



7. The shape of haemoglobin is :  
 (A) spherical (B) elongated (C) rectangular (D) coiled
8. The function of vitamin B - Complex is as :  
 (A) Enzyme (B) Antioxidant (C) Coagulant (D) Co-enzyme
9. The bond angle for a water molecule is :  
 (A) 45° (B) 75° (C) 105° (D) 135°
10. Which of the following groups requires the highest recommended daily intake of iron ?  
 (A) Girls aged 4 - 7 years (B) Women aged 55 - 77 years  
 (C) Girls aged 7 - 11 years (D) Women aged 18 - 35 years
11. A person has normal vision in bright conditions but cannot see clearly in dim light. Which of the following vegetables is most effective in helping him to overcome the problem ?  
 (A) Broad bean (B) Potato (C) Spinach (D) Green pepper
12. Richest source of iron is :  
 (A) Papaya (B) Mango (C) Pomegranate (D) Dry karonda
13. Hot break system is followed in tomato processing to deactivate :  
 (A) Pectinase (B) Pectic Methyl Esterase  
 (C) Protopectinase (D) Polygalctouronase
14. Which of the following is a climacteric fruit ?  
 (A) Mango (B) Grapes (C) Litchi (D) Citrus
15. The green colour of green vegetables is lost during heating due to the production of :  
 (A) Carotenoids (B) Chlorophylls (C) Pheophytins (D) Flavenoids
16. Nonenzymatic browning in fruits is reduced by :  
 (A) SO<sub>2</sub> treatment (B) Vacuum treatment  
 (C) Osmotic dehydration (D) All of these
17. Which of the following has the highest alcohol content ?  
 (A) Beer (B) Wine (C) Cider (D) Whisky

18. The coffee that may reduce insomnia effect is :
- (A) Instant coffee (B) Decaffeinated coffee  
(C) Regular coffee (D) All of these
19. The green tea processing does not involve :
- (A) Steaming of tea leaves (B) Rolling of leaves  
(C) Fermentation of leaves (D) Drying the leaves
20. Dutching of cocoa liquor is done to :
- (A) Reduce acidity (B) Increase acidity  
(C) Decrease solubility (D) Decrease alkalinity
21. Homogenization of milk results in :
- (A) Decrease in number of fat globules  
(B) Increase in whiteness of milk  
(C) Decrease in temperature of milk  
(D) All of the above
22. The purpose of cheddaring during cheese production is to :
- (A) To squeeze whey from curd (B) To cut the curd into cubes  
(C) To add enzymes (D) All of the above
23. Which of the following is not an operation during ice cream production ?
- (A) Pasteurization (B) Ageing (C) Ripening (D) Freezing
24. Which of the following is not a muscle protein ?
- (A) Myosin (B) Collagen (C) Elastin (D) Albumin
25. Match the following items in **Group I** and **Group II** :
- | <b>Group I</b> |              |            |            | <b>Group II</b> |   |  |  |
|----------------|--------------|------------|------------|-----------------|---|--|--|
| (a)            | Beef         |            |            | (i)             | Common <i>salmonella</i> infection          |  |  |
| (b)            | Poultry meat |            |            | (ii)            | Evisceration                                |  |  |
| (c)            | Fish         |            |            | (iii)           | Rigor mortis                                |  |  |
| (d)            | Eggs         |            |            | (iv)            | Its fat is an excellent source of vitamin A |  |  |
|                | <b>(a)</b>   | <b>(b)</b> | <b>(c)</b> | <b>(d)</b>      |   |  |  |
| (A)            | (iv)         | (iii)      | (i)        | (ii)            |   |  |  |
| (B)            | (i)          | (ii)       | (iii)      | (iv)            |   |  |  |
| (C)            | (iii)        | (ii)       | (iv)       | (i)             |   |  |  |
| (D)            | (iii)        | (ii)       | (i)        | (iv)            |   |  |  |

26. Smoking of meat is carried out at about :  
(A) 57°C (B) 77°C (C) 87°C (D) 97°C
27. Deposition of fat within lean muscle of meat is known as :  
(A) Stunning (B) Hoisting (C) Tenderizing (D) Marbling
28. Which of the following is not used for artificial tenderization of meat ?  
(A) Salt (B) Sugar  
(C) Enzymes (D) Electrical stimulation
29. The bright cherry red colour of cut meat is due to :  
(A) Oxymyoglobin (B) Metmyoglobin (C) Myoglobin (D) Myoglobulin
30. Which of the following is a water in oil emulsion ?  
(A) Milk (B) Butter (C) Cheese (D) Cream
31. The outermost layer of most cereal grains which is rich in proteins and which is removed during milling is called :  
(A) Aleurone (B) Mesocarp (C) Germ (D) Endosperm
32. Which of the following is not true in case of hard wheat ?  
(A) It yields strong flour (B) It gives elastic dough  
(C) It is used for bread making (D) It has lower protein content than soft wheat
33. Break rolls in wheat milling consists of :  
(A) Smooth rollers rotating in opposite direction  
(B) Corrugated rollers rotating in opposite direction  
(C) Corrugated rollers rotating in same direction  
(D) Smooth rollers rotating in same direction
34. In comparison to Raw rice, Parboiled rice :  
(A) Is more difficult to digest  
(B) Gives less volume of rice upon cooking  
(C) Is more enriched with vitamins and minerals  
(D) Is more sticky
35. Shortening added during baking is used as :  
(A) Tenderizer (B) Drier (C) Moistener (D) Toughner

36. The protein content of legumes is about :  
 (A) 7 - 14%                      (B) 20 - 40%                      (C) 50 - 60%                      (D) > 60%
37. The process of winterization in oils is performed to remove :  
 (A) Wax    (B) Moisture  
 (C) Organic impurities                      (D) All of the above
38. Texturised vegetable protein is used as :  
 (A) Meat tenderizer                      (B) Meat curing agent  
 (C) Meat rendering agent                      (D) Meat extender
39. Which one of the following micro - organisms is used in the preparation of bread ?  
 (A) *Gndida utilis*                      (B) *Saccharomyces cerevisiae*  
 (C) *Saccl - aromyces cevarum*                      (D) *Aspergillus niger*
40. In peanuts, moulds release a toxin named :  
 (A) Antitrypsin                      (B) Aflatoxin  
 (C) Hemagglutinins                      (D) All of the above
41. The term HACCP stands for :  
 (A) Hygiene Associated Critical Control Point  
 (B) Hazard Analysis and Critical Commercial Point  
 (C) Hygienic and Aesthetic Concept of Critical Products  
 (D) Hazard Analysis and Critical Control Point
42. Which of the following preservative is used for preservation of Volatile oils ?  
 (A) Sodium benzoate                      (B) KMS                      (C) Sorbic acid                      (D) Alcohol
43. The term BHT stands for :  
 (A) Butylated Hydroxy Toluene  
 (B) Butylated Hydro Toluene  
 (C) Butylated Hydroxy Tetraacetic acid  
 (D) Butylated Hydroxyl Tetranisole
44. Silicates are used in food as :  
 (A) Thickeners                      (B) Emulsifying agents  
 (C) Anticaking agents                      (D) Chelating agents

45. Match the following items in Group I and Group II :

- | Group I |                  |       |       | Group II |                  |  |  |
|---------|------------------|-------|-------|----------|------------------|--|--|
| (a)     | CMC              |       |       | (i)      | Bleaching agent  |  |  |
| (b)     | EDTA             |       |       | (ii)     | Thickeners       |  |  |
| (c)     | BHA              |       |       | (iii)    | Chelating agents |  |  |
| (d)     | Benzoyl peroxide |       |       | (iv)     | Antioxidants     |  |  |
| (a)     | (b)              | (c)   | (d)   |          |                  |  |  |
| (A)     | (iv)             | (i)   | (iii) | (ii)     |                  |  |  |
| (B)     | (ii)             | (iii) | (i)   | (iv)     |                  |  |  |
| (C)     | (iii)            | (ii)  | (iv)  | (i)      |                  |  |  |
| (D)     | (ii)             | (iii) | (iv)  | (i)      |                  |  |  |

46. Annatto is :

- |                            |                             |
|----------------------------|-----------------------------|
| (A) A food flavoring agent | (B) An artificial sweetener |
| (C) A food color           | (D) A nutritional additive  |

47. The term FDA stands for :

- |                                  |  |
|----------------------------------|--|
| (A) Food and Drug Administration | (B) Food and Department of Agriculture |
| (C) Food and Drug Adulteration   | (D) Food and Drug Analysis             |

48. The code that defines requirements for acceptable sanitary operation in food plants is :

- |           |         |         |         |
|-----------|---------|---------|---------|
| (A) HACCP | (B) PFA | (C) FPO | (D) GMP |
|-----------|---------|---------|---------|

49. The term GRAS stands for :

- |                                   |                                   |
|-----------------------------------|-----------------------------------|
| (A) Generally Referred to As Safe | (B) Generally Recommended As Safe |
| (C) Generally Recognized As Safe  | (D) Generally Rendered As Safe    |

50. The controversial Delaney clause is present in :

- |   |                         |
|---|-------------------------|
| (A) Food, drug and cosmetic act         | (B) HACCP               |
| (C) Prevention of food adulteration act | (D) Fruit product order |

51. Which one of the micro-organisms given below is not responsible for ropy fermentation of milk ?

- |                                    |                                   |
|------------------------------------|-----------------------------------|
| (A) <i>Alcaligenes viscolactis</i> | (B) <i>Enterobacter aerogenes</i> |
| (C) <i>Streptococcus cremoris</i>  | (D) <i>Streptococcus lactis</i>   |

52. The primary bacterial spoilage of poultry meat at low temperature, with characteristic sliminess at outer surface, is caused by :

- |                            |                            |
|----------------------------|----------------------------|
| (A) <i>Pseudomonas spp</i> | (B) <i>Aspergillus spp</i> |
| (C) <i>Bacillus spp</i>    | (D) <i>Candida spp</i>     |

53. The process in which foods are placed in a shielded chamber and subjected to a radiant energy source is :
- (A) Pasteurization (B) Irradiation  
(C) High Pressure processing (D) Ohmic heating
54. What is the collective term for disease causing microorganisms ?
- (A) Bacteria (B) Germs (C) Pathogens (D) Hosts
55. In a cold store, shrinkage of produce mainly occurs due to :
- (A) Low temperature (B) Low humidity  
(C) High temperature (D) High humidity
56. Which of the following is most suitable for precooling of leafy vegetables ?
- (A) Hydro cooling (B) Forced air cooling  
(C) Vacuum cooling (D) Package icing
57. The optimum storage temperature of banana without chilling injury is about :
- (A) 5°C (B) 7°C (C) 10°C (D) 13°C
58. The temperature and time conditions for sterilization of food is :
- (A) 121°C and 15 minutes (B) 100°C and 15 minutes  
(C) 121°C and 5 minutes (D) 100°C and 5 minutes
59. Smoking is a :
- (A) Physical preservation method (B) Chemical preservation method  
(C) Biological preservation method (D) All of the above
60. The time at a specified temperature required to destroy 90% of microbial population is known as :
- (A) F value (B) Z value  
(C) D value (D) None of the above
61. MAP stands for :
- (A) Modified Atmospheric Packaging (B) Modified Airtight Packaging  
(C) Moisture Altering Packaging (D) None of the above
62. Hydrated lime is used as :
- (A) Oxygen scrubber (B) CO<sub>2</sub> scrubber  
(C) Ethylene scrubber (D) Humidifier

63. Which of the following is a common example of a functional food ?  
 (A) Iodine in salt (B) Iron in sausages  
 (C) Beta carotene in carrots (D) Zinc in orange juice
64. Which of the following food sources may contain probiotics ?  
 (A) Whole wheat bread (B) Apple slices  
 (C) Pulses (D) Yoghurt
65. What is a food that has been manipulated to provide additional health benefits ?  
 (A) Nutraceuticals (B) Functional foods  
 (C) Phytochemicals (D) GM foods
66. Which of the following uses high intensity electric current for food preservation ?  
 (A) Microwave heating (B) Ohmic heating  
 (C) Pulsed electric field processing (D) High pressure processing
67. Which of the following is a cold pasteurization technique ?  
 (A) Microwave heating (B) Ohmic heating  
 (C) Pulsed electric field processing (D) High pressure processing
68. Milk that can remain on supermarket shelves, free of microbial growth, for many years has been processed by which of the following methods ?  
 (A) Aseptic processing (B) Use of humectants  
 (C) Using antibiotics (D) Sequestrants
69. What is the composition of prebiotics ?  
 (A) Protein (B) Fat (C) Fibre (D) Alcohol
70. Which of the following may produce free radicals ?  
 (A) Moderate exercise (B) Fruit vegetable diet  
 (C) Industrial chemicals (D) Clean air
71. Which among the following is not a characteristic of micro-teaching ?  
 (A) It is a teaching technique (B) It is a scaled down teaching endeavour  
 (C) It is a training technique (D) It is a highly individualized training technique

72. What would you do to a student who always quarrels with others in the classroom during teaching ?
- (A) You will ignore (B) You will send him out  
(C) You will punish (D) You will talk with him personally
73. Which of the following statement is most appropriate ?
- (A) A competent teacher can help all students pass the examination  
(B) A competent teacher can create interest in the subject  
(C) A competent teacher can maintain silence in the class  
(D) A competent teacher can keep students engaged
74. The Socratic method of teaching is based on :
- (A) Lecturing (B) Discovering (C) Questioning (D) Analysing
75. Team teaching is :
- (A) Teaching different teams in different aspects of a topic  
(B) Team of experts jointly teaching the different aspects of a topic to one group  
(C) Team of experts teaching the same topic to different groups  
(D) None of the above
76. Most appropriate feature of qualitative research is :
- (A) Quality is analysed (B) Long term process  
(C) Descriptive and indepth (D) Researcher's personal involvement
77. Randomization is a part of :
- (A) Descriptive research (B) Experimental research  
(C) Historical research (D) Expost facto research
78. What does the following design indicate ?
- $O_1 \times O_2$   
 $O_1 \subset O_4$
- (A) True experimental  
(B) Quasi experimental  
(C) Same group act as both experimental and control  
(D) None of the above

79. Delimitation in research report refers to :
- (A) Limitation of the researcher in studying the problem
  - (B) Setting limits to the research problem
  - (C) Defining the research problem
  - (D) All the above
80. The null hypothesis is a statement that is :
- (A) The same as the expected result
  - (B) Necessary because we can only disprove, not prove
  - (C) Stated in the negative to correspond to statistical tests
  - (D) Necessary in reporting research
81. The word 'secular' was added to the Preamble of The Constitution by the \_\_\_\_\_ Constitution (Amendment) Act.
- (A) Forty - first
  - (B) Forty - second
  - (C) Forty - third
  - (D) Forty - fourth
82. The composition of The Council of States shall be in accordance with Article \_\_\_\_\_ of The Constitution of India.
- (A) 79
  - (B) 80
  - (C) 81
  - (D) 82
83. Under Article \_\_\_\_\_ of The Constitution, an appeal lies to The Supreme Court from any judgement, decree or final order of a High Court in India, whether in a civil, criminal or other proceedings, if the High Court certifies that the case involves a substantial question of law as to the interpretation of The Constitution.
- (A) 131
  - (B) 131 - A
  - (C) 132 (1)
  - (D) 134 (1)
84. In peoples' Union for Civil Liberties v Union of Indian AIR 1997 SC 568, The Supreme Court has held that the right to Life and personal liberty under Article 21 includes \_\_\_\_\_.
- (A) Right to privacy
  - (B) Right to medical care
  - (C) Right to livelihood
  - (D) Right to shelter
85. Article \_\_\_\_\_ of The Constitution empowers the President of India to establish an Inter-state Council.
- (A) 258
  - (B) 260
  - (C) 263
  - (D) 264
86. There shall be no obligation to give any citizen, information which has been expressly forbidden to be published by any court or tribunal, as per \_\_\_\_\_ of The Right to Information Act 2005.
- (A) Section 8(1) (a)
  - (B) Section 8(1)(b)
  - (C) Section 8(1)(f)
  - (D) Section 8(1)(h)

87. Under Section 35(1) of The Protection of Children against Sexual Offences Act 2012, the statement of the child shall be recorded within a period of \_\_\_\_\_ days of the Special Court taking cognizance of the Offence.  
 (A) Fifteen (B) Thirty (C) Forty five (D) Sixty
88. Under Section 3(1) of The National Food Security Act 2013, every person belonging to priority households shall be entitled to receive \_\_\_\_\_ kilograms of food grains per person per month at subsidized prices from the State Government under the targeted PDS.  
 (A) Two and a half (B) Five  
 (C) Seven and a half (D) Ten
89. Under Section 9(1) of The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act 2013, the aggrieved Woman should make a complaint within \_\_\_\_\_ from the date of incident.  
 (A) Twenty four hours (B) Forty eight hours  
 (C) One month (D) Three months
90. Under Section 9(2) of The Maintenance and Welfare of Parents and Senior Citizens Act 2007, the Maximum maintenance allowance to be ordered by the Tribunal shall not exceed Rupees \_\_\_\_\_ per month.  
 (A) Five thousand (B) Six thousand (C) Eight thousand (D) Ten thousand
91. The head quarter of IAEA is :  
 (A) New York (B) Vienna (C) Belgium (D) Washington
92. The autobiography of G. Sankarakurup :  
 (A) Ormayude olangal (B) Odakuzhal  
 (C) Oru desathinte katha (D) Ente samaram
93. The last Bharath Rathna Award Winner along with Sachin Tendulkar :  
 (A) A.P.J. Abdul Kalam (B) K. Radhakrishnan  
 (C) K. Madhavan Nair (D) C.N.R. Rao
94. The first lady's publication in Kerala for the ladies :  
 (A) Rajyasamachar (B) Indulekha (C) Kunthalatha (D) Sarada
95. Jhansi Rani of Travancore :  
 (A) Kaumudi teacher (B) A.V. Kuttimalu Amma  
 (C) Akkamma cheriyan (D) Mayilamma

96. What is the pen name of Swadesabhimani Ramakrishna Pilla :  
(A) Keralan (B) Uroob (C) Kovilan (D) Abhimani
97. The founder of 'Facebook' :  
(A) Winton Serf (B) Gimmy Wales  
(C) Mark Zuckerberg (D) Lary Page
98. The first muslim lady from Uttar Pradesh who took part in the freedom struggle of India :  
(A) Begum Hazrath mahal (B) Be Amma  
(C) Muhzeena Kidwai (D) Sultana Razia
99. The man who defeated Viswanath Anand and broke his five years world chess championship record :  
(A) Magnes Karlson (B) Karl Louis  
(C) Shikkaru Nakkamura (D) Korobo
100. The first malayalee woman placed in the Indian Postal Stamp :  
(A) Akkamma Cheriyan (B) Suseela Gopalan  
(C) Sr. Alphonsamma (D) Mayilamma

- o o o -