1. Bio degradable material produce _____ gas in landfill waste disposal method.

(A) Carbon-di-oxide
(B) Nitrogen
(C) Carbon-mono-oxide
(D) Methane
(E) Answer not known

2. Criterion for selection of paper as packaging material is

(A) Printability
(B) Barrier properties
(C) Heat sealability
(D) Water resistance
(E) Answer not known

3. Stretch film is considered better than shrink film because of

(A) Elasticity
(B) Transparency
(C) Stability
(D) Collapsbility
(E) Answer not known

4. Indian packaging industry contributes nearly _____ percent to the country's overall GDP.

(A) 2
(B) 4
(C) 6
(D) 8
(E) Answer not known

5. The thickness of plastic pouches is

(A) 10 – 20 μ
(B) 25 – 40 μ
(C) 45 – 75 μ
(D) 80 – 90 μ
(E) Answer not known

6. Plastics having high melting of 165°C is

(A) Polypropylene
(B) Polyvinyl chloride
(C) Polyvinylidene chloride
(D) Ethylene vinyl acetate
(E) Answer not known

7. The method of combining two or more webs by bonding them together are called _____ process.

(A) Coating
(B) Dipping
(C) Lamination
(D) Extrusion
(E) Answer not known

8. The two major groups of bio-degrable packages currently entering the market are

(A) Polymers and Tetrapacks
(B) Polylactic acid and Starch based polymers
(C) Aluminium and Tin
(D) Glass and Paper
(E) Answer not known

9. Freezing point of milk is influences by

(A) Souring
(B) Boiling and sterilization
(C) Pasteurization
(D) Both (A) and (B)
(E) Answer not known

10. Sterilization of the packaging material with

(A) Application of H_2O_2 solution

(B) Hot air

(C) Auto clave

(D) Application of Hot air and H_2O_2 solution

(E) Answer not known

11. Following gas is not used in Modified Atmospheric Packaging (MAP)

(A) Hydrogen

(B) Oxygen

(C) Carbon-di-oxide

(D) Nitrogen

(E) Answer not known

12. Which of the following is not true about active packaging

(A) Shelf life extension

(B) Easier handling

(C) Good moisture barrier property

(D) Preserve quality of product

(E) Answer not known

13. Cracked rind defect in cheese is due to

(i) Incorrect cheddaring of cheese curd

(ii) Insufficient fat content in cheese

(iii) Excessive drying

(iv) Low acid development in cheese curd

(A) (ii)

(B) (ii) and (iv)

(C) (i) and (iii)

(D) (iv)

(E) Answer not known

14. Which one of the following statement is correct in association with milk?

(1) High quality milk having low in bacteria and having best flavour

(2) High quality milk having low in bacteria and not having good flavour

(3) Bitterness of milk is due to using oil during milking

(4) High sour of milk is due to excessive lactic acid

(A) (2) only correct

(B) (2) and (4) are correct

(C) (1) and (4) are correct

(D) (1), (3) and (4) are correct

(E) Answer not known

15. Pasteurization temperature of sweet butter milk is

(A) 100°C for 16 seconds
(B) 75°C for 15 seconds
(C) 80°C for 10 seconds
(D) 82°C for 16 seconds
(E) Answer not known

16. Malty flavour defect in milk is due to the growth of

(A) Streptococcus lactis var maltigenes
(B) Lactobacillus helveticus
(C) Streptococcus cremoris
(D) Streptococcus bulgaricus
(E) Answer not known

17. The process of tasting of food is known as

(A) Olfaction
(B) Gustation
(C) Perception
(D) Adoption
(E) Answer not known

18. Rind rot defect in cheese is due to

(A) Dipping damp cheese in paraffin
(B) Incorrect cheddaring
(C) Insufficiently pressed cheese
(D) Excessive drying
(E) Answer not known

19. Instrument used to measure texture through tension and compression testing is

(A) Instron universal testing machine
(B) Kramer shear press
(C) Warner Bratzler shear tester
(D) Tenderometer
(E) Answer not known

20. Persistent perception of unpleasant odors is _____ Olfactory abnormality.

(A) Anosima
(B) Merosmia
(C) Heterosmia
(D) Cacosmia
(E) Answer not known

21. In milk score card maximum score is assigned to

(A) Odour
(B) Body
(C) Flavour
(D) Colour appearance
(E) Answer not known

22. Substance which has ability to suppress sweet taste is

(A) Gymnemagenin
(B) Trypsinogen
(C) Chymosis
(D) Peptinogen
(E) Answer not known

23. Coliform level in water used in processes food industry is

(A) 1/10 ml
(B) 1/100 ml
(C) 1/50 ml
(D) 10/100 ml
(E) Answer not known

24. Similar machines on similar operations are located at the place as per the function in a dairy plant is called

(A) Fixed position layout
(B) Process layout
(C) Cellular layout
(D) Product layout
(E) Answer not known

25. Normal floor space requirement of the dairy plant for fluid milk is

(A) 1 Sq. metre to handle 1.0 litre of milk
(B) 10 Sq. metre to handle 10 litre of milk
(C) 1 Sq. metre to handle 10 litre of milk
(D) 10 Sq. metre to handle 1.0 litre of milk
(E) Answer not known

26. The capacity of medium capacity milk plant is

(A) less than 1,000 litre per day
(B) 1,000 to 20,000 litre per day
(C) 20,000 to 1,00,000 litre per day
(D) more than 1,00,000 litre per day
(E) Answer not known

27. Laboratory should have easy approach to _____ in dairy plant.

(i) Reception room
(ii) Processing room
(iii) Cold room

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

28. Milk handling route should be short as possible due to

(i) reduce cost of pipe length
(ii) save time in cleaning
(iii) easy handling of milk

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

29. The PVF panels are used for construction of

(A) Processing area
(B) Cold room
(C) Reception area
(D) Laboratory
(E) Answer not known

30. For effective removal of spilled liquids, dairy floor slope should not be less than

(A) 1 in 20
(B) 1 in 40
(C) 1 in 60
(D) 1 in 80
(E) Answer not known

31. For proper illumination, the floor of dairy plant should have minimum reflectance of

(A) 75%
(B) 50%
(C) 65%
(D) 20%
(E) Answer not known

32. Major energy expenditure in milk powder manufacture is due to

(A) Pasteurization
(B) Packing
(C) Thermization
(D) Drying
(E) Answer not known

33. In the pasteurisation of milk, the heat source for the evaporator of the heat pump is

(A) Hot pasteurized milk
(B) Steam
(C) Hot water
(D) Gas heating
(E) Answer not known

34. Which of the following statements is FALSE with regard to fouling?

(A) Fouling causes an increased pressure drop
(B) Fouling causes increased heat transfer resistance
(C) Fouling causes reduction of total energy consumption
(D) Fouling causes build up of microbial growth
(E) Answer not known

35. Certain amount of water removed from the boiler frequently to reduce the concentration of solids is known as

(A) Evacuator
(B) Fuel oil
(C) Blow down
(D) Scrubber
(E) Answer not known

36. If in natural gas the composition of methylene is 94.2% by volume and the density of methylene is 0.665 Kg/m^3, the mass fraction of methylene is

(A) 76.84%
(B) 80.00%
(C) 88.23%
(D) 65.84%
(E) Answer not known

37. Which of the following is NOT a design factor that determines optimal steam distribution system ?

(A) Condensate drainage
(B) Improvement of insulation
(C) Flow control
(D) System pressure
(E) Answer not known

38. Cogeneration can produce a given amount of electric power and thermal energy for _____ less fuel than a power plant.

(A) 1% to 5%

(B) 6% to 10%

(C) 10% to 30%

(D) 30% to 50%

(E) Answer not known

39. Which of the following is used to minimise fouling in heat exchangers caused by waste heat streams?

(A) A settling tank and skimmer

(B) An Adsorber

(C) Heat exchanger

(D) Homogeniser

(E) Answer not known

40. In energy balance calculation, _____ energy used per kilogram of product is considered.

(A) Internal

(B) External

(C) Both Internal and External

(D) Both Direct and Indirect

(E) Answer not known

41. Bureau of Energy Efficiency (BEE) was established under

(A) Energy Conservation Act – 2002
(B) Energy Conservation Act – 2001
(C) Energy Conservation Act – 2004
(D) Energy Electricity Act – 2001
(E) Answer not known

42. Hooping temperature for cheddar cheese production is _____ °C

(A) 30 – 32
(B) 34 – 36
(C) 26 – 28
(D) 38 – 40
(E) Answer not known

43. Roque Fort cheese is made from

(A) Cow milk
(B) Goat milk
(C) Sheep milk
(D) Camel milk
(E) Answer not known

44. Freezing point of fresh cheddar cheese is

(A) –2°C
(B) –4.5°C
(C) –8°C
(D) –10°C
(E) Answer not known

45. Gouda cheese is made from _____ milk.

(A) Skim milk
(B) Fresh cow
(C) Goat milk
(D) Buffalo milk
(E) Answer not known

46. The commonly used filter in spray drier is

(A) Oil filter
(B) Cloth filter
(C) Ceramic filter
(D) RO filter
(E) Answer not known

47. Rancid Harour of milk fat is primarily due to

(A) Blactoglobulin
(B) Butyric acid
(C) Suphuric acid
(D) Both (A) and (B)
(E) Answer not known

48. Hygroscopic property of milk powder means

(A) Changing in colour when exposed to air
(B) Having higher specific gravity than water
(C) Increasing in size put in water
(D) Taking up moisture from air
(E) Answer not known

49. Which one of the following statement is correct?

(1) Higher fat content in cream powder than whole milk powder

(2) Lower fat content in cream powder than whole milk powder

(3) Fat content level is same in both cream and whole milk powder

(4) Higher fat content in cream powder than ice cream mix powder

(A) (1) is correct but (4) is not correct

(B) (3) is correct

(C) (2) is correct

(D) Both (1) and (4) is correct

(E) Answer not known

50. The total solids content in Ice cream is _____ percent.

(A) 30

(B) 32

(C) 36

(D) 40

(E) Answer not known

51. Hardening temperature for Ice cream is ———— °C.

(A) –10 to – 12

(B) –23 to – 29

(C) –2 to –8

(D) –30 to – 36

(E) Answer not known

52. The indigenous frozen milk product is

(A) Rabri
(B) Kulfi
(C) Malai
(D) Danedar
(E) Answer not known

53. As per FSSAI standard the milk solids percent in Evaporated skim milk is ———— percent.

(A) Not less than 27
(B) Not less than 20
(C) Not less than 16
(D) Not less than 26
(E) Answer not known

54. First commercial production of sweetened condensed milk in India was by ———— dairy.

(A) AMUL
(B) MOTHER
(C) AAVIN
(D) NANDINI
(E) Answer not known

55. Density of condensed milk is determined by

(A) Pyconometer
(B) Baume hydrometer
(C) Lactometer
(D) Refractrometer
(E) Answer not known

56. Lactose added to condensed milk during cooling process is called

(A) Hooping
(B) Pilling
(C) Seeding
(D) Dusting
(E) Answer not known

57. As per FSSAI standards milk fat percent of Evaporated milk is ———— percent.

(A) Not less than 10
(B) Not less than 15
(C) Not less than 18
(D) Not less than 8
(E) Answer not known

58. The Ratio of concentration of milk solids for full cream products and sweetened condensed skim milk is/are respectively

(A) 1:2.5 and 1:3

(B) 1:5 and 1:2.5

(C) 1:3 and 1:2.5

(D) 1:2.5 and 1:5

(E) Answer not known

59. Match the correct pair :

(a)	Microfilteration	1.	Macromolecules
(b)	Ultrafilteration	2.	Monovalent salt
(c)	Nano filteration	3.	Suspended particles
(d)	Reverse osmosis	4.	Sugars

	(a)	(b)	(c)	(d)
(A)	2	4	1	3
(B)	1	2	3	4
(C)	3	1	4	2
(D)	4	3	2	1

(E) Answer not known

60. Using the same heat transfer area same value of overall heat transfer coefficient (u) steam and evaporator pressure and feed temperature, what will happen to the outlet concentration if the feed rate is increased?

(A) Reduced

(B) Increased

(C) Remains the same

(D) Outlet concentration is independent on feed rate

(E) Answer not known

61. The length to diameter ratio of vertical-tube and long-tube evaporators are ———— and ———— respectively.

(A) 100:1 and 50:1
(B) 15:1 and 50:1
(C) 15:1 and 100:1
(D) 50:1 and 15:1
(E) Answer not known

62. The graphical representation of thermodynamic properties of air is

(A) Drying curve
(B) Freezing curve
(C) Psychrometric chart
(D) Duhring plot
(E) Answer not known

63. The best condition for churning in buffer making is achieved when

(A) the force gravity just exceed the centrifugal force
(B) the centrifugal force exceed the gravity force
(C) gravity force is equal to centrifugal force
(D) centripetal force exceed gravity force
(E) Answer not known

64. Thermo compression is used in

(A) Pasteurizer
(B) Homogenizer
(C) Evaporator
(D) Sterilizer
(E) Answer not known

65. The ratio of steam consumption to water evaporation in drum drying is

(A) 2.2 to 2.6:1

(B) 1.2 to 1.6:1

(C) 1:1.2 to 1.6

(D) 1:2.2 to 2.6

(E) Answer not known

66. In Reverse osmosis an increase in temperature increase the diffusion rate of both water and solute at a rate of about ———— % per °C.

(A) 2.5

(B) 3.5

(C) 1.5

(D) 4.5

(E) Answer not known

67. The permeate of Reverse osmosis is

(i) Water

(ii) Salts and sugar

(iii) Macromolecules

(iv) Suspension particles

(A) (i) only

(B) (ii) only

(C) (i) and (iii) only

(D) (ii) and (iv) only

(E) Answer not known

68. Modified Atmosphere packaging (MAP) is used to pack the following dairy product.

(A) Paneer
(B) Milk
(C) Curd
(D) Yogurt
(E) Answer not known

69. In horizontal batch freezer, after required freezing is achieved, beating should be continue to

(A) scrap the frozen film from cylinder wall
(B) incorporate air upto required over run achieved
(C) mix the ice cream mix
(D) improve freezing rate
(E) Answer not known

70. Bag filters are required in spray drying while

(A) 100% collection efficiency is required
(B) hygroscopic air borne particles present
(C) handling very high temperature
(D) handing air of high moisture loading
(E) Answer not known

71. Which one among the following is true regarding Thermal vapour Recompression (TVR)

(1) TVR is used in multiple-effect evaporator

(2) TVR uses steam ejector to add new steam for recompression

(3) TVR uses compressor or fan rather than steam

(A) (3) only
(B) (2) only
(C) (1) only
(D) both (1) and (2)
(E) Answer not known

72. Which among the following is not a component of a vapour absorbtion refrigeration system?

(A) Absorber
(B) Pump
(C) Generator
(D) Compressor
(E) Answer not known

73. The device used to remove the water vapour from ammonia vapour in vapour absorption cycle is

(A) Analyser
(B) Rectifier
(C) Both (A) and (B)
(D) Heat exchanger
(E) Answer not known

74. Select the correct pair regarding the Refrigerant numbering.

(1) R-123 – Halo carbon refrigerant

(2) R-500 – Hydro carbon refrigerant

(3) R-717 – Azeotrope refrigerant

(4) R-170 – In organic refrigerant

(A) (1) only
(B) (2) only
(C) Both (2) and (3)
(D) (4) only
(E) Answer not known

75. Piston and cylinder is present in ———— type of compressors.

(A) Rotary
(B) Centrifugal
(C) Reciprocating
(D) Gravitational
(E) Answer not known

76. In psychometric chart relative humidity lines are

(A) horizontal lines
(B) vertical lines
(C) inclined lines
(D) curved lines
(E) Answer not known

77. The ratio of actual C.O.P to the theoretical C.O.P is known as

(A) Relative C.O.P
(B) Refrigeration capacity
(C) Tonnes of refrigeration
(D) Brake thermal efficiency
(E) Answer not known

78. Which among the following is not a low boiling refrigerant?

(A) Ammonia
(B) Water
(C) RZZ
(D) Propane
(E) Answer not known

79. The basic function of an automatic expansion value in Referation is

(A) to maintain temperature in condenses
(B) to maintain a constant degree of super heat in evaporator
(C) to maintain constant pressure in evaporator
(D) to compress the refrigerant
(E) Answer not known

80. Product load consist of

(i) sensible heat

(ii) latent heat

(iii) respiration

(iv) lighting

(A) (i), (iii) and (iv)
(B) (i), (ii) and (iii)
(C) (i), (ii) and (iv)
(D) (ii), (iii) and (iv)
(E) Answer not known

81. In the heating section of plate heat exchanger used for pasteurization the flow rate ratio of milk hot water is

(A) 1:0 to 1:1
(B) 1:1 to 1:2
(C) 1:2 to 1:3
(D) 1:3 to 1:4
(E) Answer not known

82. The process of separation of microorganisms from milk by using centrifugal force is called

(A) Clarification
(B) Bactofugation
(C) Filtration
(D) Sedimentation
(E) Answer not known

83. The purpose for homogenization is done for yoghurt processing is for

(A) More stable gel formation
(B) Increase flavour of milk
(C) Reduced fat
(D) Reducing viscosity
(E) Answer not known

84. For every 40 bar pressure drop during homogenization, the temperature of milk rises by ———— °C.

(A) 0.1 °C
(B) 1 °C
(C) 10 °C
(D) 5 °C
(E) Answer not known

85. A vacuum filling line ensures

(A) Low power consumption
(B) Prevents outside contamination
(C) Sterile filling condition
(D) Foam free filling
(E) Answer not known

86. CIP system most suitable for large dairy plants, which are

(A) Semi-automatic
(B) Stand alone
(C) Centralized
(D) Decentralized
(E) Answer not known

87. The time temperature combinations for in-container sterilization process are

(A) 105-120 °C for 10-30 min
(B) 105-120 °C for 10-30 sec
(C) 75-85 °C for 15 sec
(D) 75-85 °C for 15 min
(E) Answer not known

88. Separation of Ghee residue from ghee by clarifier is an example of ———— separation.

(A) Liquid – Liquid
(B) Solid – Liquid
(C) Solid – Gas
(D) Gas – Liquid
(E) Answer not known

89. ———— is used to control the direction and velocity of flow to the suction of impellar.

(A) draft tube
(B) baffles
(C) paddles
(D) turbine
(E) Answer not known

90. The flow velocity of detergent feed pumps ranges from ———— in the pipe to produce the required scouring effect

(A) 0.5 – 1 m/s

(B) 1.0 – 1.5 m/s

(C) 1.5 – 3.0 m/s

(D) 2.5 – 4.5 m/s

(E) Answer not known

91. Which component wets the contact surface of dairy equipments more easily?

(A) Carbohydrates

(B) Fats

(C) Vitamins

(D) Minerals

(E) Answer not known

92. The water pressure in rotary and straight through can washers range from

(A) 2.0 to 4.0 kg/cm^2

(B) 1.0 to 3.0 kg/cm^2

(C) 3.5 to 5.5 kg/cm^2

(D) 0.5 to 2.5 kg/cm^2

(E) Answer not known

93. In boiler, ———— develops greatest amount of heat and ———— absorbs greatest amount of heat.

(A) furnace, boiler
(B) boiler, furnace
(C) grate, boiler
(D) grate, furnace
(E) Answer not known

94. The steam properties are tabulated in

(A) Design data
(B) Log table
(C) Steam table
(D) Clark's table
(E) Answer not known

95. 1 kg of hydrogen requires ———— kg of oxygen and produces ———— kg of water (or) steam

(A) 8 and 9
(B) 9 and 8
(C) 2 and 1
(D) 4 and 11/4
(E) Answer not known

96. Which of the following statement is not true about wind energy?

(A) It is a renewable source of energy

(B) It avoid fuel provision and transport

(C) Small areas are needed to instal wind form

(D) Energy of wind can used for generation of electrical energy

(E) Answer not known

97. The grate in the combustion chamber of boiler consist of well spaced cast iron bars, because

(A) cast iron bars given support

(B) it has low thermal conductivity

(C) air required for combustion can pass easily

(D) used for high pressure

(E) Answer not known

98. If a boiler contain an Economiser, it can save ———— % of coal (fuel)

(A) 5-10

(B) 10-15

(C) 15-20

(D) 20-25

(E) Answer not known

99. The fan is placed after the five grate in the

(A) Forced fan draught
(B) Forced steam jet draught
(C) Induced fan draught
(D) Natural draught
(E) Answer not known

100. A fuel consists of 85% carbon; 12.5% hydrogen; 2.5% residual matter by mass. Working from first principles, find the higher calorific value per kg of the fuel.

(A) 46730 KJ/Kg
(B) 32330 KJ/Kg
(C) 43956 KJ/Kg
(D) 34695 KJ/Kg
(E) Answer not known

101. For steam, the critical temperature during steam formation is

(A) 374.15°C
(B) 221.2°C
(C) 274.15°C
(D) 100°C
(E) Answer not known

102. The constant pressure lines in the super heated region is

(A) Straight horizontal line
(B) Straight vertical line
(C) Curved slightly downward
(D) Curved slightly upward
(E) Answer not known

103. The absolute pressure of air at the outlet of a compressor is known as

(A) Mean effective pressure
(B) Compressor capacity
(C) Compression ratio
(D) Discharge pressure
(E) Answer not known

104. A boiler which contains super heated tube is

(A) Locomotive boiler
(B) Lancashire boiler
(C) Cochran boiler
(D) Scotch marine boiler
(E) Answer not known

105. During DNA replication which type of chemical bond is formed by the action of DNA polymerase?

(A) Phosphodiester bond
(B) Phosphotriester bond
(C) Phosphomonoester bond
(D) Disulfied bond
(E) Answer not known

106. Which one of the following is involved in unwinding DNA double strand during replication?

(A) Helicase
(B) SSB
(C) DNA ligase
(D) DNA Primase
(E) Answer not known

107. The sugar molecule present in the DNA is

(A) Deoxy ribose
(B) Ribose
(C) Dihydroxy ribose
(D) Ribose-5-phosphate
(E) Answer not known

108. In bacteria, RNA is synthesised by

(A) Single type of RNA polymerase
(B) RNA polymerase I, II and III
(C) RNA polymerase A and B
(D) RNA polymerase I, III and IV
(E) Answer not known

109. The DNA mutation caused by UV radiation results in

(A) Base exicison
(B) Frame shift mutation
(C) Deamination of cytosine
(D) Thymine dimers
(E) Answer not known

110. The enzyme responsible for attachment of amino acid to respective t-RNA is

(A) Amino acyl -tRNA synthetases
(B) Amino acyl-tRNA peptidase
(C) Amino acyl - tRNA transpeptidase
(D) Peptidyl transferase
(E) Answer not known

111. The most studied plant promoter used in gene expression of foreign

(A) T7 promoter
(B) 35 S promoter
(C) trp promoter
(D) tac promoter
(E) Answer not known

112. The expression of foreign gene in a host primarily depends on

(A) Selection market
(B) Antibiotic resistant gene
(C) Promoter
(D) Reporter gene
(E) Answer not known

113. DNA finger printing recognizes the difference in

(A) Satellite DNA
(B) Bulk DNA
(C) Repetitive DNA
(D) Both (A) and (C)
(E) Answer not known

114. The agar diffusion test introduced by Gist Brocades Laboratories in the Netherlands uses

(A) Spores of B. Subtilis
(B) Spores of Clostridia
(C) Spores of B. Stearo thermophilus var calidolactis
(D) Spores of B. Cereus
(E) Answer not known

115. ———————— is one of the biological method to determine the level of aflatoxins in foods as well as milk and milk products in vogue.

(A) HPLC
(B) ELISA
(C) Radio immuno assay
(D) Trout assay
(E) Answer not known

116. ———————— is another modification of the standard plate count, where there is no need to prepare the serial dilutions of the milk samples

(A) Droplet method
(B) Spiral plate method
(C) MDR test method
(D) Thompson plate loop method
(E) Answer not known

117. The staphylococcal intoxications can not be assured without testing the enterotoxigenicity of saurecus Isolates or demonstrating the presence of staphylococcal

(A) Endotoxin
(B) Exo toxin
(C) Neuro toxin
(D) Entero toxin
(E) Answer not known

118. Which of the following statements are true

(1) Food control systems are essential to product safety health of consumers and farmers

(2) Quality of foods entering in international trade to conform the requirements

(3) HACCP system resulted in industry taking greater responsibility for the control of food safety risks

(4) Codex Alimentarious in a Non-governmental body that co-ordinates food standards at international level

(A) (1) and (2) is correct
(B) (2) and (3) is correct
(C) (3) and (4) is correct
(D) (4) and (1) is correct
(E) Answer not known

119. A risk ———————— based approach is required to develop recommendations to ensure consumer protection and facilitate fair practices in the food trade

(A) Analysis
(B) Assessment
(C) Management
(D) Communication
(E) Answer not known

120. Successful and holistic implementation of food safety system would require an extensive camping that encourages implementation of ———————— at farm level

(A) Food safety and standard Authority of India Act
(B) Good Agricultural practices
(C) Good Manufacturing practices
(D) HACCP
(E) Answer not known

121. T Q M organizations integrate the following

(1) Customer knowledge with other information
(2) Use the planning process to orchestrate action throughout the organisation to manage day to day activities
(3) Achieve future goals
(4) Technical skills of scientists from other countries

(A) (1), (2), (4) is correct
(B) (1), (2), (3) is correct
(C) (2), (3), (4) is correct
(D) (1), (3), (4) is correct
(E) Answer not known

122. Compare to ———————— approaches, microorganism - based biosensors are reactively inexpensive to constant and can operate over a wide range of pH and temperature

(A) DNA - Based
(B) Enzyme - Based
(C) RNA - Based
(D) Microbial protein
(E) Answer not known

123. Restriction enzymes are also known as

(A) Ribo nucleases
(B) Exonucleases from 5' end
(C) Exonucleases from 3' end
(D) Endonucleases
(E) Answer not known

124. Bacterial cell that are able to takeup exogenous DNA is called as

(A) Transformed cell
(B) Competent cell
(C) Viable cell
(D) Vegetative cell
(E) Answer not known

125. Herbicide resistant plants are capable of expressing the following gene at higher rate

(A) Tryptophan synthase
(B) Pseudourine synthase
(C) Phytoene desaturase
(D) EPSP synthase
(E) Answer not known

126. The substrate on which the Restriction enzyme works is

(A) Single stranded DNA
(B) Single stranded RNA
(C) Double stranded DNA
(D) Double stranded RNA
(E) Answer not known

127. Which statement defines cloning?

(A) Making offspring phenotypically identical to one parent
(B) Producing identical plants by natural or artificial means
(C) Producing genetically identical copies of an individual cell or gene
(D) Spitting embryos to produce Twins
(E) Answer not known

128. This enzyme is used to dephosphorylate the vector

(A) Terminal Transferase
(B) Alkaline phosphatase
(C) Klenow enzyme
(D) Reverse Transcriptase
(E) Answer not known

129. The quality and purity of the food product is ensures by ———— act

(A) PFA Act
(B) FSSAI
(C) Agmark standards
(D) Meat product order
(E) Answer not known

130. ———— test is uses to defect post pasteurization contamination in milk

(A) Half - hour Methylene Blue Reduction test
(B) Alcohol test
(C) Phosphatase test
(D) Ten miruts Resazurin test
(E) Answer not known

131. Quality assurance gives adequate confidence that product or service mill satisfy given requirements for

(A) Processing methods
(B) Quality
(C) Packaging requirements
(D) Labelling
(E) Answer not known

132. The following one the objectives of AGMARK scheme to

(1) Assume consumers a product of pretested quality and purity

(2) Enable producer of good quality products to have better returns

(3) Have sole of safe product in the market with uniform composition and quality

(4) To eliminate the movement of product form producer to consumer

(A) (2), (3), (4) is correct
(B) (3), (4), (1) is correct
(C) (1), (2), (3) is correct
(D) (1), (2), (3), (4) is correct
(E) Answer not known

133. Prevention of Fool Adulteration (PFA) was implementes during the year

(A) 1974
(B) 1984
(C) 1994
(D) 1954
(E) Answer not known

134. Which are of the following is used as preservative for milk and milk product analysis

(A) Formalin
(B) DMSO
(C) Potassium Dichromate
(D) Sodium benzoate
(E) Answer not known

135. Butter for early consumption the cream avidity should be reduced to ————————% before churming

(A) 0.18 to 0.19
(B) 0.20 to 0.22
(C) 0.25 to 0.30
(D) 0.31 to 0.35
(E) Answer not known

136. ———————— is compound found in heated milk product in which the fructose moiety occurs predominantly in the pyranose and partly in the furanose form.

(A) Lactositol
(B) Lactulose
(C) Alpha sulfhydryl compound
(D) D galactose
(E) Answer not known

137. Chemistry of 'stretch' of mozzarella cheese narrates that in the calcium rich environment of milk, the casein precipitates out of milk as dicalcium paracaseinate, entrapping the fat

(A) Insoluble minerals and vitamins
(B) Insoluble calcium and vitamins
(C) Insoluble minerals and some sugar
(D) Insoluble calcium and phosphorous
(E) Answer not known

138. ———————— publishes jointly with the international organisation for standardization, standards method of sampling and analysis of milk and milk products

(A) Indian Dairy Association
(B) Indian Dairy federation
(C) International Dairy federation
(D) International Dairy Association
(E) Answer not known

139. Q_{10} concept is related to

(A) Shelf life test
(B) Kinetic test
(C) Predictive model
(D) Charm test
(E) Answer not known

140. ———————— means the maximum permitted amount of a given substance released from a material or article into food or food stimulants

(A) Single migration limit
(B) Common migration limit
(C) Overall migration limit
(D) Specific migration limit
(E) Answer not known

141. Test uses for rapid assessment of stability of milk to condensing an sterilization

(A) Organoleptic test
(B) Alcohol test
(C) Alizarin - alcohal test
(D) MBRT
(E) Answer not known

142. ———————— standards, formulated by CAC, under sanitary and phytosanitary measures has made the HACCP system an instrument of food safety

(A) FSSAI
(B) HACCP
(C) Codex Alimentarious
(D) FAO
(E) Answer not known

143. The freezing temperature of milk is lower they water due to

(A) Presence of Lactose
(B) Presence of Salt
(C) Presence of Lactise any salty
(D) Presence of milk protein
(E) Answer not known

144. The Average specific gravity of cow milk is ranges from

(A) 1.035 to 1.037
(B) 1.35 to 1.37
(C) 1.028 to 1.030
(D) 1.024 to 1.027
(E) Answer not known

145. The titrable acidity of Buffalo milk is

(A) 0.13 to 0.14 percent
(B) 0.14 to 0.15 percent
(C) 0.10 to 0.12 percent
(D) 0.5 to 0.12 percent
(E) Answer not known

146. The retinol content of 100 gm of pasteurized whole milk is

(A) 50 mg
(B) 52 μg
(C) 20 μg
(D) 20 mg
(E) Answer not known

147. The bovine casein contains four distinct gene products namely

(A) $\alpha_{s1}, \alpha_{s_2}, \beta$ and k - caseins
(B) α, β, γ and k- caseins
(C) Casein I, II, III and IV
(D) Casein A, B, C and D
(E) Answer not known

148. Milk ———————— is the major constituent helps to establish a mildly acidic reaction in the intestine and facilitate assimilation

(A) Protein
(B) Fat
(C) Lactose
(D) Whey protein
(E) Answer not known

149. The ———————— constituents of milk are fat, casein, and lactose

(A) Major
(B) Minor
(C) True
(D) Associated
(E) Answer not known

150. The milk globular protein consists of mainly the

(A) Phospholipids
(B) Hipo proteins
(C) Whey proteins
(D) Spingomylin
(E) Answer not known

151. Specific water consumption in a dairy plant is on a level of ———— liters per 1000 liters of milk.

(A) 1000 to 1500
(B) 1500 to 2000
(C) 1000 to 5000
(D) 5000 to 8000
(E) Answer not known

152. ———————— consists of a large tank used as a bioreactor which has aeration devices, a post clarification basin and a sludge return flow.

(A) Solid-bed reactor system
(B) Anaerobic ditch system
(C) Pretreatment basin
(D) Activated sludge system
(E) Answer not known

153. A ———————— is a structured community of micro-organisms encapsulated within a self-developed polymeric matrix and adherent to a living or inert surface.

(A) Bacteriophage
(B) Biofilm
(C) Extra cellular polymeric substances
(D) Biofilters
(E) Answer not known

154. Biological oxygen demand is defined as mg of ———————— required by micro-organism to decompose organic matter in 1 liter of water at 20° C.

(A) Ammonia
(B) Oxygen
(C) Carbon-di-oxide
(D) Nitrogen
(E) Answer not known

155. The area and spacement in dairy layout, the refrigeration and steam boilers each requires approximately one fifth m^2 per ———— liter milk.

(A) 100
(B) 150
(C) 175
(D) 200
(E) Answer not known

156. Which designing dairy plant, ———— flow pattern is feasible where land is sufficient for the building and single story or flat floor area is available.

(A) Serpentive
(B) Horizontal
(C) Vertical
(D) Straight line type
(E) Answer not known

157. A product layout is also called ———— is one in which equipments or work processes and arranged according to the progressive steps by which the product is made.

(A) Functional layout
(B) Flow-shop layout
(C) Group layout
(D) Combined layout
(E) Answer not known

158. In dairy plant layout, the process layout is also called as

1. Job–shop or functional layout
2. Product or line layout
3. Combined or group layout
4. Fixed portion or location layout

(A) 1 and 2 is correct
(B) 1 is correct
(C) 1 is correct but 4 is incorrect
(D) 1 and 3 is correct
(E) Answer not known

159. In the dairy plant, the ———————— type flow patterns are executed for area utilisation and roads on two sides of plant.

(A) U
(B) S
(C) L
(D) O
(E) Answer not known

160. All streptococci except ———————— group posses a serologically active, group specific 'c' substance.

(A) Pyogenic
(B) Viridans
(C) Enterococcus
(D) Lactic
(E) Answer not known

161. The somatic cells is mastitic milk is ranged from ———— ($\times 10^2$/ml)

(A) 50 – 500
(B) 100 – 1000
(C) 100 – 4000
(D) 100 – 5000
(E) Answer not known

162. The species of ———— bacteria have been known to constitute 10 to 13% of Psychrotrophic microflora of raw milk.

(A) Alcaligenes
(B) Coliform
(C) Pseudomonas
(D) Streptococin
(E) Answer not known

163. The combined activity of mesophilic and the thermophilic lactic acid bacteria and yeasts leads to ———— fermentation in milk during the manufacture of Kefir and Kumiss.

(A) Lactic acid and Diacetyl
(B) Acetyl Methyl Carbinol and Autoin
(C) Lactic acid and alcohol
(D) Alcohol and Acetic acid
(E) Answer not known

164. The bacteriocin produced by Streptococcus Cremoris is named as

(A) Acidophilin
(B) Unnamed
(C) Diplococcin
(D) Nisin
(E) Answer not known

165. ———————— ferment carbohydrate and glucose by the Embolen – Meyerhoff pathway to DL, D(–) or L(+) lactic acid

(A) Lantobuillus
(B) Pedicoccus
(C) Lactic Streptococci
(D) Bifidobacterium
(E) Answer not known

166. Mesophilic starter streptococci and Thermophilic starter sparing possess weak ———————— and thus contribute to the fatty acid pool in cured cheeses.

(A) Galactosidase and triglyceride splitting activities
(B) Esterase and triglyceride splitting activities
(C) Co A-SH and triglyceride splitting activities
(D) Permease and triglyceride splitting activities
(E) Answer not known

167. The flavour development is dependent upon lowering of ————————, the factors affecting acid production may indirectly affect flavour production as well.

(A) Acidity
(B) OR Potential
(C) pH
(D) Acidity and pH
(E) Answer not known

168. In Yoghurt preparation, to prevent weak curd formation, addition of small amount of ———————— may also increase firmness.

(A) Gelatin
(B) Sodium alginate
(C) Rennet
(D) Pertin
(E) Answer not known

169. Reddish pink discolouration of butter is due to ———————— fungus.

(A) Cladosporium
(B) Fusarium
(C) Aspergillus
(D) Mucor
(E) Answer not known

170. For ripening of cream, the starter concentrate has to be at

(A) 17 °C to 18 °C
(B) 18 °C to 19 °C
(C) 15 °C to 16 °C
(D) 10 °C or Sub zero temperature
(E) Answer not known

171. The psychrotrophic flora which usually the major part of butter microflora consisted mainly of

(A) Coli-aerogenes group
(B) Flarobacterium
(C) Pseudomonads
(D) Achromobacter
(E) Answer not known

172. The formation of 3-methyl butanal even as low as ———————— ppm is responsible for malty flavour defect of butter.

(A) 0.5
(B) 0.8
(C) 0.10
(D) 0.12
(E) Answer not known

173. The bottler's sugar which is used for the cream manufacture, the mesophilic count should not exceed

(A) 100 / 10 g
(B) 150 / 10 g
(C) 200 / 10 g
(D) 250 / 10 g
(E) Answer not known

174. The nature of ———————— distribution in turn affects the microflora of butter.

(A) fat
(B) moisture
(C) curd particles
(D) milk serum / plasma
(E) Answer not known

175. In cream, containing high spore count over ————————, the number of spores can be reduced by applying high speed centrifugal methods.

(A) 50 / g
(B) 60 /g
(C) 80 / g
(D) 100 / g
(E) Answer not known

176. The testing of Pasteurized cream for phosphate should be carried out within ———————— of its processing.

(A) 6 hours
(B) 8 hours
(C) 12 hours
(D) 24 hours
(E) Answer not known

177. According to ICMIF the maximum permissible limit of Salmonella species in the cream is ———————— / gm.

(A) 1
(B) 2
(C) 3
(D) 0
(E) Answer not known

178. The mold buttons in sweetened condensed milk is due to ———————— and mold mycilia coloured white to brown.

(A) Decomposed lactose
(B) Partially digested fat
(C) Coagulated Casein
(D) Solids not fat portion
(E) Answer not known

179. In sweetened condensed milk ———————— and ———————— bacteria can tolerate high sugar concentrations.

(A) Clostridium botulism and C. Perfingers
(B) Staphytococcus aurues and E. Coli
(C) Bacillus ureus and B. Subtilis
(D) Enterobarter aelogenes and B. Cereus
(E) Answer not known

180. Whipping cream contains ———————— (%) percent of milk fat.

(A) 20 – 25
(B) 30 – 40
(C) 50 – 60
(D) 65 – 85
(E) Answer not known

181. For efficient cream separation the temperature of milk should be ———— ◦C.

(A) 30 (B) 35

(C) 40 (D) 45

(E) Answer not known

182. The time temperature combination for batch pasteurisation of cream is

(A) 63°C for 30 minutes

(B) 71°C for 30 minutes

(C) 72°C for 15 seconds

(D) 62°C for 10 seconds

(E) Answer not known

183. Temperature of cream when neutraliser is added to ———— °C.

(A) 29 – 32 (B) 34 – 35

(C) 38 – 41 (D) 42 – 44

(E) Answer not known

184. ———————— of the following statements given which is not true about high temperature short time pasteurisation.

(A) Capacity of heat treat milk quickly and adequately

(B) Less floor space required

(C) Well adapted to handle small quantities of several liquid milk products

(D) Lower operating cost

(E) Answer not known

185. Which of the following is not affected by the process of homogenisation of milk.

(A) Viscosity

(B) Surface tension

(C) Specific gravity

(D) Titrable acidity

(E) Answer not known

186. Strengthening of national milk grid is the major objective of

(A) Operation flood I

(B) Operation flood II

(C) MMPO

(D) Both options (A) and (C)

(E) Answer not known

187. The product obtained when butter oil, skim milk powder and water are combined in correct proportion is

(A) Toned milk

(B) Reconstituted milk

(C) Recombined milk

(D) Double toned milk

(E) Answer not known

188. The process of making stable emulsion of milk fat and milk serum by mechanical treatment is called as

(A) Standardisation
(B) Homogenisation
(C) Pasteurisation
(D) Bactofugation
(E) Answer not known

189. ———————— exists as true solution in milk serum.

(A) Fat
(B) Lactose
(C) Protein
(D) Phospholipids
(E) Answer not known

190. Carotene content of cow milk ghee is ———————— µg/g .

(A) 2.0
(B) 2.5
(C) 3.2
(D) 3.0
(E) Answer not known

191. Agmark red label ghee should contain free fatty acid ———————— percent.

(A) Not more than 0.5
(B) Not more than 1.0
(C) Not more than 1.4
(D) Not more than 2.0
(E) Answer not known

192. Yield of Khua from cow milk ranges from ———————— percent

(A) 15–16
(B) 17–19
(C) 21–23
(D) 24–27
(E) Answer not known

193. ———————— is the base material for production of srikhand.

(A) Chakka
(B) Channa
(C) Pindi
(D) Dhar
(E) Answer not known

194. Yield of chhana from buffalo milk is ———————— percent.

(A) 16–18
(B) 22–24
(C) 14–16
(D) 18–20
(E) Answer not known

195. Higher proportion of small sized fat globules in cream results in

(A) Longer churning time
(B) Greater fat loss in butter milk
(C) Option (B) is correct
(D) Both (A) and (B) are correct
(E) Answer not known

196. ———————— process involves used of high speed beaters to destabilise fat emulsion in chilled cream for butter production.

(A) Fritz
(B) Alfa laval
(C) Meleshin
(D) Cherry Burrell
(E) Answer not known

197. Cooked defect in butter is due to ——————

(A) Using acid cream
(B) Over – neutralisation of cream
(C) Over - heating of cream during pasteurization
(D) Fat hydrolysis due to lipase action in cream
(E) Answer not known

198. —————— is a flavour producing organism responsible for producing flavour in ripened cream butter.

(A) Streptococcus lactis subsp.diacetyllactis
(B) Streptococcus lactis
(C) Streptococcus thermophilus
(D) Lactobacillus bulgoricus
(E) Answer not known

199. According to this —————— theory presence of foam / froth is essential for churning of milk fat.

(A) Hansu modern
(B) Rahn's
(C) Fischer and Hooker
(D) Fritz
(E) Answer not known

200. Colouring matter is used in butter is

(A) Annatto
(B) Chlorophyll
(C) Xanthophyll
(D) Leucopene
(E) Answer not known