

Subject: Dairy Technology

1. Which of the following enrichment to a food matrix does not improve the stability of probiotics during storage?
 - a. Adding emulsifiers
 - b. Lowering salt content of cheese
 - c. Adding proteins or substituting casein by whey proteins in fermented milks
 - d. Adding honey
2. Which of the following is the ideal dietary ratio of omega-6 to omega-3 fatty acids for human health?
 - a. 2:1
 - b. 1:1
 - c. 1:2
 - d. 1:3
3. Which of the following phytosterols has least absorption in the gastro intestinal tract of human body to give nutraceutical effect?
 - a. β -Sitosterol
 - b. Avenasterol
 - c. Esterified β -Sitosterol
 - d. Sitostanol
4. For obtaining best organoleptic quality as well as most desirable frying quality in terms of shape retention, softness and integrity, coagulation of paneer should be done at _____ °C
 - a. 90
 - b. 76
 - c. 72
 - d. 86
5. For the preparation of rabri using a scraped surface heat exchanger (SSHE), milk is concentrated to approximately _____
 - a. 1.2 fold
 - b. 1.5 fold
 - c. 2.5 fold
 - d. 2.0 fold
6. Which of the following traditional Indian dairy products has the distinction of obtaining Geographical Identification (GI) tag?
 - a. Shrikhand
 - b. Kheer mohan
 - c. Dharwad peda
 - d. Mathura peda
7. According to the FSSR (2018) and IS: 9845 (1998), the maximum overall migration limit of food contact materials is _____
 - a. 16 mg/kg
 - b. 60 mg/kg
 - c. 50 mg/kg
 - d. 10 mg/kg

8. In the “Multitherm process” of aseptic particulate food processing system, which of the following is used for sterilization of particulate foods that are pre-packaged?
- Microwaves
 - SSHE with slight modification
 - Ohmic heater
 - Tubular heat exchanger
9. According to the FSSR (2011), which of the following is not permitted as an acidulant in paneer making?
- Tartaric acid
 - Vinegar
 - Citric acid
 - Glucono-delta-lactone
10. Pressure used for Cheddar Cheese for long period (24 h) pressing is about _____
- 40 – 50 kPa
 - 250 – 300 kPa
 - 10 – 20 kPa
 - 100 – 150 kPa
11. Which of the following packaging materials is widely used for stretch packaging applications?
- Biaxially oriented polypropylene
 - Nylon
 - Polystyrene
 - Low density polyethylene
12. Which of the following polymeric materials has highest “hot tackability”?
- Ethylene vinyl acetate
 - Ethylene vinyl alcohol
 - Biaxially oriented polypropylene
 - Polyvinyl chloride
13. At which of the following wave lengths of light, maximum destruction of riboflavin, the photosensitive nutrient present in milk, occurs?
- 350 nm
 - 450 nm
 - 550 nm
 - 650 nm
14. Among the various gases used in modified atmosphere packaging of food products, which of the following gases has maximum solubility (mg.kg-1) in water between 0-20°C?
- Oxygen
 - Nitrogen
 - Carbon dioxide
 - Carbon monoxide

15. According to the Food Safety and Standards (Labelling and Display) Regulations (2020), if the area of the principal display panel is above 2500 cm², what shall be the minimum “diameter” of the green circle of the vegetarian logo?
- 8 cm
 - 6 cm
 - 4 cm
 - 3 cm
16. Which of the following is widely used as an ethylene absorber for the control of respiration of fruits and vegetables?
- SiO₂
 - Ca(OH)₂
 - C₂H₅OH
 - KMnO₄
17. One gram of iron powder used as oxygen scavenger in active packaging of food products can react with approximately _____ mL of oxygen
- 500
 - 100
 - 300
 - 200
18. Which of the following packaging materials is used a sealant layer of retort pouch?
- LDPE
 - HDPE
 - PP
 - Metallized PVC
19. Which of the following is an example of “Category-3” type of biodegradable polymers?
- Starch
 - Polyhydroxyalkanoates (PHA)
 - Poly(lactic acid) (PLA)
 - Poly(ε-caprolactone) (PCL)
20. Which of the following is the most appropriate reason for the use of high impact polystyrene (HIPS) for the packaging of set type of fermented milks such as dahi, misti dahi and yoghurt?
- Prevention of syneresis
 - Improving stacking performance
 - High oxygen barrier
 - High moisture barrier
21. Which of the following packaging materials have highest puncture resistance and used for preventing pests and rodents attack in packaged food products?
- HDPE
 - Nylon 6,6
 - PS
 - PVC

22. Which of the following is not a factor on which the choice of a protease depends for the production of a protein hydrolysate?
- Protein source
 - Specificity
 - Optimum pH
 - Heat stability
23. Which of the following sources of microbial rennet produces highest amount of bitterness?
- Mucor pusillus*
 - Mucor miehei*
 - Endothia parasitica*
 - Bacillus subtilis*
24. Starting material for the production of “enzyme modified cheese” is _____
- Raw milk
 - Cheese paste or slurry made from partially ripened cheese
 - Pasteurized milk
 - Cheese paste or slurry made from immature cheese
25. Which of the following is necessary for the improved performance of the reverse osmosis (RO) plant?
- Raw whey should be centrifuged to remove casein fines and fat globules
 - Heating of whey to 60°C or less
 - Adjusting pH of whey to 6.6 – 6.8
 - Incorporation of calcium salts to whey
26. Approximate “yield of paneer” manufactured using ultrafiltration technique is _____ %
- 18
 - 22
 - 30
 - 40
27. The level of demineralization of whey during electrodialysis does not depend on which of the following?
- Initial ash content of the feed
 - Current density
 - Duration of time the solution of whey is within the cells
 - Ion-selective membrane material
28. Which of the following membrane techniques is also called as “ultra-osmosis”?
- Combined Ultrafiltration and Reverse Osmosis
 - Nanofiltration
 - Microfiltration
 - Diafiltration

29. Which of the following is a limitation of polyamide membranes used in dairy and food industry?
- They are used in narrow temperature range, maximum recommended is usually 30°C
 - Highly biodegradable and susceptible to microbial attack
 - They are extremely sensitive to chlorine
 - They undergo “compaction” phenomenon to a greater extent.
30. Which of the following types of membranes are capable of handling feed stream with fairly large suspended particles?
- Tubular system
 - Plate and frame system
 - Spiral wound system
 - Hollow fibre system
31. The build-up of solutes close to or on the membrane surface is called as ____
- Diafiltration
 - Concentration polarization
 - Fouling
 - Compaction
32. Which of the following is the typical pore size of ultrafiltration (UF) membranes?
- 1 – 10 Å
 - 100 – 1000 Å
 - 1000 – 100000 Å
 - 10 – 100 Å
33. Ohmic heating is due to which of the following?
- Electrical resistance of food
 - Inductance of food
 - Thermal resistance of food
 - Electrical impedance of food
34. Which of the following is the critical temperature of carbon dioxide used in supercritical fluid extraction?
- 91.9 °C
 - 31.1 °C
 - 25.5 °C
 - 9.3 °C
35. Which of the following is the correct sequence of operations during canning of food products?
- Syruping or brining
 - Double seaming
 - Exhausting
 - Thermal processing
 - Clinching
- I, III, II, IV and V
 - V, I, III, IV and II
 - V, III, I, II and IV
 - I, V, III, II, and IV

36. Which of the following statements is true with respect to the major causes of deterioration of whole milk powder?
- Bacterial growth, hydrolysis of fat and developed acidity
 - Caramelization, carbon dioxide production and lactic acid production
 - Oxidation of fat, Maillard browning and lactose crystallization
 - Denaturation of proteins, conversion of lactose crystals to amorphous form and fat crystallization
37. Milk powders are classified into low-, medium- and high-heat classified powders based on which of the following?
- Extent of insolubility
 - Whey protein nitrogen index
 - Reconstitutability
 - Feathering index
38. Which of the following is considered as the marker enzyme for cream pasteurization?
- Plasmin
 - Alkaline phosphatase
 - Catalase
 - Peroxidase
39. Bacterial inactivation by pulsed electric field (PEF) is due to _____
- Protein denaturation
 - DNA damage
 - Pore formation in cell membrane
 - Cellular oxidation
40. Typical pulses of high voltage applied during pulsed electric field (PEF) processing of foods is _____
- 5 – 10 kV.cm⁻¹
 - 20 – 80 kV.cm⁻¹
 - 200 – 1000 kV.cm⁻¹
 - 915 – 2450 kV.cm⁻¹
41. Which of the following alternate food processing technologies effects are characterized as uniform and nearly instantaneous throughout the food and independent of food geometry and equipment size?
- High pressure processing
 - Microwave heating
 - Ohmic heating
 - Pulsed electric field heating
42. The amount of energy absorbed by foods from electromagnetic waves mostly depends on which of the following?
- Packaging materials
 - Penetration depth
 - Moisture content
 - Dielectric constant

43. “Gumminess”, one of the texture profile analysis (TPA) parameters, is a product of _____
- Adhesiveness and Springiness
 - Hardness and Springiness
 - Cohesiveness and Springiness
 - Hardness and Cohesiveness
44. Which of the following tests is not considered for obtaining useful properties of gels and of gelation and melting?
- Frequency sweep test
 - Force-compression test
 - Temperature sweep test
 - Time sweep test
45. Which of the following model best describe an ideal plastic body?
- The St. Venant Model
 - The Hooke Model
 - The Maxwell Model
 - The Kelvin-Voigt Model
46. Rheological behaviour of frozen ice cream is _____
- Ideal plastic
 - Pseudoplastic
 - Viscoelastic
 - Dilatant fluid
47. Which of the following sugar solutions have highest relative sweetness at ambient temperature (30°C)?
- Fructose
 - Glucose
 - Galactose
 - Lactose
48. Which of the following species milk is naturally homogenized?
- Camel
 - Buffalo
 - Cow
 - Goat
49. Light initiates the oxidation of fats, even at refrigeration temperatures and in unripened cheeses it results in _____ off-flavour.
- Putrid
 - Rancid
 - Oily
 - Cardboardy
50. Which of the following solutes is having highest osmosity that makes it suitable for application as an osmotic agent?
- D-Fructose
 - Sucrose
 - Sodium chloride
 - D-Glucose

51. With regard to particle size reduction, which of the following laws describe that “the work required to form particle of a particular size from very large feed is proportional to the square root of the surface-to-volume ratio of the product”?
- Kick’s law
 - Bond’s law
 - Rittinger’s law
 - Fick’s law
52. In a food powder quality analysis test, a product was found to have an angle of repose as more than 55 degrees. Which of the following flow characteristics best describes the nature of the powder?
- Very-free flowing
 - Free-flowing
 - Cohesive
 - Very cohesive
53. Which of the following statements are true with regard to the food packaging materials?
- Ethylene vinyl alcohol is permitted as food contact material by FSSR (2020).
 - Recycled PET is allowed as a food packaging material by FSSR (2020).
 - Polypropylene is used as a sealant layer in a retort pouch.
 - Shrink sleeve labels are widely used for packaging of irregular shaped containers.
- II and III only
 - III and IV only
 - I, II, and IV only
 - I and II only
54. What is the desirable quantity of suitable quality of rice required for preparing *Kheer*, on milk basis?
- 5 %
 - 10 %
 - 15%
 - 25 %
55. The method of drying in which concentrate is injected with air or nitrogen under pressure and the mixture is heated in a vacuum is referred to as _____
- Freeze drying
 - Spray drying
 - Roller drying
 - Foam drying
56. Approximate water activity (a_w) of sweetened condensed milk is _____
- 0.995
 - 0.986
 - 0.830
 - 0.650

57. Which of the following temperature dependence reactions may require the highest activation energy ($\text{kJ}\cdot\text{mol}^{-1}$)?
- Most enzyme catalyzed reaction
 - Heat denaturation of proteins
 - Autooxidation of lipids
 - Maillard's reaction
58. Which of the following is not a factor that determines the colloidal interactions in milk during heat coagulation?
- Alpha* lactalbumin
 - Kappa* casein
 - pH
 - Calcium ion activity
59. Which of the following amino acids in milk proteins forms crosslinks within or between peptide chains due to heat treatment of milk?
- Asparagine and Glutamine
 - Aspartic acid and Lysine
 - Cysteine and Methionine
 - Leucine and Isoleucine
60. The lactoperoxidase (LP) system especially affects which of the following microorganisms in milk?
- Escherichia coli*
 - Psychrotrophs
 - Lactic acid bacteria
 - Thermophiles
61. "Six Sigma" is a process that produces _____ number of defects parts per million opportunities (DMPO).
- 6.0
 - 3.4
 - 1.0
 - 6.6
62. Among the seven principles of HACCP, which of the following refers to "Principle-5"?
- Establishing record-keeping procedures
 - Establishing critical limits for each CCP
 - Establishing corrective actions
 - Establishing CCP monitoring requirements
63. Beta-cyclodextrin, which is an oligomer of glucose and used as an inclusion complex in food processing, contains _____ number of glucose monomers.
- 8
 - 7
 - 6
 - 5

64. Which of the following nanoparticles is used in intelligent food packaging systems?
- Nano silver
 - Nano clay
 - Nano titanium dioxide
 - Nano zinc oxide
65. Which of the following is a typical characteristic of Top-Down approach of energy management in a food industry?
- Establishing block flow diagram
 - Process requirements are defined considering horizontal transformations
 - Defines possible recovery that could result from streams that leave the systems that has remaining energetic value
 - Allocation of energy costs to processes subsystems and process unit operations
66. Which of the following is not a quantitative descriptive analysis method in sensory evaluation of food?
- Flavour profile analysis
 - Texture profile analysis
 - Free choice profiling
 - Spectrum analysis
67. Which of the following is a “popular term” of “cohesiveness” of a food product?
- Soft
 - Sticky
 - Crunchy
 - Goey
68. Which of the following terms best describe “odour blindness” in population?
- Insomnia
 - Sensory processing disorder
 - Anosmia
 - Ageusia
69. The type of errors made by sensory panellists wherein when a product of “poor” quality was presented followed by a product of “higher” quality, the difference was exaggerated, and the higher quality product was scored much higher than if it was preceded by a product close in quality is referred to as
- Proximity error
 - Stimulus error
 - Contrast and convergence error
 - Time-order error

70. Which of the following types of illustrations or graphs are used for detecting the origin of sensory quality loss during food processing?
- Bar graph
 - Biplot of Principal Component Analysis
 - Fishbone diagram
 - Correlation heat maps
71. In which of the following sensory evaluation techniques, the task of a panelist is to indicate a sample which is most similar to the reference product or sample?
- Duo-Trio Test
 - Paired comparison test
 - Triangle test
 - Dual standard test
72. Which of the following statements related to the methods available for monitoring process-induced changes in food proteins is **not** correct?
- Vibrational circular dichroism (CD) is a very promising technique for providing secondary structure estimates for proteins involving more localized transitions and much lower sensitivity to side chain contributions over far-ultraviolet CD.
 - In FTIR, the strong O-H bending absorption of water in the IR spectrum will not obscure the spectra obtained for protein secondary structural analysis.
 - Raman spectroscopy can monitor the tertiary and secondary structures of a protein.
 - With one dimensional proton NMR, even a small protein of 50 residues will yield an NMR spectrum containing 300 to 400 individual signals, and assignment of these signals yield a finger print.
73. Apart from improving the dispersion of fat globules, the advantage of a two-stage homogenization is _____
- Controlling the viscosity of cream and ice cream mix
 - Formation of new membrane material with the existing milk fat globule membrane
 - For maintaining the feed pressure
 - For creating turbulence resulting from eddy currents within the flow of milk
74. Among the aflatoxin variants, which mycotoxin is of concern to cheese industry?
- M1
 - G1
 - G2
 - B2
75. Which of the following refers to “toad-skin” of a cheese?
- Yeast-like appearance on the surface of cheese
 - Conidiophores on cheese surface with distinctly wrinkled walls and the thallus is flat and generally greenish blue
 - White-grey surface mycelium on camembert cheese
 - Growth of *Brevibacterium* cells on the surface of Brick cheese

76. Which of the following enzymes has the least coagulation to proteolysis (C/P) ratio?
- Chymosin
 - Bovine pepsin
 - Mucor* rennet
 - Endothia* rennet
77. Which of the following statements is **not** correct?
- Stability of calf rennet is maximum at pH between 5.5 and 5.9
 - Photooxidation results in inactivation of chymosin
 - Chymosin is likely to be digested by other proteolytic enzymes, especially in a blend of other milk clotting enzymes, particularly porcine pepsin
 - At 30°C, the rennet curds are tough and rubbery and release whey slowly
78. Which of the following casein fractions has very low correlation coefficient in terms of curd firmness?
- α_s -Casein
 - β -Casein
 - κ -Casein
 - α_s -Casein plus β -Casein
79. Which of the following statements is correct with regard to cheese milk additives?
- Addition of CaCl₂ decreases rennet coagulation time (RCT) and improves gel strength
 - Vinegar is also used for manufacture of Mozzarella cheese manufacture
 - Carotene colour addition during Cheddar cheese making is successful only at higher levels
 - Sodium nitrate affect the gas forming propionic bacteria desirable in manufacture of Swiss type cheeses
80. What percentage of vitamin A is retained in cheese during the conversion of milk into Cheddar cheese?
- 80 – 85 %
 - 10 – 20 %
 - 40 – 50 %
 - 25 – 35 %
81. Given below are different types of cheeses and their distinguishing features. Match the cheese with its characteristic feature and choose the correct option.

Column A

- Edam cheese
- Mozzarella cheese
- Limburger cheese
- Parmesan cheese
- Cheddar cheese

Column B

- Smear-coat
- High-scalding
- Medium-scalding
- Low-scalding
- Plastic curd

- a. 1-C; 2-A; 3-D; 4-E; 5-B
- b. 1-B; 2-D; 3-E; 4-A; 5-C
- c. 1-D; 2-E; 3-A; 4-B; 5-C
- d. 1-E; 2-C; 3-B; 4-D; 5-A

82. An alternative to nitrate addition in low acid cheeses is _____
- a. Bactofugation
 - b. Pasteurization
 - c. Microwave treatment
 - d. Ultrasonication
83. Which of the following strategies could help in improving moisture retention in buffalo milk Cheddar cheese?
- a. Use of 100% lactose hydrolyzed milk
 - b. Admixing of sweet cream buttermilk at a rate of 25% of casein requirement
 - c. Late Cheddaring
 - d. Admixing of mare's milk
84. Which of the following is a major flavour component present in Roquefort cheese?
- a. Acetaldehyde
 - b. Trimethylamine
 - c. Ethyl acetate
 - d. Methyl ketone
85. Which of the following is the approximate energy value of Cheddar cheese?
- a. 465 calories per 100 grams.
 - b. 400 calories per 100 grams.
 - c. 365 calories per 100 grams.
 - d. 300 calories per 100 grams.
86. Given below are different types of cheeses and their origin countries. Match the cheese with its origin country and choose the correct option.
- | Column A | Column B |
|----------------------|-------------------|
| 1. Cheddar cheese A. | Belgium |
| 2. Limburger cheese | B. Germany |
| 3. Roquefort cheese | C. United Kingdom |
| 4. Parmesan cheese | D. France |
| 5. Quarg cheese | E. Italy |
- a. 1-C; 2-A; 3-D; 4-E; 5-B
 - b. 1-B; 2-C; 3-E; 4-A; 5-D
 - c. 1-D; 2-B; 3-C; 4-E; 5-A
 - d. 1-C; 2-E; 3-A; 4-B; 5-D
87. The average phospholipid content of buffalo milk is ___ mg per 100 g.
- a. 300
 - b. 39
 - c. 65
 - d. 400

88. According to the FSSR (2011) Rules, “low lactose milk” shall not have lactose more than _____
- 0.1 %
 - 0.5 %
 - 1.0 %
 - 0.01 %
89. According to the FSSR (2011) Rules, the maximum ash content of *Khoa* is _____
- 100 ppm
 - 6 %
 - 9 %
 - 250 ppm
90. According to the FSSR (2011) Rules, the minimum milk solids-not-fat content of camel milk is _____
- 2.0 %
 - 9.0 %
 - 6.0 %
 - 8.5 %
91. According to the FSSR (2011) Rules, the percentage range of 9-Octadecenoic acid (cis-9) in ghee is _____
- 19 – 32
 - 22 – 38
 - 0.5 – 3.5
 - 8 – 19
92. According to the FSSR (2011) Rules, which of the following statements of whey powder standards is/are correct?
- “Acid whey” standard includes whey obtained during the manufacture of cheese, *paneer* or similar products.
 - Maximum milk fat content of “whey powder” is 2.0%
 - Maximum total ash content of “Acid whey” is 9.5%
 - Minimum milk protein content of “Whey powder” is 7.0%
- III only
 - I only
 - I and II only
 - III and IV only
93. According to the FSSR (2011) Rules, the minimum immunoglobulins content of cow or buffalo colostrum is _____
- 0.2 %
 - 0.5 %
 - 1.0 %
 - 1.8 %

94. Which of the following polymorphic forms of fat is having the lowest latent heat of fusion?
- α -form
 - β -form
 - β' -form
 - Combined β and β' -forms
95. Arrange the following phospholipids present in bovine milk fat in their descending order.
- Phosphatidylethanolamine
 - Phosphatidylserine
 - Phosphatidylcholine
 - Sphingomyelin
 - Phosphatidylinositol
- I < IV < V < II < III
 - III < I < IV < V < II
 - I < II < III < IV < V
 - V < III < I < III < IV
96. Which of the following statements related to milk fat in butter is **not** correct?
- Melting begins at +30°C and is complete at +37°C
 - In a bulk fat, nucleation occurs at the surface of impurities
 - If crystallization under agitated conditions is permitted to continue for too long, the product will be too soft for most patting or bulk filling operations.
 - The dissolved oxygen level in the freshly processed milk fat would be about 5 ppm at 45°C, a level sufficient to permit the development of oxidative rancidity.
97. Which of the following is a reduced-calorie structured lipid that contributes about 5 kcal/g compared to 9 kcal/g of conventional fats?
- Captrin
 - Caprenin
 - Olestra
 - Sorbestrin
98. Which of the following scientists first patented and manufactured Margarine?
- K.T. Achaya
 - Mary Elizabeth Hickox Mandels
 - David J. McClements
 - Hppolyte Mege Mouries
99. The antioxidant property of curry and betel leaves suggested to preserve “desi ghee” is predominantly due to which of the following phenolic compounds?
- Vanillin
 - Catechins
 - Hydroxychavicol
 - Gallic acid

100. Given below are the health benefits and/or medicinal uses of ghee from different sources as mentioned in ancient literature. Match the ghee type with its most appropriate health benefit and/or use and choose the correct option.

Column A

1. Cow milk ghee
2. Camel milk ghee
3. Buffalo milk ghee
4. Ewe milk ghee
5. Goat milk ghee

Column B

- A. Anti-toxic
- B. Eye invigorating
- C. Light in digestion
- D. Heavy in digestion
- E. Improves intelligence capabilities

- a. 1-C; 2-A; 3-B; 4-E; 5-D
- b. 1-B; 2-D; 3-E; 4-A; 5-C
- c. 1-E; 2-A; 3-D; 4-C; 5-B
- d. 1-D; 2-E; 3-A; 4-B; 5-C

101. Read the given assertion followed by the reason. Later, choose the correct option based your understanding.

Assertion: Cow's milk allergy is the most common Ig-E mediated food allergy in infants and children.

Reason: The tremendous digestive stability likely plays a prominent role in beta-lactoglobulin's ability to sensitize individuals and elicit reactions.

- a. Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.
- b. The Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion.
- c. Assertion is true but the Reason is false.
- d. The statement of the Assertion is false but the Reason is true.

102. What is the approximate meltdown of "Kulfi" at 30°C in 30 minutes?
- a. 12 mL
 - b. 18 mL
 - c. 24 mL
 - d. 30 mL

103. In "filled ice creams" to improve texture and smoothness, along with sucrose, which of the following sweeteners is recommended?
- a. 3 – 5 % Maltose
 - b. 3 – 5 % Fructose
 - c. 3 – 5 % Galactose
 - d. 3 – 5 % Glucose

104. Which of the following milk solids addition avoids additional use of an emulsifier in soft serve ice creams?
- a. Whole milk powder
 - b. Buttermilk concentrate
 - c. Skimmed milk powder
 - d. Whey protein concentrate

105. During chocolate ice cream preparation, syrup containing cocoa powder and sugar are thoroughly mixed and heated to which time-temperature combinations for bringing out the chocolate flavour and to produce a smoother consistency product?
- 90 – 95°C for 15-20 minutes
 - 72°C for 15-16seconds
 - 45 – 55°C for 30 minutes
 - 100°C for no hold

106. Given below are the defects and reasons in ice cream. Match the defects and their corresponding reason.

Column A

Column B

- | | | |
|----------------|----|--|
| 1. Snowy | A. | High level of stabilizer |
| 2.Gritty | B. | High overrun and low level of stabilizer |
| 3.Spongy | C. | Over emulsification |
| 4.Greasy | D. | High serum solids percentage |
| 5.Pudding-like | E. | Large air cells and related high overrun |

- 1-B; 2-D; 3-E; 4-C; 5-A
- 1-C; 2-A; 3-E; 4-B; 5-D
- 1-D; 2-C; 3-A; 4-E; 5-B
- 1-E; 2-B; 3-A; 4-D; 5-C

107. Which of the following species milk is relatively rich in chlorides?
- Cow milk
 - Donkey milk
 - Camel milk
 - Yak milk
108. Which of the following species milk contains significant concentrations and a variety of oligosaccharides similar to human milk?
- Cow milk
 - Goat milk
 - Buffalo milk
 - Sheep milk
109. Which of the following cheeses are considered as good sources of magnesium?
- Soft cheeses
 - Mold ripened cheeses
 - Hard cheeses
 - Very soft cheeses
110. Which of the following dried milks is “very cohesive” due to their proximate composition?
- Skimmed milk powder
 - Lactose powder
 - Rennet casein powder
 - Sodim caseinate powder

111. Which of the following is the source of Bisphenol A (BPA) in canned dairy products?
- Tinplate
 - Epoxy lacquer
 - Vinyl lacquer
 - Tin-free steel
112. What is the approximate quantity of lactulose formed in milk during sterilization?
- 0.05 – 0.1 g/L
 - 1.0 – 1.5 g/L
 - 2.0 – 2.5 g/L
 - 0.3 – 1.0 g/L
113. Which of the following acids is primarily responsible for the increased acidity in heated milk?
- Formic acid
 - Citric acid
 - Lactic acid
 - Phosphoric acid
114. Given below are the various types of reactions in food products and their activation energies. Match the type of reaction and their corresponding activation energies.
- | Column A | Column B |
|------------------------------------|---------------------|
| 1. Autooxidation of lipids | A. 450 kJ/mol |
| 2. Maillard reaction | B. 150 - 500 kJ/mol |
| 3. Most enzyme-catalyzed reactions | C. 40 - 100 kJ/mol |
| 4. Enzyme inactivation | D. 100 - 180 kJ/mol |
| 5. Heat denaturation of proteins | E. 35 - 55 kJ/mol |
- 1-C; 2-D; 3-E; 4-A; 5-B
 - 1-D; 2-C; 3-A; 4-E; 5-B
 - 1-E; 2-A; 3-B; 4-C; 5-D
 - 1-B; 2-E; 3-D; 4-B; 5-A
115. In a falling film evaporator, in which the flow rate is generally high, the viscosity should not exceed ____
- 0.1 Pa.s
 - 1.0 Pa.s
 - 10.0 Pa.s
 - 0.01 Pa.s

116. Read the given assertion followed by the reason. Later, choose the correct option based your understanding.

Assertion:Milk proteins are very good emulsifiers for water-in-oil emulsions.

Reason:Milk proteins do not give a very low interfacial tension between oil and water.

- Both the Assertion and the Reason are correct and the Reason is the correct explanation of the Assertion.
- The Assertion and the Reason are correct but the Reason is not the correct explanation of the Assertion.
- Assertion is true but the Reason is false.
- The statement of the Assertion is false but the Reason is true.

117. What is the amount of unfrozen water content in liquid skimmed milk stored at minus2°C?

- 0.5 %
- 1.0 %
- 4.0 %
- 10.0 %

118. Epilactose, found in trace amounts in heated milk, is a disaccharide of which monosaccharides?

- Galactose and Glucose
- Glucose and Fructose
- Galactose and Mannose
- Galactose and Fructose

119. Which of the following multilayered films of uniform thickness are best suited for packaging of “dairy whitener”?

- PE-PE
- Metallized PET-PE
- Metallized PP-PE
- PP-PE

120. Which of the following closures create partial vacuum?

- Roll-on cap
- Crown cap
- Lug cap
- Cork cap

1.	A
2.	B
3.	D
4.	B
5.	C
6.	C
7.	B
8.	A
9.	A
10.	D
11.	D
12.	A
13.	B
14.	C
15.	A
16.	D
17.	C
18.	C
19.	B
20.	B
21.	B
22.	A
23.	C
24.	D
25.	A
26.	C
27.	D
28.	B
29.	C
30.	A

31.	B
32.	B
33.	A
34.	B
35.	D
36.	C
37.	B
38.	D
39.	C
40.	B
41.	A
42.	D
43.	D
44.	B
45.	A
46.	C
47.	A
48.	D
49.	D
50.	C
51.	B
52.	D
53.	B
54.	A
55.	D
56.	C
57.	B
58.	A
59.	B
60.	C

61.	B
62.	C
63.	B
64.	C
65.	D
66.	A
67.	C
68.	C
69.	C
70.	C
71.	A
72.	B
73.	A
74.	A
75.	C
76.	B
77.	D
78.	C
79.	B
80.	A
81.	C
82.	A
83.	B
84.	D
85.	B
86.	A
87.	B
88.	C
89.	B
90.	C

91.	A
92.	C
93.	D
94.	A
95.	B
96.	A
97.	B
98.	D
99.	C
100.	C
101.	A
102.	C
103.	D
104.	B
105.	A
106.	A
107.	C
108.	B
109.	C
110.	B
111.	B
112.	D
113.	A
114.	A
115.	A
116.	D
117.	C
118.	C
119.	B
120.	C