_ reduces milk yield and also increases fat content of milk.
- (A) Acidosis    (B) Mastitis  
(C) Ketosis    (D) Brucellosis  
(E) Answer not known

77. Calf hood vaccination against brucellosis should be between the age of
- (A) 1-3 months (B) 4-8 months  
(C) 8-10 months (D) 2 to 5 months  
(E) Answer not known
78. Read the following statements about milk fever. Find the statement(s) that are correct.
- (i) Occur at the time of parturition.  
(ii) Caused by hypocalcemia.  
(iii) The plasma level of magnesium also decrease.  
(iv) Mature dairy cows are most commonly affected
- (A) (i), (ii), (iii) are correct (B) (i), (iii), (iv) are correct  
(C) (i), (ii), (iv) are correct (D) (ii), (iii) and (iv) are correct  
(E) Answer not known
79. Which one of the following matting system is adopted to gain the advantage of heterosis is promoting individual merit of dairy cattle?
- (A) Out crossing (B) Cross breeding  
(C) Live breeding (D) Grading up  
(E) Answer not known

80. Which of the following statements are correct with respect to Foot and Mouth Disease (FMD)?
- (i) Caused by picorna virus
  - (ii) Causes 1-2% mortality in calves below 3 months of age.
  - (iii) The virus is resistant to alcohol.
  - (iv) FMD has been eradicated from India.
- (A) (i) and (ii) are correct                      (B) (i) and (iii) are correct  
(C) (i), (ii) and (iii) are correct              (D) (iv) alone correct  
(E) Answer not known
81. Pink eye in cattle is caused by
- (A) Morexella basis                                      (B) Histophilus  
(C) Haemophilus                                        (D) Pasterulla  
(E) Answer not known
82. Most pathogenic Babesia sp. in Bonine is/are
- (A) Babesiabigemine                                      (B) Babesia basis  
(C) Babesia caballi                                        (D) Babesia divergeas  
(E) Answer not known
83. Drug of choice for Theileriosis is/are
- (A) Diminazene aceturate  
(B) Buparvaquone  
(C) Diminazene aceturate as Buparvaquone  
(D) Atovaquone  
(E) Answer not known

84. The product prepared from pre-concentrating a mixture of whey and skim milk in a vacuum evaporator is
- (A) Plain condensed whey                      (B) Whey vit  
(C) Carbonated whey vit                      (D) Whey paste  
(E) Answer not known
85. Microorganism used to produce wheyvit is
- (A) *Saccharomyces cerevisiae*  
(B) Lactic acid bacteria  
(C) *Lactobacillus acidophilus*  
(D) *Lactobacillus bulgaricus*  
(E) Answer not known
86. Assertion [A] : Steam jacketed vat is recommended for casein production.
- Reasons [R] : Casein is heat sensitive.
- (A) [A] is true but [R] is false  
(B) Both [A] and [R] are true ; and [R] is the correct explanation of [A]  
(C) [A] is false, [R] is true  
(D) Both [A] and [R] are true ; and [R] is not the correct explanation of [A]  
(E) Answer not known
87. Rennet casein is not used in the manufacturing of
- (A) Jewellery                                      (B) In medicines  
(C) Adhesive                                      (D) Films  
(E) Answer not known

88. \_\_\_\_\_ used as a fat replacer in processed cheese, which reduces its hardness.
- (A) Milk fats (B) Whey protein concentrate  
(C) Skimmed milk (D) Rennin  
(E) Answer not known
89. Which is the most common whey protein?
- (A) Lactoglobulin (B) Albumin  
(C) Ovalbumin (D) Casein  
(E) Answer not known
90. Name the organism added during the process of producing cultured buttermilk to increase the flavor?
- (A) *Leuconostoc* sp. (B) *Bacillus* sp.  
(C) *Acinetobacter* sp. (D) *Achromobacter* sp.  
(E) Answer not known
91. Name the variety of cheese produced from sour shine milk which is blue in color and ripened with mold?
- (A) Mozeralla (B) Cheddar  
(C) Gammelost (D) Cottage cheese  
(E) Answer not known
92. Name the product obtained after separation of the curd when milk is coagulated with acid or proteolytic enzymes
- (A) Shine milk (B) Casein  
(C) Whey (D) Cheese  
(E) Answer not known

93. Addition of Acid to milk results in the disassociation of \_\_\_\_\_ complex where the casein begins to precipitate.
- (A) Calcium caseinate calcium phosphate complex
  - (B) Sodium caseinate calcium phosphate complex
  - (C) Calcium caseinate calcium sulphate complex
  - (D) Calcium caseinate sodium sulphate complex
  - (E) Answer not known
94. What is the reason behind browning in casein manufacturing with respect to fat?
- (A) Because of high heat
  - (B) Presence of excess fat while drying
  - (C) Reaction between sugars and protein
  - (D) Presence of protein
  - (E) Answer not known
95. The functionality of the processed cheese spreads could be enhanced by adding
- (A) Buttermilk concentrate
  - (B) Dairy fats
  - (C) Whey protein
  - (D) Skimmed milk
  - (E) Answer not known



96. Which of the following statements about whey protein is/are correct?
- (i) precipitate at pH 4.6
  - (ii) more water soluble than caseins
  - (iii) have good gelling properties and poor whipping properties
  - (iv) Prone to heat denaturation
- (A) (i), (ii) and (iii) are correct      (B) (i), (ii) and (iv) are correct  
(C) (i), (iii) and (iv) are correct      (D) (ii), (iii) and (iv) are correct  
(E) Answer not known
97. The product obtained by separating washing and drying the acid precipitated coagulate of skimmed milk is
- (A) Rennet casein      (B) Co-precipitate  
(C) Industrial casein      (D) Edible casein  
(E) Answer not known
98. Sweet whey is preferred over acid whey in the manufacture of lactose due to its
- (A) High lactose and low ash content
  - (B) Low lactose and low ash content
  - (C) Low lactose and high ash content
  - (D) Moderate lactose and low ash content
  - (E) Answer not known

99. \_\_\_\_\_ whey containing 70 percent total solids is used in production of chicken feed.
- (A) Sweetened condensed whey      (B) Plain condensed whey  
(C) Yeast whey      (D) Whey paste  
(E) Answer not known
100. Carbohydrates present in Dairy waste water can stimulate the growth of
- (A) Bacteria      (B) Fungi  
(C) Both bacteria and fungi      (D) Bacteria and protozoa  
(E) Answer not known
101. In Anaerobic treatment at ETP \_\_\_\_\_ % of organic matter can decomposed to produce biogas.
- (A) 95%      (B) 70%  
(C) 80%      (D) 85%  
(E) Answer not known
102. The Chemical Oxygen Demand (COD) in Dairy Waste water can be determined in about
- (A) 3 hours      (B) 6 hours  
(C) 3 days      (D) 5 days  
(E) Answer not known

103. Permanent Hardness of water in a Dairy plant is removing by adding
- (A) Sodium carbonate (B) Sodium chloride  
(C) Potassium Chloride (D) Potassium Carbonate  
(E) Answer not known
104. After rinsing, the bottles are kept in a cold chlorine solution at \_\_\_\_\_ ppm for some time.
- (A) 10 to 90 ppm (B) 300 to 400 ppm  
(C) 100 to 200 ppm (D) 450 to 550 ppm  
(E) Answer not known
105. All type of sanitizers and detergents can be used for \_\_\_\_\_ material.
- (A) Paper corrugated boards (B) Stainless steel  
(C) Tinned containers (D) Plastics  
(E) Answer not known
106. Chlorine solution at 15 - 20°C with \_\_\_\_\_ ppm of available chlorine is used for a contact time of 1 to 2 minutes for sanitation of vessels.
- (A) 250 to 350 ppm (B) 150 to 200 ppm  
(C) 90 to 100 ppm (D) 400 to 600 ppm  
(E) Answer not known

107. Drums for dried milk production are normally horizontal, hollow steel cylinder with
- (A) 90 to 360 cm length and 60 to 120 cm diameter
  - (B) 90 to 180 cm length and 60 to 120 cm diameter
  - (C) 90 to 360 cm length and 60 - 100 cm dia
  - (D) 90 to 360 cm length and 60 - 220 cm diameter
  - (E) Answer not known
108. Toned milk should contain a minimum of \_\_\_\_\_ and \_\_\_\_\_.
- (A) 3% fat and 8.5% SNF
  - (B) 3.5% fat and 8.5% SNF
  - (C) 4.5% fat and 8.5% SNF
  - (D) 3% fat and 9.0% SNF
  - (E) Answer not known
109. Pasteurization of cream refers to the process of heating every particle of cream not less than
- (A) 60°C and holding atleast 20 minutes
  - (B) 71°C and holding atleast 20 minutes
  - (C) 80°C and holding atleast 20 minutes
  - (D) 74°C and holding atleast 20 seconds
  - (E) Answer not known
110. In Ultra High Temperature (UHT) method of sterilization the milk is heated upto
- (A) 115°C for few seconds
  - (B) 145°C for few minutes
  - (C) 135° – 150°C for few seconds
  - (D) 145° – 160°C for few seconds
  - (E) Answer not known

111. After homogenization, the milk fat globules are subdivided into

- (A) 3 microns
- (B) No change
- (C) 2 microns and less than 2 microns
- (D) More than 3 microns
- (E) Answer not known

112. Flow Diversion Value (FDV) is operated by

- (A) Air pressure of milk
- (B) Temperature of milk
- (C) Both (A) and (B)
- (D) Volume of milk
- (E) Answer not known

113. “Cheddaring” is the combined operations of

- (1) Packing
- (2) Turning
- (3) Piling
- (4) Repiling
- (A) 1, 2 and 4 alone correct
- (B) 2, 3 and 1 not correct
- (C) 3, 4 and 1 correct
- (D) 1, 2, 3, 4 correct
- (E) Answer not known

114. Milk processing plant generally should be located at

1. Near Highway and railway
  2. Closed to marketing and consumption area
  3. Remote and village area
- (A) 1 alone correct (B) 2 alone correct  
(C) Both 1 and 2 is correct (D) 3 alone correct  
(E) Answer not known

115. Planning of dairy plant layout is a joint venture with following personnels.

1. Architects
  2. Dairy manager
  3. Dairy Engineers
  4. Dairy administrations
- (A) 1 and 2 (B) 2 and 3  
(C) 3 and 4 (D) 1, 2, 3, 4  
(E) Answer not known

116. The temperature of Alkaline solution in CIP should be atleast

- (A) 70°C (B) 80°C  
(C) 60°C (D) 90°C  
(E) Answer not known

117. Milk fat in equipment are cleaned by

- (A) Acid detergent (B) Alkaline detergent  
(C) Hot water rise (D) Cold water rinse  
(E) Answer not known

118. The \_\_\_\_\_ constituent of milk, occurs nowhere other than in milk.
- (A) Casein (B) Whey protein  
(C) Lactose (D) Fat  
(E) Answer not known
119. Lactose is used as a seed material to induce \_\_\_\_\_ in certain dairy products.
- (A) Partially saturated solution (B) Fine crystal formation  
(C) Fine lactose glass formation (D) Fully saturated solution  
(E) Answer not known
120. The \_\_\_\_\_ contents differ among breeds in the same direction but to a smaller extent than fat content, whereas the ash content is relatively constant.
- (A) Protein and lactose (B) Protein and fat  
(C) Fat and lactose (D) Fat and minerals  
(E) Answer not known
121. As per food safety and standards (Food products standards and Food additives) Regulations, 2011 the total urea content of milk shall not be more than
- (A) 200 ppm (B) 500 ppm  
(C) 700 ppm (D) 900 ppm  
(E) Answer not known

122. Which of the following statement(s) are correct with respect to chemical quality assessment of raw milk?

- (i) Sample should be collected after thorough mixing.
  - (ii) Samples has to be delivered on the same day for testing.
  - (iii) Labelling of samples is mandatory.
  - (iv) Sampling procedure differs according to the nature of material required.
- (A) (i), (ii) and (iii) are correct  
(B) (i), (iii) (iv) are correct  
(C) (i), (ii) and (iv) are correct  
(D) (i), (ii), (iii) and (iv) are correct  
(E) Answer not known

123. Most commonly used preservation in milk for bacteriological, physical and chemical analysis

- (A) Formalin (B) DMSO  
(C) Boric acid (D) Benzoic acid  
(E) Answer not known

124. The general grade Agmark Green Label ghee contain \_\_\_\_\_% of free fatty acids.

- (A) Not more than 1.5 (B) Not more than 2.5  
(C) Not more than 3 (D) Not more than 3.5  
(E) Answer not known



125. According to Bureau of Indian Standard, the coliform count should not be more than \_\_\_\_\_/ml for satisfactory quality butter.
- (A) 1 (B) 5  
(C) 10 (D) 15  
(E) Answer not known
126. Which one of the following chemical is uses to detect adulteration of milk powder in milk?
- (A) Potassium permanganate (B) Sodium hydroxide  
(C) Formalin (D) Sodium oxide  
(E) Answer not known
127. The most common milk adulterants specified under carbohydrates are
- (1) Sugar, glucose, starch, maltodextrin  
(2) Sugar, urea, starch, sodium alginate  
(3) Sugar, pectin, urea, formalin  
(4) Sugar, gelatin, glucose, starch
- (A) (1), (2) is correct  
(B) (2), (3) is correct  
(C) (2) is correct  
(D) (1) is correct  
(E) Answer not known

128. The International Standards in the Indian context, the Codex Committee on milk and milk products was established in \_\_\_\_\_ to cater to new scientific and technological developments and accordingly revise the existing standards.
- (A) 1990 (B) 1991  
(C) 1992 (D) 1993  
(E) Answer not known
129. \_\_\_\_\_ coordinates and promotes codex activities in India in association with the National Codex Committee and facilitates India's input to the work of codex through an established consultation process.
- (A) Government of India (B) FSSAI  
(C) MMPO (D) PFA  
(E) Answer not known
130. To eliminate the problems and confusion in the trade of food items including milk, a thought of uniform standards was evolved, which has been culminated in the form of
- (A) BIS (B) AGMARK  
(C) CAC (D) FSSAI  
(E) Answer not known
131. \_\_\_\_\_ method a specially designed mercury pipette is used to calibrate the butyrometers.
- (A) BIS (B) MMPO  
(C) AGMARK (D) Zeal  
(E) Answer not known

132. Test used to indicate the mineral balance and stability of milk is
- (A) Alcohol test
  - (B) Clot on boiling test
  - (C) Alizarin-alcohol test
  - (D) Methylene blue reduction test
  - (E) Answer not known
133. The gravimetric method using \_\_\_\_\_ is used to quantify the fat percentage in milk.
- (A) Gerber method
  - (B) Milk-o-scanner
  - (C) Rose GOTTLIEB method
  - (D) Modified gerber's method
  - (E) Answer not known
134. The mastitis milk has \_\_\_\_\_ pH.
- (A) < 6.0
  - (B) > 6.0
  - (C) > 6.2
  - (D) > 6.8
  - (E) Answer not known
135. Raddish pink colour of butter is due to the growth of
- (A) Geotrichum candidum
  - (B) Phoma species
  - (C) Mucor species
  - (D) Fubarium
  - (E) Answer not known
136. According to AGMARK standard, the general grade ghee, the Baudouin test should be
- (A) Minimum
  - (B) Lower than 5
  - (C) Negative
  - (D) Lower than 7
  - (E) Answer not known

137. The amount of lactoperoxidase enzyme required for the preservation of raw milk is \_\_\_\_\_ mg/liter, much lower than its concentration in cow milk (30 mg/liter).
- (A) 0.5 to 1 (B) 1 to 1.5  
(C) 1.5 to 2 (D) 2 to 2.5  
(E) Answer not known
138. BIS Act establishing in the year
- (A) 1954 (B) 1986  
(C) 1996 (D) 1985  
(E) Answer not known
139. Prevention of Foods Adulteration (PFA) Act was initiated during the year
- (A) 1954 (B) 1955  
(C) 1945 (D) 1947  
(E) Answer not known
140. As per BIS, the maximum moisture content of milk powder should be
- (A) 2% (B) 4%  
(C) 6% (D) 8%  
(E) Answer not known
141. As per BIS, the maximum aerobic plate count of paneer should be
- (A)  $2.5 \times 10^5$  cfu/g (B)  $3.5 \times 10^5$  cfu/g  
(C)  $4.5 \times 10^5$  cfu/g (D)  $5.0 \times 10^5$  cfu/g  
(E) Answer not known

142. Ghee can be store for \_\_\_\_\_ at 21°C.
- (A) 6 to 12 months (B) 1-2 weeks  
(C) 1-2 month (D) 6-12 weeks  
(E) Answer not known
143. Rapid cooling of hot ghee after clarification cause \_\_\_\_\_ texture defect.
- (A) Rancid (B) Metallic  
(C) Oils (D) Grease  
(E) Answer not known
144. Clarification temperature for ghee making is
- (A) 110-120°C (B) 80-85°C  
(C) 135-150°C (D) 63-72°C  
(E) Answer not known
145. Paneer contain \_\_\_\_\_ fat.
- (A) 13.0 (B) 6.0  
(C) 26.0 (D) 45.3  
(E) Answer not known
146. Khoa yield from Buffalo milk is
- (A) 21-23% (B) 17-19%  
(C) 25-30% (D) 30-40%  
(E) Answer not known

147. Over run of khoa is due to

- (A) Sugar content
- (B) Moisture retained
- (C) Incorporation air
- (D) Salt content
- (E) Answer not known

148. Cow milk yield in chhana is

- (A) 15-17%
- (B) 24-26%
- (C) 20-22%
- (D) 22-24%
- (E) Answer not known

149. Traditional method of misti dahi prepared culture is inoculated at

- (A) 37°C
- (B) 40°C
- (C) 10°C
- (D) 25°C
- (E) Answer not known

150. Yield of paneer prepared from ultra filtration milk is \_\_\_\_\_ increased.

- (A) 10%
- (B) 20%
- (C) 25%
- (D) 35%
- (E) Answer not known

151. Frozen Indian dairy product

- (A) Ice cream
- (B) Kulfi
- (C) Lolly
- (D) Puddings
- (E) Answer not known

152. Plastic cream contains \_\_\_\_\_ milk fat %.
- (A) 68.20 (B) 25.00  
(C) 65.85 (D) 31.80  
(E) Answer not known
153. Mealy defect in butter due to
- (A) Incorrect neutralization of high acid cream with lime  
(B) Incorrect cooling and ageing of cream  
(C) Incorrect salting of butter  
(D) Incomplete working of two or more lactic butter  
(E) Answer not known
154. Ripening of cream beaten butter making \_\_\_\_\_ benefit.
- (A) Low buttermilk (B) No buttermilk  
(C) No fat loss in buttermilk (D) Low fat loss in buttermilk  
(E) Answer not known
155. NIZO process developed butter making is
- (A) Nigerias Institute of Zuivelondazock  
(B) Newslands Institute of Zuivelondazock  
(C) Norways Institute of Zuivelondazock  
(D) Netherlands Institute Voor Zuivelondazock  
(E) Answer not known

156. Curd content of Butter in ranges from \_\_\_\_\_ %.
- (A) 4 – 5% (B) 0.3 – 3.0%  
(C) 1 – 1.5% (D) 15.5 – 16.0%  
(E) Answer not known
157. Hardening room temperature \_\_\_\_\_ °C.
- (A) –12 to –45 (B) –34 to –45  
(C) –23 to –26 (D) –0 to +10  
(E) Answer not known
158. Emulsifier used in ice cream for
- (A) Reduce whipping time (B) Enhances flavour  
(C) Better body (D) Increase acceptability  
(E) Answer not known
159. During ageing of ice cream the following things are happen
- (A) Fat solidities and viscosity increase  
(B) Temperature increase and viscosity decreases  
(C) Freezing of mix and Hardening  
(D) Decrease is over run  
(E) Answer not known
160. Minimum Aging time for ice cream mix
- (A) 4 hrs (B) 6 hrs  
(C) 1.30 hrs (D) 12 hrs  
(E) Answer not known



161. Freezing point of ice cream

- (A) 0°F
- (B) 0°C
- (C) 27.5°F
- (D) 275°C
- (E) Answer not known

162. DIDF stands for

- (A) Dairy processing and Infrastructure Development Fund
- (B) Dairy products and Innovation in Dairy Fund
- (C) Dairy processing and Innovation Development Fund
- (D) Dairy products and Infrastructure Development Fund
- (E) Answer not known

163. Operation flood phase-I was supported by

- (A) EEC
- (B) EEG
- (C) AICTE
- (D) ICAR
- (E) Answer not known

164. Per capita availability of milk in Tamil Nadu during 2021-22 is

- (A) 270 grams
- (B) 362 grams
- (C) 278 grams
- (D) 944 grams
- (E) Answer not known

165. The fat percent of Toned Milk is

- (A) 4.5
- (B) 1.5
- (C) 3.0
- (D) 3.5
- (E) Answer not known

166. NPDD Stands for

- (A) National Policy for Dairy Development
- (B) Nutritional Policy for Dairy Development
- (C) National Programme for Dairy Development
- (D) Nutritional Programme for Dairy Development
- (E) Answer not known

167. Which one of the following is a constituent of fat globular membrane?

- (A) Phospholipids
- (B)  $\alpha$  - Lactalbumin
- (C)  $\beta$  - Lactoglobulin
- (D) Vitamin C
- (E) Answer not known

168. Lysozyme content of Buffalo milk is

- (A) 0.4 gm/100 ml
- (B) 15.2 mg/100 ml
- (C) 6.3 mg/100 ml
- (D) 20.0 gm/100 ml
- (E) Answer not known

169. In reception dock volume of milk is measured in tanker lorry by ring piston using the principle of

- (A) Rotation from inlet to the outlet
- (B) Displacement of define volume
- (C) Magnetic inductive flow meter
- (D) Lobe piston contour
- (E) Answer not known

170. Lactoperoxidative enzyme is an
- (A) Fat splitting
  - (B) Oxido reductase
  - (C) Lactose splitting
  - (D) Protein splitting
  - (E) Answer not known
171. Large quantities of milk can be chilled continuously by
- (A) can immersion
  - (B) shell and tube heat exchanger
  - (C) plate chiller
  - (D) scraped surface heat exchanger
  - (E) Answer not known
172. In fresh milk diameters of fat globule \_\_\_\_\_  $\mu\text{m}$  are sufficient to avoid creaming.
- (A) 1.0-1.5  $\mu\text{m}$  (micron)
  - (B) 2.0-2.5  $\mu\text{m}$  (micron)
  - (C) 3.0-4.0  $\mu\text{m}$  (micron)
  - (D) 0.1-0.5  $\mu\text{m}$  (micron)
  - (E) Answer not known
173. In sterilization process milk temperature should not exceed \_\_\_\_\_ $^{\circ}\text{C}$ .
- (A) 115 $^{\circ}\text{C}$
  - (B) 72 $^{\circ}\text{C}$
  - (C) 120 $^{\circ}\text{C}$
  - (D) 125 $^{\circ}\text{C}$
  - (E) Answer not known

174. Homogenization is carried out in cheese milk to inhibit
- (A) Whitening (B) Fat sweating/leakage  
 (C) Buttering (D) Creaming  
 (E) Answer not known
175. The \_\_\_\_\_ organism are tested during sterilization test to determine its letrolity.
- (A) Streptococcus aureus (B) S. lactis  
 (C) Clostridium botulinum (D) E.Coli  
 (E) Answer not known
176. In high pressure homogenization pressure used is \_\_\_\_\_ bar.
- (A) 1000-2000 bar (B) 1500-2500 bar  
 (C) 100-350 bar (D) 5-30 bar  
 (E) Answer not known
177. \_\_\_\_\_ is the optimal for UHT cream to avoid fat plug in the container.
- (A) Double stage homogenization  
 (B) Single stage homogenization  
 (C) Up stream homogenization  
 (D) Down stream homogenization  
 (E) Answer not known
178. \_\_\_\_\_ flavour defect found in butter stored insufficiently low temperature for long period.
- (A) Rancid (B) Flat  
 (C) Cheese (D) Stale  
 (E) Answer not known

179. In bottle sterilization temperature for milk is
- (A) 135-150°C/fraction of seconds (B) 72°C/15 sec  
(C) 108-111°C/25-30 min (D) 63°C/30 min  
(E) Answer not known
180. Official test for sterilized milk is
- (A) Phosphatase test (B) Turbidity test  
(C) Acidity test (D) COB test  
(E) Answer not known
181. Lactose level in cow and human milk are \_\_\_\_\_, \_\_\_\_\_ respectively.
- (A) 4.8% and 6.8% (B) 6.3% and 4.7%  
(C) 3.0% and 4.0% (D) 3.5% and 4.5%  
(E) Answer not known
182. Chemical compound used to evaluate the heat damage of milk and milk products is
- (A) Melanoidin (B) Ketiminers  
(C) Furosine (D) Aldimines  
(E) Answer not known
183. The \_\_\_\_\_ by the method of Loftus hills thiel, appears to be the best available means for following oxidative deterioration in milk and milk products.
- (A) 2-thiobarbituric acid value (B) Peroxide value  
(C) Free fatty acid value (D) Malonic dialdehyde  
(E) Answer not known

184. Dry milk fat is better reserved for the lipid material recovered from dry milk, whereas anhydrous milk fat should be used in describing the lipid material recovered from
- (A) Butter
  - (B) Classified milk fat
  - (C) Fresh fluid milk (or cream)
  - (D) Homogenized pasteurized milk
  - (E) Answer not known
185. Which among the following is true in fat content of bouine milk?
- (i) Fat content increases during the first 4-6 weeks after pasturization
  - (ii) Successive lactation increases fat content
  - (iii) Concentration of fat decreases on mastitic infection
- (A) (i) only
  - (B) (i) and (ii) only
  - (C) (iii) only
  - (D) (ii) only
  - (E) Answer not known
186. Acid degree value indicates
- (A) Extend of lipolysis
  - (B) Extend of proteolysis
  - (C) Extend unsaturation
  - (D) Extend of unsaponifiable matter
  - (E) Answer not known

187. The hydroxy acid which is responsible for the flavour of butter and ghee is

- (A) Lactones (B) Ketones  
(C) Butyric acid (D) Palmitic acid  
(E) Answer not known

188. The normal milk contains sufficient catalase to liberate \_\_\_\_\_ ml. of oxygen per 100 ml of milk in 2 hours at 25°C.

- (A) 1 to 5 (B) 5 to 20  
(C) 20 to 28 (D) 29 to 35  
(E) Answer not known

189. Choose the correct answer.

- (1) Fresh milk is exposed to day light for 8 hrs, 2% of vitamin A loss occurs  
(2) 10% vitamin A loss occurs at storing using amber-glass bottles  
(3) X-ray do not cause vitamin A loss  
(A) (1) and (2) only correct  
(B) (2) and (3) only correct  
(C) (1), (2), (3) are correct  
(D) (3) only correct  
(E) Answer not known

190. Which one of the following enzyme is responsible for lactic fermentation?

- (A) Lipase (B) Protease  
(C) Peroxidase (D) Lactase  
(E) Answer not known

191. Antisterility vitamin is

- (A) Vitamin – A
- (B) Vitamin – E
- (C) Vitamin – C
- (D) Vitamin – K
- (E) Answer not known

192. The principal antibody present in the serum is

- (A) Immunoglobulin G
- (B) Immunoglobulin M
- (C) Immunoglobulin A
- (D) Immunoglobulin D
- (E) Answer not known

193. The sugar present in casein protein is

- (A) Imino acid
- (B) Sialic acid
- (C) Keto acid
- (D) Lactic acid
- (E) Answer not known

194. Commonly used method for phenotyping of the milk protein is

- (A) Zonal electrophoresis
- (B) Chromatographic method
- (C) Differential solubility method
- (D) Titration method
- (E) Answer not known



195. Classification of  $\alpha$  - lactalbumin is based on the following parameter

- (i) Solubility
  - (ii) Stability
  - (iii) Primary sequence of the amino acids in their poly peptide chains
- (A) (i) only                                    (B) (ii) only  
(C) (iii) only                                   (D) (i) and (ii) only  
(E) Answer not known

196. Among the milk proteins, the ————— are often said to be ‘undernaturable’ meaning that they themselves are not altered in the range of heat treatments ( $60^{\circ}$  to  $100^{\circ}\text{C}$  for times upto 5 hours) that denature other proteins

- (A) Whey proteins
- (B) Proteose – peptone fractions
- (C) Caseins
- (D) Kappa casein
- (E) Answer not known

197. Choose the right answer from the following in relation mineral content and stage of lactation

- (i) Calcium content in milk is high both in early and late lactation
  - (ii) Sodium and chloride in milk is high in late lactation
  - (iii) Concentration of potassium increases throughout the lactatia
- (A) (i) only                                    (B) (i) and (ii) only  
(C) (ii) only                                   (D) (iii) only  
(E) Answer not known

198. Choose the right answer in relation to effect of freezing on salt content of milk

- (i) Crystallisation of pure water
- (ii) Unfrozen liquid becomes more saturated
- (iii) Crystallisation of pure water and more saturated with salts

- (A) (i) only
- (B) (ii) only
- (C) (i) and (ii) only
- (D) (iii) only
- (E) Answer not known

199. Water content of cow milk is

- (A) 87.54 percent
- (B) 64.00 percent
- (C) 85.54 percent
- (D) 80.01 percent
- (E) Answer not known

200. The average total phosphorus content of \_\_\_\_\_ mg/100ml is present in milk plasma.

- (A) 80
  - (B) 85
  - (C) 90
  - (D) 95
  - (E) Answer not known
-