Total No. of Printed Pages : 13

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D

SET-Z

M.Phil./Ph.D./URS-EE-2019

SUBJECT : Food Technology

Sr. No. 10016

Time : **1¼ Hours** Max. Marks : **100** Total Questions : **100**

Roll No. (in figures)_____ (in words) _____

Name _____ Father's Name_____

Mother's Name_____ Date of Examination_____

_____ _____

(Signature of the Candidate) (Signature of the Invigilator)

SEAL

CANDIDATES MUST READ THE FOLLOWING INFORMATION/INSTRUCTIONS BEFORE STARTING THE QUESTION PAPER.

1. ***All questions are compulsory.***
2. The candidates ***must return*** the question booklet as well as OMR Answer-Sheet to the Invigilator concerned before leaving the Examination Hall, failing which a case of use of unfair-means / mis-behaviour will be registered against him / her, in addition to lodging of an FIR with the police. Further the answer-sheet of such a candidate will not be evaluated.
3. Keeping in view the transparency of the examination system, carbonless OMR Sheet is provided to the candidate so that a copy of OMR Sheet may be kept by the candidate.
4. Question Booklet along with answer key of all the A, B, C & D code will be got uploaded on the University website after the conduct of Entrance Examination. In case there is any discrepancy in the Question Booklet/Answer Key, the same may be brought to the notice of the Controller of Examination in writing/through E.Mail within 24 hours of uploading the same on the University Website. Thereafter, no complaint in any case, will be considered.
5. The candidate ***must not*** do any rough work or writing in the OMR Answer-Sheet. Rough work, if any, may be done in the question booklet itself. Answers ***must not*** be ticked in the question booklet.
6. ***There will be no negative marking. Each correct answer will be awarded one full mark. Cutting, erasing, overwriting and more than one answer in OMR Answer-Sheet will be treated as incorrect answer.***
7. Use only **Black** or **Blue Ball Point Pen** of good quality in the OMR Answer-Sheet.
8. *Before answering the questions, the candidates should ensure that they have been supplied correct and complete booklet. Complaints, if any, regarding misprinting etc. will not be entertained* **30** *minutes after starting of the examination.*

1. In modified atmosphere packaging :
   (1) CO_2 and O_2 level increase
   (2) CO_2 level increase & O_2 level decrease
   (3) CO_2 level decrease & O_2 level increase
   (4) CO_2 and O_2 levels remain constant

2. Packaging film which is used for better MAP is :
   (1) LDPE (2) HDPE
   (3) Polypropylene (4) LLDP

3. Which of the following material is not used for aseptic packaging ?
   (1) Plastics (2) Aluminum
   (3) Stainless steel (4) Glass

4. Which of the following is the suitable packaging material for dried milk products ?
   (1) Carton lined with aluminum foil
   (2) Bags of plastic coated paper
   (3) Aluminum polyethylene foil bags
   (4) All of the above

5. Which of the following materials is the best for packaging of liquid for products ?
   (1) Glass (2) Plastic film (3) Steel (4) Wood

6. For Corrosive or non corrosive low acid foods and dry products, type of steel base required :
   (1) Type L (2) Type MS
   (3) Type L and Type MS (4) Type MR or MC

7. The main constituent of wood that is important in paper making is :
   (1) Cellulose (2) Fibres
   (3) Starch (4) Pentosan

8. In an actively modified MAP/CAS, which of the following can be used as an oxygen absorber ?

(1) Magnesium oxide (2) Activated charcoal

(3) Ferrous oxide (4) Potassium permanganate

9. Size reduction by serrated roll crushers are by :

(1) Compression and shear (2) Compression, shear & impact

(3) Shear and impact (4) Only compression

10. The type of drier in which the grain is dried in suspended state is known as :

(1) Kiln dryer (2) Forced convection dryer

(3) Spray deyer (4) Fluidized bed dryer

11. Milk viscosity is due to which constitutent of milk :

(1) Casein (2) Albumin

(3) Globulin (4) Phospholipids

12. When HTST pasteurization is performed, the milk is heated at :

(1) 72°C (2) 65°C

(3) 81°C (4) 130°C

13. Quality of egg can be judged by :

(1) pH (2) Candling

(3) Annealing (4) Temperature test

14. Buffalo meat contains white fat as :

(1) WBC (2) RBC

(3) Yellow pigment (4) Carotene covered to Vitamin A

15. Amount of protein in an egg is :

(1) 600 Iu (2) 600 mg (3) 6.6 gm (4) 9.3 gm

16. Removal of feather from scaled bird is known as :

(1) Picking (2) Pinning (3) Scalding (4) Singing

17. According to ISI, the size of extra large egg is :

(1) 50 gm (2) 60 gm (3) 70 gm (4) 80 gm

18. The colour of meat is due to the pigment :

(1) Lycopene (2) Heamoglobin

(3) Myoglobin (4) None of the above

19. One of the following ingredients in meats helps to kill spores of anaerobic bacteria by heat and inhibit germination of surviving spores :

(1) Salt (2) Nitrites (3) Spices (4) Nitrates

20. Mostly meat is preserved under low temperature is :

(1) Chilling (2) Cold Storage (3) Refrigeration (4) Freezing

21. ..... is a water soluble yellow pigment.

(1) Thiamine (2) Riboflavin

(3) Niacin (4) Biotin

22. Which of the following are denatured by heat ?

(1) Vitamin (2) Minrals

(3) Enzymes (4) Fat

23. Idli and dhokla are good example of :

(1) Fast foods (2) Organic foods

(3) Purified foods (4) Fermented foods

24. The characteristic penetrating flavour of garlic, onion and related species is due to ..... compounds.

(1) Sulphur (2) Phosphorus

(3) Iron (4) Magnesium

25. Lipid oxidation in foods are accelerated by :

(1) Al and Cu (2) Fe and Cu

(3) Hg and Cu (4) Cu and Zn

26. Fish Contains ..... fatty acids.

(1) Free (2) Saturated

(3) Monounsaturated (4) Polyunsaturated

27. The characteristic pungent flavour of Chillies is due to :

(1) Capsaicin (2) Tannin

(3) Anthocyanin (4) None of the above

28. The equation which expresses the energy balance for fluid flow is :

(1) Fourier equation (2) Laplace equation

(3) Continuity equation (4) Bernoulli's equation

29. A 5 percent sugar solution means that :

(1) 5 gram of sugar is dissolved in 95 gram of water

(2) 5 gram of sugar is dissolved in 100 gram of water

(3) Both (1) and (2) are true

(4) None of the above

30. The amount of heat required to raise the temperature of 1 kg of milk by 1 degree celsius in comparison of water is :

(1) 93% (2) 97% (3) 101% (4) 103%

31. Guava is a rich source of :

(1) Vitamin A (2) Vitamin C

(3) Carbohydrates (4) Beta-carotene

32. Potato is the rich source of :

(1) Starch (2) Vitamin (3) Fat (4) Minerals

33. Cow milk's protein is :

(1) Casein (2) Albumin

(3) Zein (4) Lactoalbumin

34. Paneer is a :

(1) Concentrated milk product (2) Dried milk product

(3) Coagulated milk product (4) Fermented product

35. Buffalo milk is rich source of following minerals :

(1) Calcium and iron (2) Copper and iron

(3) Copper and phosphorus (4) Calcium and phosphorus

36. Butter is an emulsion of :

(1) Water in oil (2) Oil in water

(3) Water in water (4) Oil in oil

37. Standard fat percentage in toned and double toned milks are :

(1) 3.5 and 1.5 (2) 1.5 and 3.5

(3) 3.0 and 1.5 (4) 1.5 and 3.0

38. Yellow colour of cow milk is due to the presence of :

(1) Casein (2) Carotene

(3) Fat (4) Lacto-Chrome

39. Acidity of milk is expressed as :

(1) Citric acid (2) Oleic acid

(3) Butyric acid (4) Lactic acid

40. Milk is deficient in which of the following :

(1) Iron (2) Calcium

(3) Copper (4) Potassium

41. Which of the following is a food safety standard ?

(1) ISO 9001 (2) ISO 22000

(3) ISO 14000 (4) IS 22001

42. CAC is the abbreviated form for :

(1) Critical Allowable Clearance

(2) Codex Alimentarius Commission

(3) Central Association of Consumers

(4) Consortium of Applied Chemists

43. In 1963, FAO and WHO established a commission for setting of food standards which is known as :

(1) FPO (2) PFA (3) CAC (4) BIS

44. The amount o lactose in human milk is about :

(1) 4.4% (2) 5.4% (3) 7.4% (4) 9.4%

45. The sugar found is malted grain is :

(1) Glucose (2) Maltose (3) Sucrose (4) Galactose

46. ..... is not digested by the human body :

(1) Fiber (2) Protein

(3) Fat (4) Carbohydrates

47. Dextrinization is a process of :

(1) Dry heating (2) Drying

(3) Heating with steam (4) Hydrolyzing

48. Each gram of oil or fat supplies :

(1) 3 kcal of energy (2) 6 kcal of energy

(3) 9 kcal of energy (4) 12 kcal of energy

49. Which of the followiong mineral is not required by human being ?

(1) Sulphur (2) Chlorine

(3) Aluminum (4) Manganese

50. Vitamin C is also known as :

(1) Ascorbic acid (2) Citric acid

(3) Lactic acid (4) Malic acid

51. If n & N represents the number of moles of a solutes and solvent respectively, the mole fraction of the solvent is given by :

(1) $\frac{N}{n+N}$ (2) $\frac{n}{n+N}$ (3) $\frac{n+N}{n}$ (4) $\frac{n+N}{N}$

52. Golden rice is a rich source of :

(1) Vitamin A (2) Vitamin B_{12}

(3) Vitamin C (4) Vitamin D

53. Microwave can penetrate the food upto the depth of :

(1) 20 cm (2) 15 cm (3) 10 cm (4) 5 cm

54. 'Scurvy' is caused due to deficiency of :

(1) Vitamin A (2) Vitamin B

(3) Vitamin C (4) Minerals

55. The nutrient most sensitive to processing & cooking are :

(1) Proteins (2) Carbohydrates

(3) Minerals (4) Vitamins

56. For size reduction, the following method(s) is/are used :

(1) Cutting (2) Crushing

(3) Compression (4) All of the above

57. Hammer mill and burr mill are used for the grinding of :

(1) Grain (2) Oil seed

(3) Milkk powder (4) Fruit powder

58. In a ball mill or pebble mill, most of size reduction is done by :

(1) Shearing (2) Impact

(3) Cutting (4) Crushing

59. The Homogenization reduces the mean diameter of fat globules by a factor of :

(1) 1 (2) 10 (3) 100 (4) 1000

60. Hermetically sealed containers are essential for :

(1) Vacuum and pressure packaging (2) Aseptic packaging

(3) Flexible packaging (4) Controlled atmosphere packaging

61. HACCP was developed by :

(1) Pillsbury and NASA (2) FDA

(3) USDA (4) FSIS

62. A critical control point is an operation by which :

(1) Monitoring is considered unnecessary

(2) Hazards can be eliminated, minimized or prevented

(3) Contamination becomes certain

(4) All risks can be completely eliminated

63. How the upgradation system in an organization for establishing ISO 9000 is assessed ?

(1) Simplex method (2) Dual Method

(3) Gap analysis (4) All of the above

64. Which of the following does not fall under Global Food Safety Initiatives (GFSI) ?

(1) ISO 9001 (2) BRC

(3) FSC 22000 (4) SQF

65. The characteristic flavour of banana is due to the :

(1) Benzaldehyde (2) Cis-4-heptenal

(3) Isopentyl acetate (4) Isothiocyanate

66. Which of the following contributes to the flavour of cream ?

(1) Benzaldehyde (2) Cis- 4- hyptenal

(3) Acetaldehyde (4) Geosmin

67. Clostridium botulinum is :

(1) Aerobic bacteria (2) Anaerobic bacteria

(3) Facultative anaerobic (4) Facultative aerobic

68. Sauerkraut is a fermented product made from the :

(1) Cabbage (2) Barley

(3) Tomato (4) Cauliflower

69. Among the following, the most heat resistance pathogens found in food :

(1) Clostridium botulinum (2) Bacillus stearothermophilus

(3) Micrococcus (4) Both (1) & (2)

70. In growth of microbial culture, the phase in which, there is no growth or even a decline in numbers of microorganisms is called :

(1) Death phase (2) Lag phase

(3) Exponential phase (4) Positive acceleration phase

71. The phase is which the rate of multipliation is most rapid and is constant is known as :

(1) Death phase (2) Lag phase

(3) Exponential phase (4) Logarithmic Phase

72. Generally TDT curve is plotted on :

(1) Simple graph paper (2) Log- log paper

(3) Semi log paper (4) Plain paper

73. The time of heating at a specified temperature required to destroy 90% of organism in a population is known as :

(1) D-value (2) Z-value (3) F-value (4) Fo-value

74. Clostridium botulirum type E which has a minimum temperature for growth of about :

(1) $0^{\circ}C$ (2) $3.3^{\circ}C$ (3) $-3.3^{\circ}C$ (4) $5^{\circ}C$

75. Aspergillus flavus and A. parasiticus molds are responsible to produce a toxin in food is known as :

(1) Aflatoxin (2) Mycotoxin (3) Neurotoxin (4) Enterotoxin

76. Mycotoxins are :

(1) Fungal metabolites (2) Bacterial metabolities

(3) Plant parasites (4) Enzyme

77. The machine used for making scratch over whole grain of pulse is :
(1) Gota machine
(2) Emery roller
(3) Concave type machine
(4) Screw conveyor

78. Separation of broken rice and head rice is known as :
(1) Scalping
(2) Screening
(3) Sorting
(4) Grading

79. The purpose of tempering of wheat through tempering bin is employed to :
(1) Raise the moisture
(2) Reduce the moisture
(3) Equalize the moisture in whole grain
(4) Raise the temperature

80. The FSS Act of Government of India is controlled by :
(1) Ministry of Agriculture
(2) Ministry of Food Processing Industries
(3) Ministry of Health and Family Welfare
(4) Ministry of Food

81. Carbohydrates contain the elements :
(1) Carbon and hydrogen
(2) Carbon and oxygen
(3) Carbon, hydrogen, oxygen & nitrogen
(4) Carbon, hydrogen and oxygen

82. ..... provides the energy needed to transform the carbon dioxide and water into carbohydrates.
(1) Sunlight
(2) Photosynthesis
(3) Oxygen
(4) Chemical reaction

83. Basai Metabolic Rate (BMR) is the ..... required for activity of internal organs when man is on complete rest.
(1) Food
(2) Energy
(3) Oxygen
(4) Water

84. Each gram carbohydrate supplies ..... of energy to the body :

(1) 4 kcal (2) 6 kcal (3) 8 kcal (4) 10 kcal

85. Excess intake of carbohydrates is converted to :

(1) Glucose (2) Fructose (3) Fat (4) Blood Sugar

86. Pudding cake, pastries etc. are made from :

(1) Self raising flour (2) Bread flour

(3) Biscuit flour (4) Cake flour

87. Flaked rice is made from :

(1) Raw rice (2) Brown rice

(3) Parboiled rice (4) Bulgur

88. During bread making, the elasticity of gluten is controlled by :

(1) Glutenin (2) Gliadin (3) Water (4) Yeast

89. In rice polishing :

(1) A coating is applied on the outer surface of brown rice

(2) A layer of bran is removed from brown rice

(3) A layer of starch is removed

(4) Only husk is removed

90. In dry milling process prior to treatment with oil, the following operation is done :

(1) Grading (2) Polishing

(3) Conditioning (4) Pitting

91. After the oil treatment, the pulses are kept for about 12 hours to allow proper penetration to take place in the pulse kernel is called :

(1) Conditioning (2) Oil penetration

(3) Tempering (4) Saponification

92. Break rolls have :

(1) Smooth Surface (2) Corrugated surface

(3) Rough Surface (4) Hole in surface