

Version 3

Date: _____

Admission Test Spring 2026

MS Food Technology

Name: _____

Reference ID: _____

Total Marks: 100

Marks Obtained: _____

Instructions

- Read each question carefully and choose the most appropriate option.
- Encircle the correct option (a, b, c, or d) on the answer sheet clearly
- Each question carries equal marks. No negative marking
- Do not use correction fluid on the answer sheet
- Use a blue or black ballpoint pen only
- Unanswered questions will receive zero marks
- Mobile phones are strictly prohibited inside the examination hall.
- Ensure your phone is switched off and kept outside before the test begins

1. Which of the following statement regarding enzyme is always true?
 - a. Enzymes decreases the activation energy of the reaction
 - b. Enzymes are consumed in the reaction they catalyse
 - c. Enzymes are specific to the substrates they bind to
 - d. Enzymes can function at any temperature and pH
2. Which enzyme is responsible for the breakdown of starch into maltose?
 - a. Protease
 - b. Amylase
 - c. Lipase
 - d. Peroxidase
3. In the food industry, which enzyme is commonly used to coagulate milk in the cheese-making process?
 - a. Pectinase
 - b. Renin
 - c. Cellulase
 - d. Invertase
4. What is the primary role of lipase in food technology?
 - a. Hydrolysing fats into glycerol and fatty acids
 - b. Hydrolysing proteins into amino acids
 - c. Hydrolysing polysaccharides into monosaccharides
 - d. None of the above
5. Which of the following describe the study of zymology?
 - a. The study of fermentation and enzymes involved in it.
 - b. The study of plant growth and development
 - c. The study of soil microbiology
 - d. The study of nutritional content of various food products
6. Which type of milk treatment involves removing water to concentrate the milk, often used in making products like evaporated milk
 - a. Filtration
 - b. Ultrafiltration

- c. Evaporation
 - d. None of these
7. Which of the following reactions is primarily responsible for the browning of foods during cooking, such as in baking bread or grilling meat?
- a. Fermentation
 - b. Maillard Reaction
 - c. Caramelization
 - d. Saponification
8. Which type of bond is formed between the carboxyl group of one amino acid and the amino group of another amino acid in protein synthesis?
- a. Ionic
 - b. Peptide
 - c. Disulphide
 - d. Hydrogen
9. In the context of lipid oxidation, which of the following is considered a primary product of oxidation?
- a. Hydroperoxides
 - b. Aldehydes
 - c. Alcohol
 - d. ketones
10. Which vitamin is known for its antioxidant properties and is often used to prevent rancidity in fats and oils?
- a. Vitamin A
 - b. Vitamin D
 - c. Vitamin E
 - d. Vitamin K
11. What is the primary role of pectin in the production of jams and jellies?
- a. Preservative
 - b. Sweetener
 - c. Flavour Enhancer
 - d. Gelling Agent
12. Which of the following is a reducing sugar that participates in the Maillard reaction?
- a. Glucose

- b. Sucrose
 - c. Maltose
 - d. Lactose
13. In food chemistry, what is the term for the process by which enzymes catalyse the breakdown of proteins into peptides and amino acids?
- a. Lipolysis
 - b. Proteolysis
 - c. Glycolysis
 - d. Hydrolysis
14. What is the main method used to detect the presence of *Escherichia coli* O157 in food samples?
- a. PCR
 - b. Gram Staining
 - c. ELISA
 - d. DNA Sequencing
15. Which mycotoxin, produced by *Aspergillus* species, is commonly found in improperly stored grains and is highly carcinogenic?
- a. Patulin
 - b. Ochratoxin
 - c. Fumonisin
 - d. Aflatoxin
16. Which bacteria is commonly associated with raw or undercooked poultry and can cause food poisoning?
- a. *Clostridium botulinum*
 - b. *Escherichia Coli*
 - c. *Bacillus cereus*
 - d. *Salmonella*
17. What is the recommended minimum internal temperature for cooking ground beef to ensure it is safe to eat?
- a. 135°F (57°C)
 - b. 145°F (63°C)

- c. 155°F (68°C)
 - d. 160°F (71°C)
18. Which type of hazard includes the risk of food contamination by harmful bacteria, viruses, or parasites?
- a. Chemical hazard
 - b. Physical hazard
 - c. Biological hazard
 - d. Radiological hazard
19. Which pathogen is often associated with foodborne illness outbreaks linked to contaminated water and fresh produce?
- a. Norovirus
 - b. *Listeria monocytogenes*
 - c. *Staphylococcus aureus*
 - d. *Vibrio cholerae*
20. What is a critical control point (CCP) in the context of food safety?
- a. A point where food is tasted
 - b. A step where control can be applied to prevent or eliminate a food safety hazard
 - c. A location where food is stored
 - d. A method of food presentation
21. Which of the following preservation techniques relies on the application of high hydrostatic pressure to inactivate microorganisms in food without significant heating?
- a. High Pressure Processing
 - b. Irradiation
 - c. Lyophilization
 - d. Ohmic Heating
22. What is the main mechanism through which Modified Atmosphere Packaging (MAP) extends the shelf life of fresh produce?
- a. Increasing oxygen levels
 - b. Reducing carbon dioxide levels
 - c. Balancing gas composition to slow down respiration
 - d. Removing nitrogen from the package
23. In the context of food irradiation, which type of irradiation is most commonly used for the sterilization of spices and dry ingredients?

- a. Gamma Radiation
 - b. Ultra-violet Radiation
 - c. Microwave Radiation
 - d. Infrared Radiation
24. Which chemical compound is primarily responsible for the anti-microbial properties of smoke in traditional smoking process?
- a. Alcohols
 - b. Ascorbic Acid
 - c. Ethylene
 - d. Phenols
25. In the context of enzymatic browning in fruits and vegetables, which enzyme catalyses the oxidation of phenolic compounds leading to the formation of brown pigments?
- a. Amylase
 - b. Lipase
 - c. Polyphenol oxidase
 - d. Protease
26. Which advanced thermal processing technique uses high temperatures (typically above 100°C) for short times (a few seconds) to achieve commercial sterility in liquid foods?
- a. Ultra-High Temperature (UHT) Processing
 - b. Pasteurization
 - c. Sterilization
 - d. Blanching
27. Which of the following is a primary disadvantage of using vacuum drying compared to other drying methods in food processing?
- a. Reduced product quality
 - b. High energy consumption
 - c. Limited application to specific foods
 - d. Lower retention of heat-sensitive nutrients
28. Which of the following is a non-thermal method used to reduce microbial load in fresh produce without altering its sensory properties?
- a. Thermal pasteurization

- b. Gamma irradiation
 - c. Ultraviolet (UV) light treatment
 - d. Ohmic heating
29. Which type of fermentation is primarily used in the production of sauerkraut and kimchi?
- a. Alcoholic fermentation
 - b. Acetic acid fermentation
 - c. Lactic acid fermentation
 - d. Butyric acid fermentation
30. In the context of food preservation, what is the primary function of using nitrites in cured meats?
- a. To enhance flavour
 - b. To inhibit the growth of *Clostridium botulinum*
 - c. To increase the shelf life by reducing moisture content
 - d. To act as a colour stabilizer
31. Which preservation method uses rapid freezing followed by storage at very low temperatures to preserve the quality of food products?
- a. Cryogenic freezing
 - b. Plate freezing
 - c. Air blast freezing
 - d. Mechanical freezing
32. Which molecule is often referred to as the "energy currency" of the cell?
- a. Glucose
 - b. NADH
 - c. ATP
 - d. Pyruvate
33. Which enzyme is responsible for catalysing the conversion of glucose to glucose-6-phosphate in glycolysis?
- a. Hexokinase
 - b. Phosphofructokinase
 - c. Pyruvate kinase

- d. Lactate dehydrogenase
- 34. In DNA, which nitrogenous base pairs with cytosine?
 - a. Adenine
 - b. Guanine
 - c. Thymine
 - d. Uracil
- 35. Which of the following is a primary goal of post-harvest technology?
 - a. Increase the size of the harvest
 - b. Enhance the flavour of produce
 - c. Minimize losses and maintain quality after harvest
 - d. Reduce labour costs in farming
- 36. Which gas is commonly reduced in controlled atmosphere storage to delay the ripening of fruits?
 - a. Ethylene
 - b. Oxygen
 - c. Nitrogen
 - d. Argon
- 37. Which of the following is a common cause of post-harvest losses in fruits and vegetables?
 - a. Insufficient irrigation
 - b. Pest attacks during growth
 - c. Mechanical damage during handling and transportation
 - d. Over-fertilization
- 38. What is the main benefit of pre-cooling fruits and vegetables immediately after harvest?
 - a. Reduces their nutritional value
 - b. Increases their respiration rate
 - c. Minimizes water loss and preserves quality
 - d. Enhances their colour development
- 39. Which of the following is the primary focus of food engineering?
 - a. Enhancing the flavour of food
 - b. Designing processes to produce, process, and preserve food

- c. Marketing food products
 - d. Regulating food safety standards
40. Which principle is primarily used in the design of equipment for pasteurization?
- a. Mass transfer
 - b. Heat transfer
 - c. Fluid dynamics
 - d. Thermodynamics
41. In the context of food engineering, what does the term "unit operation" refer to?
- a. A step in the food production process
 - b. A type of food product
 - c. A measurement of food quality
 - d. A method of food packaging
42. Which of the following is an example of a unit operation involving mass transfer?
- a. Freezing
 - b. Drying
 - c. Homogenisation
 - d. Mixing
43. What is the primary goal of fluid dynamics in food engineering?
- a. To enhance food flavour
 - b. To understand the behaviour of liquids and gases in food processing
 - c. To improve food packaging
 - d. To regulate food safety standards
44. What is the primary purpose of scalding in poultry processing?
- a. To enhance the flavour of the meat
 - b. To loosen feathers for easier removal
 - c. To reduce bacterial contamination
 - d. To tenderize the meat
45. In poultry processing, what is the significance of the term "evisceration"?
- a. Removing the feathers
 - b. Chilling the carcass

- c. Removing the internal organs
 - d. Packaging the meat
46. Which of the following is a common method used to detect blood spots in eggs during processing?
- a. Candling
 - b. Pasteurization
 - c. Homogenization
 - d. Sterilization
47. In the context of fruit juice clarification, what is the primary purpose of using pectinase enzymes?
- a. To enhance sweetness
 - b. To break down pectin and reduce viscosity
 - c. To improve colour
 - d. To increase acidity
48. What is the main advantage of using ultrafiltration in the production of clear fruit juices?
- a. It enhances the flavour of the juice
 - b. It retains the juice's nutritional content while removing suspended solids
 - c. It increases the juice's shelf life without preservatives
 - d. It reduces the sugar content
49. Which advanced drying technique uses electromagnetic waves to remove water from fruits and vegetables while maintaining their nutritional and sensory qualities?
- a. Freeze-drying
 - b. Microwave drying
 - c. Vacuum drying
 - d. Sun drying
50. Which of the following treatments is often used to prevent enzymatic browning in fresh-cut fruits like apples and potatoes?
- a. Blanching
 - b. Citric acid dip
 - c. Drying
 - d. Fermentation

51. What is the main purpose of using calcium chloride dips in the processing of fresh-cut fruits and vegetables?
- To enhance flavour
 - To improve texture and firmness
 - To reduce microbial load
 - To increase sweetness
52. Which of the following materials is commonly used for vacuum packaging?
- Paper
 - Glass
 - Polyethylene
 - Aluminium
53. Which type of packaging is designed to interact with the food to improve its shelf life or safety?
- Active packaging
 - Passive packaging
 - Vacuum packaging
 - Modified Atmosphere Packaging (MAP)
54. Which type of plastic is most commonly used for soda bottles and food containers due to its strength and recyclability?
- Polyvinyl chloride (PVC)
 - Low-density polyethylene (LDPE)
 - High-density polyethylene (HDPE)
 - Polyethylene terephthalate (PET)
55. Which innovation in food packaging involves the use of nanomaterials to improve food safety and shelf life?
- Biodegradable packaging
 - Nanocomposite packaging
 - Modified atmosphere packaging (MAP)
 - Active Packaging
56. Which international standard is commonly used for food safety management systems?

- a. ISO 90001
 - b. ISO 22001
 - c. ISO 14001
 - d. ISO 45001
57. Which term refers to the statistical method used to monitor and control a process to ensure that it operates at its full potential?
- a. Sensory evaluation
 - b. Supply chain management
 - c. Statistical process control (SPC)
 - d. Quality assurance (QA)
58. Which statistical tool is used in food quality management to identify, analyse, and improve process variability and defects using a structured methodology?
- a. Lean Manufacturing
 - b. Six Sigma
 - c. Pareto Analysis
 - d. Fishbone Diagram
59. What is the primary purpose of using the Failure Mode and Effects Analysis (FMEA) tool in food quality management?
- a. To measure the nutritional content of food
 - b. To systematically identify and evaluate potential failures in a process and their impact on product quality
 - c. To enhance the aesthetic appeal of food packaging
 - d. To increase production speed
60. What does the acronym "GFSI" stand for, and what is its role in food quality management?
- a. Global Food Safety Initiative; to enhance food safety and quality through harmonized standards
 - b. Global Food Standardization Institute; to create international food standards
 - c. General Food Safety Information; to provide guidelines on food handling
 - d. General Food Service Inspection; to conduct food safety inspections worldwide

61. What is the primary function of tempering in wheat milling?
- To enhance the flavour of wheat
 - To adjust the moisture content for optimal milling performance
 - To increase the protein content
 - To reduce microbial contamination
62. Which cereal grain is commonly used to produce semolina flour?
- Oats
 - Barley
 - Durum Wheat
 - Corn
63. Which process involves heating grains in dry heat to develop flavor and reduce moisture content?
- Extrusion
 - Malting
 - Toasting
 - Steeping
64. In the context of rice processing, what is the purpose of parboiling?
- To increase the shelf life of rice
 - To improve the nutritional content by gelatinizing the starch and driving nutrients into the kernel
 - To enhance the flavour of rice
 - To reduce cooking time
65. Which cereal processing method involves cooking and flaking to produce ready-to-eat breakfast cereals?
- Extrusion
 - Fermentation
 - Parboiling
 - Puffing
66. During the sugar extraction process from sugarcane, what is the purpose of the "clarification" step?

- a. To extract juice from the cane
 - b. To remove impurities and non-sugar components
 - c. To crystallize the sugar
 - d. To reduce the moisture content
67. What is the main purpose of using "liming" in the sugar manufacturing process?
- a. To enhance the flavour of sugar
 - b. To adjust the pH and aid in the removal of impurities
 - c. To increase the colour of sugar
 - d. To reduce the crystallization time
68. What is "molasses" in the context of sugar production?
- a. A by-product rich in sugar and nutrients obtained after the crystallization of sugar
 - b. The primary product of sugarcane processing
 - c. A type of refined sugar
 - d. A waste product with no nutritional value
69. In sugar refining, what is the purpose of the crystallization process?
- a. To purify the sugar juice
 - b. To form solid sugar crystals from the concentrated sugar solution
 - c. To increase the sweetness of the sugar
 - d. To enhance the colour of the sugar
70. Which technique is commonly used to separate sugar crystals from the mother liquor during sugar processing?
- a. Filtration
 - b. Centrifugation
 - c. Distillation
 - d. Fermentation
71. What is the main objective of the bleaching process in edible oil refining?
- a. To add nutrients to the oil
 - b. To remove colour pigments and other impurities
 - c. To increase the oil's viscosity
 - d. To enhance the oil's flavour

72. What is the primary purpose of using High-Performance Liquid Chromatography (HPLC) in food analysis?
- To measure the moisture content of food
 - To separate, identify, and quantify compounds in a sample
 - To determine the fat content of food
 - To analyze the colour of food
73. Which technique is commonly used to determine the protein content in food samples?
- Gas Chromatography (GC)
 - Kjeldahl method
 - Infrared Spectroscopy (IR)
 - Atomic Absorption Spectroscopy (AAS)
74. What is the primary function of a differential scanning calorimeter (DSC) in food analysis?
- To measure the moisture content of food
 - To analyse thermal transitions such as melting and crystallization
 - To determine the pH of food
 - To quantify mineral content
75. Which technique is utilized to analyse volatile compounds in food products?
- Mass Spectrometry (MS)
 - Thin Layer Chromatography (TLC)
 - Nuclear Magnetic Resonance (NMR) Spectroscopy
 - Gas Chromatography (GC)
76. Solve for x: $3x-7=11$
- 2
 - 6
 - 5
 - 4
77. What is the value for $8^2 - 4^2$?
- 48
 - 80

- c. 60
 - d. 32
78. If $\frac{3}{4}$ of a number is 12, what is the number?
- a. 16
 - b. 18
 - c. 20
 - d. 22
79. What is the median of the data set: 4, 8, 15, 20, 25?
- a. 4
 - b. 15
 - c. 20
 - d. 25
80. A rectangle has a length that is twice its width. If the perimeter of the rectangle is 60 units, find the dimensions of the rectangle.
- a. Length = 20 units, Width = 10 units
 - b. Length = 24 units, Width = 12 units
 - c. Length = 30 units, Width = 15 units
 - d. Length = 40 units, Width = 20 units
81. If a car travels 150 miles on 5 gallons of fuel, how many miles can it travel on 8 gallons of fuel, assuming the fuel efficiency remains constant?
- a. 240
 - b. 280
 - c. 320
 - d. 360
82. In a class of 30 students, 60% are girls. If 4 girls left the class, what percentage of the remaining students are girls?
- a. 50%
 - b. 55%
 - c. 60%
 - d. 65%

83. A book is priced at Rs.50. During a sale, the book is offered at a 20% discount. If you have a coupon for an additional 10% off the sale price, what is the final price of the book?
- Rs. 36
 - Rs. 32
 - Rs. 40
 - Rs. 46
84. If the area of a circle is 154 square units, what is the radius of the circle? (Use $\pi \approx 3.14$)
- 28 units
 - 21 units
 - 14 units
 - 7 units
85. A recipe calls for $\frac{3}{4}$ cup of sugar for every 2 cups of flour. If you are using 5 cups of flour, how much sugar is needed?
- $1 \frac{1}{4}$ cups
 - $1 \frac{2}{3}$ cups
 - 2 cups
 - $2 \frac{1}{2}$ cups
86. Choose the correct form of the verb to complete the sentence: "She ____ to the store every Saturday."
- Go
 - Goes
 - Going
 - Gone
87. Choose the sentence that is correctly punctuated:
- I need to buy eggs, milk, and bread.
 - I need to buy eggs milk and bread.
 - I need to buy eggs milk and, bread.
 - I need to buy, eggs milk and bread

88. Identify the correct use of "their," "there," or "they're": "___ going to the park after school."
- There
 - Their
 - They're
 - Theirs
89. Select the sentence that uses the correct form of the adjective:
- This book is more better than that one.
 - This book is better than that one.
 - This book is best than that one.
 - This book is more good than that one.
90. Choose the correct past tense form of the verb: "He ___ the movie last night."
- Watch
 - Watches
 - Watching
 - Watched
91. Which sentence correctly uses the article "a" or "an"?
- She wants to be an engineer.
 - She wants to be a engineer.
 - She wants to be an umbrella.
 - She wants to be a umbrella.
92. Identify the sentence with the correct subject-verb agreement:
- The team are winning the game.
 - The team is winning the game.
 - The team wins the game.
 - The teams are winning the game.
93. Choose the correct form of the verb to complete the sentence: "By next week, she ___ the project."
- Will complete
 - Completed

- c. Completes
 - d. Has completed
94. Select the sentence that correctly uses the conjunction:
- a. I want to go to the party, but I'm not feeling well.
 - b. I want to go to the party but I'm not feeling well.
 - c. I want to go to the party but, I'm not feeling well.
 - d. I want to go to the party; but I'm not feeling well.
95. Identify the correct use of the comparative adjective: "This test is ____ than the previous one."
- a. Easier
 - b. More easy
 - c. Easiest
 - d. More easier
96. In a row of 8 chairs, 3 people are seated with the following conditions: Person A is to the left of Person B, and Person C is seated between Person A and Person B. If Person A is in the 2nd chair, in which chair is Person C seated?
- a. 3rd
 - b. 4th
 - c. 5th
 - d. 6th
97. In a circular arrangement, 7 people are seated. If Person P is directly opposite Person Q, how many people are between P and Q?
- a. 1
 - b. 2
 - c. 3
 - d. 4
98. A train leaves a station at 2:00 PM and travels at a speed of 80 km/h. If the destination is 240 km away, at what time will the train arrive?
- a. 4:00 PM
 - b. 5:00 PM
 - c. 6:00 PM
 - d. 7:00 PM
99. In a box of 24 chocolates, $\frac{1}{3}$ are dark chocolates and the rest are milk chocolates. How many milk chocolates are there?

- a. 4
- b. 8
- c. 12
- d. 16

100. A recipe requires 4 eggs for every 3 cups of flour. How many eggs are needed if you are using 9 cups of flour?

- a. 3
- b. 6
- c. 9
- d. 12