

Seat No.

Total No. of Pages : 24

P.G. Entrance Examination, 2024
M.Sc. Food Science and Technology
Subject Code : 58724

Day and Date : Friday, 17-05-2024
Time : 03:30 pm to 05:00 pm

Total Marks : 100

Instructions :

- 1) All questions are compulsory.
 - 2) Each question carries 1 mark.
 - 3) Answers should be marked in the given OMR answer sheet by darkening the appropriate option.
 - 4) Follow the instructions given on OMR sheet.
 - 5) Rough work shall be done on the sheet provided at the end of question paper.
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1. The general formula of Carbohydrate is

 - a. $C_n (H_2O)_n$
 - b. $C_{n-1} (H_2O)_n$
 - c. $C_{n+1} (H_2O)_n$
 - d. $C_{n+2} (H_2O)$

2. The phase change that results from a solid going directly into the gaseous phase is

 - a. Vapourization
 - b. Sublimation
 - c. Supercritical
 - d. Triple Point

3. Proteins are polymers of
 - a. α -amino acids
 - b. β -amino acids
 - c. γ -amino acids
 - d. δ -amino acids

4. The sequence in which amino acids are arranged in a protein is called structure.
 - a. primary
 - b. secondary
 - c. fibrous
 - d. sheet

5. Palmitoleic acid (16:1) classified as fatty acid.
 - a. saturated
 - b. monounsaturated
 - c. polyunsaturated
 - d. polysaturated

6. Sterilized milk is devoid of
 - a. Vitamin A
 - b. Vitamin B1
 - c. Vitamin C
 - d. Vitamin D

7. helps in the regulation of blood volume and blood pressure.
- a. Iron
 - b. Iodine
 - c. Sodium
 - d. Phosphorous
8. Specific Gravity of lipid is
- a. 0.3
 - b. 0.4
 - c. 0.6
 - d. 0.8
9. Rancidity of lipids of lipid-rich foodstuff is because of
- a. Reduction of fatty acids
 - b. Hydrogenation of unsaturated fatty acids
 - c. Dehydrogenation of saturated fatty acids
 - d. Oxidation of fatty acids
10. Which One of the Following is a Monosaccharide?
- a. Maltose
 - b. Sucrose
 - c. Fructose
 - d. Starch

11. Milk is deficient in which vitamins?
 - a. Vitamin C
 - b. Vitamin A
 - c. Vitamin B2
 - d. Vitamin K

12. Which one is the largest particulate of the cytoplasm?
 - a. Lysosomes
 - b. Mitochondria
 - c. Golgi apparatus
 - d. Entoplasmic reticulum

13. Carrier protein can
 - a. Transport only one substance
 - b. Transport more than one substance
 - c. Exchange one substance to another
 - d. Perform all of these functions

14. The sugar found in RNA is
 - a. Ribose
 - b. Deoxyribose
 - c. Ribulose
 - d. Erythrose

15. A carbohydrate found only in milk is
- a. Glucose
 - b. Galactose
 - c. Lactose
 - d. Maltose
16. An aromatic amino acid is
- a. Lysine
 - b. Tyrosine
 - c. Taurine
 - d. Arginine
17. An example of a saturated fatty acid is
- a. Palmitic acid
 - b. Oleic acid
 - c. Linoleic acid
 - d. Erucic acid
18. Dietary fiber denotes
- a. Undigested proteins
 - b. Plant cell components that cannot be digested by own enzymes
 - c. All plant cell wall components
 - d. All non-digestible water insoluble polysaccharide

19. High intake of is advised to prevent constipation
- a. Fiber
 - b. Meat
 - c. Fish
 - d. All of above
20. Obesity results if:
- a. Energy intake is lesser than energy expenditure
 - b. The number of enzymes become more than the food
 - c. Energy expenditure is less than the energy intake.
 - d. Energy expenditure is more than the energy intake
21. Father of microbiology is
- a. Louis Pasteur
 - b. Lister
 - c. A.V. Leeuwenhock
 - d. Robert Koch
22. pH required for the growth of bacteria is
- a. 6.8-7.2
 - b. 5.6-8.2
 - c. 3.0-6.0
 - d. 8.0-14.0
23. The no. of generations per hour in a bacteria is
- a. Growth rate
 - b. Generation time
 - c. Sigmoid curve
 - d. None of these

24. Penicillin is a
- a. Primary metabolite
 - b. Secondary metabolite
 - c. Tertiary metabolite
 - d. None of the above
25. The fungus used in the industrial production of citric acid:
- a. *Rhizopus Oryzae*
 - b. *Fusarium moniliformae*
 - c. *Rhizopus nigricans*
 - d. *Aspergillus nigricans*
26. Methods used to get immobilized enzymes:
- a. Adsorption
 - b. Encapsulation
 - c. Covalent bonding
 - d. All of these
27. What are the extrinsic factors for the microbial growth?
- a. humidity
 - b. storage temperature
 - c. composition of gas phase
 - d. all of these

28. Generation time of *Escherichia coli* is
- a. 20 minutes
 - b. 20 hours
 - c. 20 days
 - d. 200 hours
29. Which of the following is the suitable temperature range for mesophiles?
- a. 20-30°C
 - b. 25-40°C
 - c. >40°C
 - d. None of these
30. A bacterial food intoxication refers to
- a. illness caused by presence of pathogens
 - b. food borne illness caused by the presence of a bacterial toxin formed in food
 - c. both (a) and (b)
 - d. none of the above
31. Which method is suitable to detect virus infection in seeds?
- a. Tetrazoloin test
 - b. Triple response
 - c. ELISA
 - d. All of the above
32. Real-time PCR is also called as
- a. qPCR
 - b. Nested PCR
 - c. Hot Start PCR
 - d. None of the above

33. Synthetic seeds are prepared from
- a. Hybrid seed
 - b. Somatic embryos
 - c. Root tips
 - d. Local seeds
34. DNA fingerprinting involves
- a. HPTLC
 - b. SDS-PAGE
 - c. DOT BLOT
 - d. RFLP
35. Which of the following is a genetic engineering-related topic?
- a. Plastid
 - b. Heterosis
 - c. Plasmid
 - d. Mutation
36. EcoRI is the name of a restriction endonuclease. What does the "co" in the acronym mean?
- a. Coenzyme
 - b. coli
 - c. Colon
 - d. Coelom
37. Which of the following is true about T DNA?
- a. Integration of T-DNA can occur at many different, apparently random, sites in the plant nuclear DNA
 - b. Integration of T DNA occurs only at one specific sites in the plant nuclear DNA
 - c. Integration of T DNA occurs at two specific sites in the plant nuclear DNA
 - d. Integration of T DNA occurs at one site that may be random in the plant nuclear DNA

38. Triticale, the first man made cereal is an example of
- a. artificial allopolyploidy
 - b. artificial autopolyploidy
 - c. man made crossing
 - d. artificial evolution
39. Golden rice is a transgenic crop of the future with the following improved trait.
- a. Insect resistance
 - b. High protein content
 - c. High vitamin A content
 - d. High lysine content
40. The shortest of mitotic phases is the
- a. telophase
 - b. interphase
 - c. metaphase
 - d. anaphase
41. Food laws are classified into
- a. Mandatory standards and voluntary standards
 - b. Preventive standards and hygienic standards
 - c. Safety standards and security standards
 - d. General standards and potential standards
42. The person suffering from which of the following disease can work inside food processing industry
- a. Diarrhoea
 - b. Vomiting
 - c. Excessive hair fall
 - d. None of the above

43. Which of the following is an objective of 'Quality assurance'?
- a. To establish, issue and maintain standards and specifications for all raw materials and finished goods
 - b. To assure all ingredients and all finished goods adhere to the company's quality standards
 - c. To be of service to the company in all areas related to product quality
 - d. All of the mentioned
44. Which one of the following is a contaminant?
- a. Urea
 - b. Pesticides
 - c. Iron filings in tea
 - d. All of the mentioned
45. Which method of purification of organic compound is useful to separate volatile liquids from non volatile impurities?
- a. Sublimation
 - b. Distillation
 - c. Crystallization
 - d. Fractional crystallization
46. Muffle furnace is used to determine the content of food
- a. Moisture
 - b. Fat
 - c. Protein
 - d. Mineral
47. is not a chemical property
- a. Moisture
 - b. Smell
 - c. Protein
 - d. Fat

48. Ash content is nothing but
- a. Organic Matter
 - b. Inorganic Matter
 - c. Both a and b
 - d. None of these
49. ISO 14000 standards are for the
- a. sustained success
 - b. production management
 - c. operations quality management
 - d. environmental management
50. How many principles are there in a HACCP system?
- a. Four
 - b. Seven
 - c. Eighteen
 - d. Ten
51. Naturally occurring play a role in food coloring.
- a. enzymes
 - b. pigments
 - c. sugars
 - d. carbohydrates
52. The most common drying method is drying.
- a. Freeze
 - b. Spray
 - c. Sun or tray drying
 - d. Oven
53. heating means that the circulation of currents in one region inside a can distributes the heat to another.
- a. Conduction
 - b. Convection
 - c. Radiation
 - d. Slow

54. Bread is leavened with
- a. Yeast
 - b. Salt
 - c. Sugar
 - d. Baking soda
55. make a food acid or sour.
- a. Flavorings
 - b. Colorings
 - c. Texturings
 - d. Acidulants
56.is made by churning pasteurized cream.
- a. Butter
 - b. Yogurt
 - c. Ice cream
 - d. Milk
57. The yolk or yellow portion makes up about percent of the liquid weight of the egg.
- a. 12
 - b. 43
 - c. 22
 - d. 33
58. Candies based on a sugar include rock candy, fondant, and fudge.
- a. crystalline
 - b. white
 - c. noncrystalline
 - d. sweet
59. The most common sweetener used in candies and chocolates is
- a. glucose
 - b. maltose
 - c. lactose
 - d. sucrose
60. The science and art of growing grapes for wine is called
- a. vinification
 - b. viticulture
 - c. viniculture
 - d. vineyard

61. Freeze drying takes place at
- a. The triple point
 - b. Below the triple point
 - c. Above the triple point
 - d. At zero degree Celsius
62. Which of the following sentence is true with respect to food storage/preservation?
- a) Each food type has a potential storage life
 - b) The mechanical abuse that food has received during storage/distribution does not affects its storage stability
 - c) All of the mentioned
 - d) None of the mentioned
63. Alginate is used as a
- a. Thickener
 - b. Low intensity sweetener
 - c. Leavening agent
 - d. None of the above
64. Which of the following is high in protein?
- a. Wheat
 - b. Avocado
 - c. Amla
 - d. Soyabean

65. The colour of turmeric is due to?
- a. Carotene
 - b. Paprika
 - c. Curcumin
 - d. Apocarotenal
66. Minimum fat % in double toned milk is
- a. 0.5
 - b. 1.5
 - c. 2.5
 - d. 3.5
67. Botanical name of Tea is
- a. Camellia sinensis
 - b. Theobrana cacao
 - c. Theobrama sinensis
 - d. None of these
68. Curing step is involved in the processing of
- a. Vanilla.
 - b. Green cardonom
 - c. Saffron
 - d. All of the above
69. Eugenol is the principal component of
- a. Clove
 - b. Coriander
 - c. Cassia
 - d. Cardamon
70. Which of the following spices is known as the KING OF SPICE?
- a. Aniseed
 - b. Chilli
 - c. Pepper
 - d. Ginger

71. BOPP stands for
- a. Biaxially Oriented Polypropylene
 - b. Biodegradable Oxidized Polypropylene
 - c. Biodegradable & Oriented Polypropylene
 - d. None of the above
72. PVA stands for
- a. Polyvinyl Alcohol
 - b. Post Vacation Activity
 - c. Potassium Valeric Acid
 - d. None of the above
73. Semi- viscous product obtained by the solvent extraction of essential oils is
- a. Oleoresin
 - b. Isolate
 - c. Concrete
 - d. Absolute
74. Poor quality egg floats in the water due to
- a. Microbial spoilage
 - b. Increase in air cell
 - c. Decrease in air cell
 - d. Air cell has no relation to quality of egg

75. Sausage is
- a. An emulsion
 - b. A solution
 - c. A precipitate
 - d. None of the above
76. Meat juiciness is dependent on
- a. Amount of fat in meat
 - b. Amount of fat and water holding capacity of meat
 - c. Connective tissue
 - d. Proteins present in connective tissue
77. An agent used for glazing is
- a. Edible wax
 - b. Layers of ice
 - c. Sodium salts.
 - d. None of the above
78. Smoking is used for the preservation of
- a. Cereals
 - b. Meat
 - c. Egg
 - d. Fruits

79. Nitrate and Nitrite along with Sodium Chloride is called as
- a. Curing agent
 - b. Emulsifier
 - c. Anti caking agent
 - d. Fumigating agent
80. Fat bloom is
- a. Increase in the fat level in chocolate leading to the formation of soft texture
 - b. Coating the sugar candy with cocoa butter
 - c. Defect found in chocolate
 - d. None of the above
81. As per the FPO specifications, the drained weight of canned vegetables should be not less than
- a. 25%
 - b. 35%
 - c. 45%
 - d. 55%
82. Strength of brine is being measured by
- a. Salometer
 - b. Salinometer
 - c. Baume's hydrometer
 - d. All of the above

83. Apples are
- a. Pome
 - b. Drupe
 - c. Berry
 - d. Nut
84. Guava is rich in
- a. Vitamin A
 - b. Vitamin C
 - c. Vitamin K
 - d. Vitamin B complex
85. Degree of methylation in a low methoxy pectin is
- a. Less than 5%
 - b. 10-12%
 - c. 15-30%
 - d. 20-40%
86. Carbon dioxide in carbonated beverages acts as
- a. Preservative
 - b. Sparkling agent
 - c. Enhancement of flavour
 - d. All of the above
87. The sparkling, clear sweetened fruit juice is
- a. RTS
 - b. Squash
 - c. Puree
 - d. Cordial

88. TSS of fruit squash is
- a. 12%
 - b. 25%
 - c. 30%
 - d. 40%
89. Fruit drinks have TSS of
- a. 5%
 - b. 10%
 - c. 15%
 - d. 20%
90. Canning is also sometime called as
- a. Appertization
 - b. Pasteurization
 - c. Sterilization
 - d. Cold sterilization
91. Benzoates can be used for the preservation of
- a. Bread
 - b. Jam
 - c. Meat
 - d. Egg
92. Storage of food under reduced pressure is called
- a. Aseptic packaging
 - b. Hyperbaric storage
 - c. Hypobaric storage
 - d. Gas packaging

93. In slow freezing
- a. Crystal size is big
 - b. Crystal size is small
 - c. Both extra cellular and intracellular crystallization takes place
 - d. Quality of product is better than fast freezing
94. Which of the following preservative have found to be much effective to prevent ropiness of bread?
- a. Sugar
 - b. Sulphite
 - c. Propionic acid
 - d. Acetic acid
95. What is the proposed mode of action of citric acid?
- a. Dehydration
 - b. Osmosis
 - c. Chelation
 - d. None of the above
96. Cyclamate is
- a. A leavening agent
 - b. A antimicrobial agent
 - c. A non nutritive sweetener
 - d. A shortening
97. Lemon extract can be preserved by using
- a. alcohol
 - b. formaldehyde
 - c. acetic acid
 - d. formic acid

98. Vinegar is used as the preservatives in
- a. Confectionry
 - b. Ketchup
 - c. Jelly
 - d. Oils
99. Baking powder is of two principal kinds
- a. Less acidic and more acidic
 - b. Slow and fast acting
 - c. Neither a nor b
 - d. Both a and b
100. For cake making the protein content of the flour required is
- a. 5-7%
 - b. 7-9%
 - c. 9-11%
 - d. 11-13%



Rough Work

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