

ENTRANCE EXAMINATION FOR ADMISSION, MAY 2012.

M.Sc. (FOOD SCIENCE AND TECHNOLOGY)

COURSE CODE : 396

Register Number :

*Signature of the Invigilator
(with date)*

COURSE CODE : 396

Time : 2 Hours

Max : 400 Marks

Instructions to Candidates :

1. Write your Register Number within the box provided on the top of this page and fill in the page 1 of the answer sheet using pen.
2. Do not write your name anywhere in this booklet or answer sheet. Violation of this entails disqualification.
3. Read each of the question carefully and shade the relevant answer (A) or (B) or (C) or (D) in the relevant box of the ANSWER SHEET using HB pencil.
4. Avoid blind guessing. A wrong answer will fetch you -1 mark and the correct answer will fetch 4 marks.
5. Do not write anything in the question paper. Use the white sheets attached at the end for rough works.
6. Do not open the question paper until the start signal is given.
7. Do not attempt to answer after stop signal is given. Any such attempt will disqualify your candidature.
8. On stop signal, keep the question paper and the answer sheet on your table and wait for the invigilator to collect them.
9. Use of Calculators, Tables, etc. are prohibited.

1. The protein of egg white known for its antibiotic activity
 (A) Conalbumin (B) Lysozyme (C) Ovalbumin (D) Avidin

2. Fishy flavor of egg is the indication of growth of
 (A) *Pseudomonas mucidolens* (B) *Pseudomonas graveolens*
 (C) *Escherichia coli* (D) *Achromobacter perolens*

3. While manufacturing egg powder glucose oxidase is used for removing glucose which helps
 (A) To control microbial growth (B) To control caramelization reaction
 (C) To control maillard reaction (D) To control moisture loss from egg

4. What is game meat
 (A) Meat for sports persons
 (B) Meat obtained from the animals used in game eg : Horse
 (C) Meat of wild animals
 (D) A word used in cricket

5. The enzyme activity of egg yolk is associated with
 (A) Phosvitin (B) Lipovitellin
 (C) Livetin (D) Lipovitellelenin

6. Pork never aged because
 (A) It is not consumed largely
 (B) Ageing of pork is not liked by the consumers
 (C) It has high fat content
 (D) None of the above

7. Essential components of contraction relaxation cycle is
 (A) Iron and Phosphorous (B) Calcium and magnisium
 (C) Sodium and Potassium (D) Zinc and Iron

8. Among the following which is the most common dressing style in pork
 (A) Shipper style (B) Packer style
 (C) Farmer style (D) None of the above
9. Many quick-freezing processes freeze fish under pressure to
 (A) Prevent denaturation of protein
 (B) Prevent desiccation
 (C) Enhance freezing
 (D) None of the above
10. Fat of fish prone to oxidation because of
 (A) More saturation
 (B) Less saturation
 (C) Higher amount of lipoxidase enzyme
 (D) Oxidation has nothing to do with saturation
11. An agent used for glazing is
 (A) Edible wax (B) Layers of ice (C) Sodium salt (D) Bee wax
12. Frankfurters sausages are
 (A) Cured, cooked and smoked (B) Cured, uncooked and smoked
 (C) Fresh, cooked and smoked (D) smoked, cooked and Cured
13. Smoking is done
 (A) After slaughtering (B) Before curing
 (C) After curing (D) At any time
14. The amount of fish salt and acetic acid in marinade is _____ respectively
 (A) 25%, 3% and 0.1% (B) 2%, 1% and 0.5%
 (C) 94%, 5.5% and 0.5% (D) 85%, 3% and 0.2%

15. Cured meats are called
(A) Beef (B) Bacon (C) Ham (D) Marinades
16. Which of the following statement is not correct?
(A) Bromelin from pine apple can be used for tenderization of meat
(B) Electrical stimulation of carcasses after slaughtering of animals can cause tenderization
(C) Ficin is a proteolytic enzyme, obtained from Faba beans can be used for tenderization of meat.
(D) None of the above
17. The specific heat of milk is highest at temperature of _____ °C
(A) 19.4 (B) 20.4 (C) 21.4 (D) 18.4
18. The first KVK in India is at
(A) Pondicherry (B) Pattambi (C) Jalna (D) Varanasi
19. The example for C₄ plant is
(A) Rice (B) Wheat (C) Cotton (D) Maize
20. Golden rice is genetically modified rice with yellow colored seeds rich in
(A) Vitamin A (B) Vitamin C (C) Vitamin E (D) Vitamin K
21. Pungency of onion is due to
(A) Allyl propyl disulphide (B) Allyl tertiarybutyl sulphide
(C) Allicin (D) Propanal
22. Milk is deficient in
(A) Na (B) K
(C) Fe (D) None of the above

23. Storage of food under reduced pressure is called
(A) Aseptic packaging (B) Hyperbaric storage
(C) Hypobaric storage (D) Gas storage
24. Polystyrene is used for
(A) Acid foods (B) Neutral foods
(C) basic foods (D) All of the above
25. SWMA stands for
(A) Standard Weight & Measurement Act
(B) Switzerland Weight and Measurement Act
(C) Sweden Weight and Measurement Act
(D) None
26. What is cellophane
(A) A cellulose combined with ethane
(B) A Cellulose combined with methane
(C) Regenerated cellulose
(D) It has no relation with cellulose
27. Aluminum foil acts as
(A) A good barrier for vapor (B) A good barrier for oxygen
(C) A good barrier for light (D) All of the above
28. IPP standards for
(A) Institute of plastic packaging
(B) Institute of packaging professionals
(C) Institute of package protection
(D) Indian Packaging Professionals

29. Which of the following is excellent oxygen barrier
 (A) Polyethylene (B) Ethylenr Vinyl Alcohol
 (C) Polyvinyl Alcohol (D) Propelene
30. AGMARK was promulgated in
 (A) 1954 (B) 1934 (C) 1937 (D) 1935
31. The first aseptic packaging of food was carried out by
 (A) Dunkley (B) Neilson (C) Nicholas (D) Martin
32. From a packaging point of view very important property of coffee is
 (A) Particle size (B) Bulk density (C) Density (D) Moisture
33. The possible migrant from paperboard carton is
 (A) Polychlorinated biphenyls (B) Dioxin
 (C) Nitrosamines (D) Trichloroanisole
34. Costliest spice is
 (A) Vanilla (B) Pepper (C) Turmeric (D) Saffron
35. Which of the following is sulphur containing spice
 (A) Dill (B) Asafoetida (C) Clove (D) Vanilla
36. Which of the following spices have highest amount of fiber in them
 (A) Ginger (B) Rosemary (C) Coriander (D) Clove
37. Vanilla flavour is naturally obtained by curing of which part of the plant
 (A) Seed (B) Pod (C) Leaves (D) Buds
38. Uniform black color of black pepper is obtained by
 (A) Oven Drying (B) Using Cooker
 (C) Enzymic Treatment (D) None of the above

39. Tea is originated from
 (A) India (B) Africa (C) China (D) Australia
40. Rolling is done in the process of
 (A) Tea (B) Coffee (C) Cashew nut (D) Cocoa
41. Air blast freezer typically operated a temperature of
 (A) -5 to -15°C (B) -30 to -45°C (C) -50 to -60°C (D) -15 to 20°C
42. Minimal heat treatment of market milk at 137.8°C is for atleast
 (a) 1 Sec (B) 2 Sec (C) 3 Sec (D) 4 Sec
43. Tin cans was patented by
 (A) Nicholas Appert (B) Peter Durand
 (C) Louis Pasteur (D) Alexander Flemming
44. Martin process is based on
 (A) High temperature more time (B) High temperature less time
 (C) Low temperature more time (D) Low temperature low time
45. Dole process is the example of
 (A) Heat-Cool- fill (B) Cold sterilization
 (C) Batch pasteurization (D) Fast canning
46. "C" enamels contains
 (A) FeS (B) ZnS (C) MgS (D) CaS
47. F_0 value is F value when Z is equal to
 (A) 10 (B) 12 (C) 16 (D) 18
48. Mustard oil is effective against
 (A) Mold (B) Yeast
 (C) Bacteria (D) All of the above
49. _____ is the term used to label food treated with low level ionizing radiation
 (A) Picowaved (B) Irradiated (C) Radapertized (D) Grayed

50. Heating of the frozen food is termed as
 (A) Dehydrofreezing (B) Thawing
 (C) freeze-drying (D) None of the above
51. Boiling of water will leads to
 (A) Sterilization (B) Pasteurization
 (C) Disinfection (D) None of the above
52. Both extra cellular and intracellular crystallization takes place in
 (A) Slow freezing only (B) fast freezing only
 (C) Both in fast as well as slow freezing (D) Neither slow or fast freezing
53. What is the strength of the brine solution for the canning of vegetables?
 (A) 2% (B) 8% (C) 15% (D) 67%
54. Antifreeze proteins
 (A) Lower the freezing temperature (B) Raise the temperature of nucleation
 (C) Reduce the degree of super cooling (D) Accelerate recrystallization
55. In standard salinometer 100° is equal to _____ % of brine
 (A) 22.5 (B) 26.5 (C) 27.5 (D) 29.5
56. Death of bacteria follows
 (A) Zero order reaction (B) First order reaction
 (C) Second order reaction (D) It does not follow any pattern
57. Freeze crack is seen when foods are frozen by
 (A) Air freezing (B) Contact freezing
 (C) Immersion freezing (D) Cryogenic freezing
58. Process lethality at a specified temperature is a multiple of
 (A) Initial concentration of microbes (B) Final concentration of microbes
 (C) Z-value (D) Decimal reduction time
59. Most resistant spores of *Clostridium botulinum* have $D_{121.1}$ of
 (A) 0.02 min (B) 0.21 min (C) 0.89 min (D) 9 min
60. Corn gluten is rich in the corn protein known as
 (A) Zein (B) Glutenin (C) Glutelin (D) Prolamin

61. Which of the following is highest yielding strains of rice
 (A) IR-7 (B) IR-6 (C) IR-8 (D) IR-9
62. Angel and sponge cakes are
 (A) Yeast raised product (B) Chemically leavened product
 (C) Partially leavened product (D) Air leavened product
63. Gelling and whipping agents used in confectionery provides
 (A) Microbial safety (B) Texture
 (C) Color (D) All of the above
64. Chocolate liquor is another name for
 (A) Marshmallow (B) Cocoa solids
 (C) Cocoa butter (D) Chocolate liquor
65. Which of the following is a revolving screen
 (A) Grizzly (B) Shaking
 (C) Trommel (D) None of the above
66. _____ solids are unfloatable
 (A) Hydrophilic (B) Hydrophobic
 (C) Both (D) None of the above
67. The viscosity of _____ decreases with temperature
 (A) Syrup (B) Water
 (C) Milk (D) All of the above
68. Tomato ketchup is a good example of
 (A) Newtonian fluid (B) Non Newtonian fluid
 (C) Pseudoplastic (D) Both (B) and (C)
69. Ratio of inertial force to viscous force is called
 (A) Nusslet number (B) Reynolds number
 (C) Prandl number (D) Newtons number
70. Relationship between the maximum local velocity and average velocity
 (A) $U = 0.75 U_{\max}$ (b) $U = 0.5 U_{\max}$ (C) $U = 0.25 U_{\max}$, (D) $U = U_{\max}$

71. The ratio of $C_p \mu$ to K is known as _____ number
 (A) Reynolds number (B) Nusslet number
 (C) Boltz mann number (D) Prandl number
72. Maltodextrin has DE value
 (A) Less than 5 (B) Less than 20 (C) Less than 50 (D) More than 50
73. SI unit of overall heat transfer coefficient dent is
 (A) $W/(m^2K)$ (B) $m^2 K/W$ (C) Wm^2K (D) Wk/m^2
74. Wave used for ultrasonic cleaning is of the frequency
 (A) 14 Hz (B) 15 Hz (C) 16 Hz (D) 17 Hz
75. Impact forces are used for _____ sized material
 (A) Fine (B) Coarse
 (C) Medium (D) From coarser to finest
76. Crushing is the term applied to the reduction of coarse material down to the size of about
 (A) 12 mm (B) 9 mm (C) 6 mm (D) 3mm
77. Economy of multiple effect evaporator is
 (A) Always more than one (B) Always less than one
 (C) Always one (D) Generally 100
78. Thermal conductance is a reciprocal of
 (A) Temperature difference (B) Cross sectional area
 (C) Thermal conductivity (D) Thermal resitance
79. Wet milling tend to produce a
 (A) Coarser (B) Medium size
 (C) Finer (D) There is no size reduction
80. In the case of oil water emulsion oil act as
 (A) Emulsifier (B) Stabilizer
 (C) Dispersed phase (D) Dispersion medium

81. In how many ways 7 person seat in a round table
 (A) 720 (B) 5040 (C) 120 (D) 1008
82. What is the coefficient of middle term in the expansion of $(4+3x)^n$
 (A) 1728 (B) 864 (C) 432 (D) 216
83. There are 1200 students in the school. If 700 of them speaks Hindi. 500 of them speaks Tamil and 300 of them speaks Malayalam. How many of them can speaks all the languages?
 (A) 100 (B) 300 (C) 400 (D) 600
84. In how many ways can 15 boys and 6 girls be arranged in a row so that no girls are together?
 (A) $15! \times 6!$ (B) $15! \times 15P_6$ (C) $15! \times 16 C_6$ (D) $15! \times 15 P_6$
85. What is the sum of the numbers lying between 113 and 269 which are divisible 5
 (A) 5890 (B) 5220 (C) 5330 (D) 5950
86. In how many ways can a bowler take 5 wickets in a single 6-ball over?
 (A) 6 (B) 5 (C) 36 (D) 1
87. The value of $\log_{10} 400 - \log_{10} 4$ is equal to
 (A) 100 (B) 4 (C) 2 (D) 1
88. What is the value of $\tan(-405^\circ)$
 (A) -1 (B) $-1/2$ (C) 0 (D) 1
89. "Camera" related to "Film" in the same way "Eye related to
 (A) Iris (B) Retina (C) Cornea (D) Cone
90. Bird: Aeroplane:: Fish:?
 (A) Air (B) Car (C) Kitchen (D) Ship
91. 25:216:: 49:?
 (A) 512 (B) 64 (C) 81 (D) 100

92. 9, 12, 11, 14, 13, (.....), 15
 (A) 12 (B) 16 (C) 10 (D) 17
93. 121, 143, 165, (.....), 209
 (A) 187 (B) 197 (C) 177 (D) 198
94. Sangeetha after moving 5 Km towards east turns left and wals 3 Km and then turns left and moves 3 Km. How far is he standing from his starting point?
 (A) 8 km (B) 14 Km (C) 9 km (D) 2 Km
95. If the alphabet of English language is written in reversed order, which will be the tenth letter to the right of "N"
 (A) D (B) E (C) X (D) W
96. Consider the following words
 1. Rainbow 2. Rain 3. Sun 4. Happy 5. Child
 Which of the following is the reasonable arrangement of the above words?
 (A) 2, 1, 4, 3, 5 (B) 2, 3, 1, 5, 4 (C) 4, 2, 3, 5, 1 (D) 4, 5, 1, 2, 3
97. Consider the sequence given below
 1. District 2. Village 3. State 4. Town
 Which will be the proper order of the above with respect to area?
 (A) 2, 1, 4, 3 (B) 2, 3, 4, 1 (C) 2, 4, 1, 3 (D) 3, 2, 1, 4
98. Stage: drama:: Stadium:?
 (A) Cricket (B) Game (C) Circus (D) Player
99. In a certain code GARIMA is written as 725432 and TINA as 6482. How is MARINA
 (A) 3256482 (B) 3265842 (C) 3645862 (D) 3658426
100. Sangeetha remembers that her father's birthday is certainly after 8th but before 13th of December. Her sister Natasha remembers that their fathers birthday was definitely after 9th but before 14th of December. On which date of December was their father's birthday.
 (A) 10th (B) 11th
 (C) 12th (D) data not sufficient