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 magnesium
   (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) Allyll tetraarybutyl 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) Ethylene Vinyl Alcohol
   (C) Polyvinyl Alcohol     (D) Propene

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) Coccoa

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) Prandtl number   (D) Newtons number

70. Relationship between the maximum local velocity and average velocity
   (A) \( U = 0.75 U_{\text{max}} \)   (b) \( U = 0.5 U_{\text{max}} \)
   (C) \( U = 0.25 U_{\text{max}} \),   (D) \( U = U_{\text{max}} \)
71. The ratio of $C_p \mu$ to $K$ is known as _________ number
   (A) Reynolds number (B) Nusslet number
   (C) Boltzmann number (D) Prandtl 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) 3 mm

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 resistance

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 persons 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) \(15! \times 15 \text{P}_6\)  (C) \(15! \times 16 \text{C}_6\)  (D) \(15! \times 15 \text{P}_6\)

85. What is the sum of the numbers lying between 113 and 269 which are divisible by 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 \(\tan(-405\degree)\)
   (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 walks 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
   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
   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 father’s 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