SECTION I (FOOD SCIENCE AND TECHNOLOGY)

1. Which of the following is NOT a fatty acid?

   A) Butyric acid

   B) Linolenic acid

   C) Acetic acid

   D) Stearic acid

2. What is TSS of tomato ketchup

   A) 10%

   B) 15%

   C) 25%

   D) 45%

3. What is % fat in khoa

   A) 10%

   B) 20%

   C) 30%

   D) 40%

4. Which one of the following is bifidus

   A) Human being

   B) Buffalo

   C) Bacteria

   D) Apple

5. What is the triple point of freeze drying?

   A) 273.16 K temperature & 0.06 kPa pressure

   B) 273.16 ^{o}C temperature & 0.06 kPa pressure

   C) 273.16 K temperature & 0.6 kPa pressure

   D) 273.16 ^{o}C temperature & 0.6 kPa pressure

6. Golden rice is rich in?

   A) β-carotene

   B) lycopene

   C) Vitamin B_1

   D) Calcium

7. Which of the following is GM tomato?

   A) Tal Polong

   B) Bagoong monamon

   C) Flavr Savr

   D) None of the above

8. Type of drier in which heat sensible products are dried

   A) Tray drier

   B) Vacuum drier

   C) Drum drier

   D) All of the above

9. Which of the following is common microbe which is used in both baking and brewing industries?

   A) Saccharomyces boulardii

   B) Saccharomyces ellipsoideus

   C) Saccharomyces cerevisiae

   D) Saccharomyces cariocanus

10. Which one of the following is used as a preservative in baking industry?

   A) Benzoate

   B) Propionate

   C) Alginate

   D) Citrate

11. Fishy smell is due to?

   A) Triacetyl benzene

   B) Tricalcium phosphate

   C)Trimethyl amine

   D) Tricholo methane

12. Scombroid spoilage in fish is due to?

   A) Arginine

   B) Histamine

   C) Bromine

   D) Botulin

13. From which part of wheat, bread is prepared?

   A) Husk

   B) Bran

   C) Germ

   D) Endosperm

14. Which of the following is saccharifying enzyme?

   A) Lipase

   B) α-amylase

   C) β-amylase

   D) Protease

15. Which of the following is biodegradable?

    A) LDPE

    B) HDPE

    C) cellulose acetate

    D) PVC

16. Which of the following is used in measuring of fat content of cream?

    A) Gerber method

    B) Kjeldahl's method

    C) Brabender method

    D) Newton's method

17. Starch contains-------

    A) Alanine

    B) Cellulose

    C) Amylose

    D) Stearic acid

18. Gluten contains?

    A) Arginine

    B) Gliadin

    C) Amylopectin

    D) Starch

19. Non Sticky property of starch is due to--

    A) High amylose

    B) High amylopectin

    C) High cross linking

    D) High methylation

20. Which test is used to perform to know completeness of pasteurization of milk ?

    A) Lipase test

    B) Amylase test

    C) Peroxidase test

    D) Phosphatase test

21. Which one is considered as bad cholesterol?

    A) HDL

    B) LDL

    C) MDL

    D) HMDL

22. What is Chewiness?

    A) Gumminess + Hardness

    B) Gumminess + Fracturability

    C) Gumminess + Cohesiveness

    D) Gumminess + Hardness + Fracturability

23. Colour of Brinjal is due to presence of ?

    A) Lycopene

    B) Carotene

    C) Curcumin

    D) Anthocyanins

24. Component responsible for flavour of clove?

    A) Eugenol

    B) Allyl isocynide

    C) Piperine

    D) Linalool

25. Which of the following is the king of Spices ?

    A) Anise

    B) Pepper

    C) Clove

    D) Cardamom

26. From Tomato puree, if the peel, seeds are removed the remaining product have TSS les than 25%, then the product is ?

    A) Tomato ketchup

    B) Tomato juice

    C) Tomato sauce

    D) Tomato paste

27. Raffinose and Stachyose present in pulses are responsible for?

    A) Cancer

    B) Puffing during extrusion

    C) Flatulence

    D) Surface cracking during drying

28. Which one of the following is firming agent?

    A) Sodium alginate

    B) Sodium carbonate

    C) Sodium chloride

    D) Sodium propionate

29. FSSAI stands for?

    A) Food Safety, Security, Application of India

    B) Food Safety and Standards Application of India

    C) Food Safety and Standards Authority of India

    D) Food Security and Standards Authority of India

30. Germ portion is maximum in ?

    A) Corn

    B) Rice

    C) Sorghum

    D) All of the above

31. Which of the following is omega-3 fatty acids?

    A) Linoleic acid

    B) Oleic acid

    C) Docosahexaenoic acid

    D) Eicosadienoic acid

32. Which of the following is sanitation and hygiene test?

    A) TPC

    B) Coliform test

    C) Yeast test

    D) Mould test

33. Commonly used emulsifying agent in Dairy industry?

    A) Propionates

    B) Sorbitan esters

    C) Tricalcium silicate

    D) All of the above

34. What is caramelization temperature of glucose?

    A) $87\,^{o}C$

    B) $100\,^{o}C$

    C) $160\,^{o}C$

    D) $210\,^{o}C$

35. Refrigeration load measured in?

    A) kg

    B) m

    C) sec

    D) ton

36. In ice cream which of following is measured?

    A) Fluffing property

    B) over run

    C) temper index

    D) blending ratio

37. More sugar and less acid found in?

    A) Jelly

    B) Ketchup

    C) Squash

    D) Amla

38. Pearling is done in?

   A) Dairy

   B) Millets

   C) Tomato

   D) Meat

39. UV spectrometer works on the principle of?

   A) Newton's law

   B) Bernoulli's theorem

   C) Beer-Lambert Law

   D) Boyle's law

40. Sake is prepared from?

   A) Rice

   B) Corn

   C) Wheat

   D) Barley

41. In which of the following mass/concentration would never change ?

   A) Deep freezing

   B) Dehydration

   C) Vacuum drying

   D) Spray drying

42. Food irradiation is done by which radiation?

   A) Microwave

   B) Infrared

   C) Ultraviolet

   D) Gamma rays

43. Which of the following acts as emulsifying agent in mayonnaise?

   A) Oil

   B) Egg

   C) Sugar

   D) Salt

44. Commercially rice bran oil is extracted by which method?

   A) Solvent extraction

   B) Super critical fluid extraction

   C) Freeze drying

   D) Distillation

45. Water activity range for mould growth is-----

    A) 0.85 to 0.95

    B) 0.80 to 0.90

    C) 0.65 to 0.75

    D) 0.50 to 0.60

46. In enzymatic browning reaction involved enzyme?

    A) Lipase

    B) Polyphenol oxidase

    C) Amylase

    D) Protease

47. Which of the following is sulphur containing amino acid?

    A) Alanine

    B) Tryptophan

    C) Methionine

    D) Tyrosine

48. Which of the following wavelength has most germicidal effect?

    A) 160 nm

    B) 260 nm

    C) 660 nm

    D) 86 0nm

49. Which of the following colorant is used butter?

    A) Chlorophyll

    B) Lycopene

    C) Bixin

    D) Anthocyanin

50. Maximum permissible limit of SO_2 in squash is ----

    A) 150 ppm

    B) 250 ppm

    C) 350 ppm

    D) 450 ppm

SECTION II (RESEARCH METHODOLOGY)

51. Research is
  A) Producing available knowledge again and again
  B) Finding solution to any problem
  C) Working in a scientific way to search for truth of any problem.
  D) None of the above

52. Computed measure of how much scores vary around the mean score.
  A) range
  B) standard deviation
  C) normal curve
  D) skewed distribution

53. Which of the following statements is true?
  A) The mean is a continuous variable.
  B) The variance and standard deviation of a normal population are equal.
  C) For large samples, the distribution of scores is approximately normal.
  D) None of the above

54. Taking someone else's words or ideas and taking credit for them as your own.
  A) cite
  B) plagiarism
  C) paraphrase
  D) credit

55. What steps are involved in a central tendency test?
  A) Addition, subtraction, and division.
  B) Determination of mean, median, and mode.
  C) Addition, subtraction, multiplication, and division.
  D) None of the above

56. Random sampling is also called _____.
  A) Availability sampling
  B) Probation sampling
  C) Probability sampling
  D) Prospect sampling

57. What is the Median of the following data sample?
  2, 7, 4, 8, 9, 10, 6, 12, 13
  A) 8
  B) 11
  C) 9
  D) 10

58. Which of the following statements is CORRECT?
  A) Research is a hurried activity.
  B) Research starts with a problem and ends with a problem.
  C) Research is not a contributing factor of progress.
  D) Research is an investigation where you look for answers that are already there.
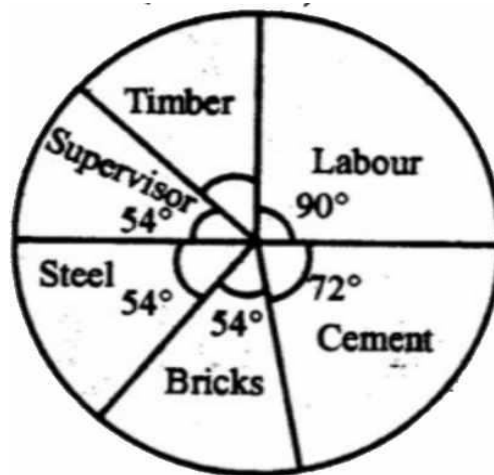
59. Which of the following has same mean median and mode?
    A) 6,5,2,4,3,4,1
    B) 4,2,2,1,3,2,3
    C) 2,3,7,3,8,3,2
    D) 4,3,4,3,4,6,4

60. Resource libraries, economic census, trade shows & associations would be examples of what kind of data sources?
    A) Tertiary
    B) Secondary
    C) Primary
    D) Unprofessional

61. The purpose of correlation research is to:
    A) study the relationship between two or more than two variables
    B) predict the criterion variable on the basis of predictor variable
    C) Both (1) and (ii)
    D) Neither (i) Nor(ii)

62. It is sometimes called "central location" or just "center". It is a way to describe what's typical for a set of data. It is called.
    A) Middle destination
    B) Center fold
    C) Central Tendency
    D) Mid frequency

63. Which is NOT a step of the scientific method?
    A) Hypothesis
    B) Analyse data
    C) Count items
    D) Report Findings

64. In order to pursue the research, which of the following is priorly required?
    A) Developing a research design
    B) Formulating a research question
    C) Deciding about the data analysis procedure
    D) Formulating a research hypothesis

65. Every person in the population has an equal chance of being selected -which sampling method
    A) Systematic sampling
    B) Quota sampling
    C) Volunteer sampling
    D) Random sampling

66. When a distribution of scores is skewed, which of the following is the most representative measure of central tendency?
  A) Inference
  B) Standard deviation
  C) Mean
  D) Median

67. An even spread of a variable that is symmetrical about the mean median and mode.
  A) bar graph
  B) histogram
  C) scatter graph
  D) normal distribution

68. A diagram with rectangles showing values or numbers.
  A) Pictogram
  B) Pie chart
  C) Bar chart
  D) Line graph

69. Type of research that solve practical issues is;
  A) Fundamental research
  B) Exploratory research
  C) Applied research.
  D) Empirical research

70. What should not be included in the conclusion?
  A) literature review
  B) summary
  C) implication
  D) major findings

71. A variable that is being manipulated is____
  A) Independent variable
  B) dependent variable
  C) confounding variable
  D) extraneous variable

72. What is qualitative research?
  A) Observation and description of activities, situations, attitudes, or behaviors of a specific group of people.
  B) Analysis of numerical data.
  C) Numerical comparisons and statistical inferences.
  D) None of above

73. A standard deviation can never be
  A) positive
  B) negative
  C) zero
  D) None

74. The sample standard deviation is denoted by:
   A) s
   B) p
   C) Σ
   D) σ

75. First step of an investigation is _____ .
   A) collection of data.
   B) presentation of data.
   C) analysis of data.
   D) explanation of data.

76. The sum of absolute deviations about median is _____.
   A) the least
   B) the greatest
   C) zero
   D) equal

77. When the value of r=0, it is said to be _____.
   A) no correlation.
   B) positive.
   C) perfect positive.
   D) perfect negative.

78. The straight-line trend is represented by the equation _____.
   A) y=a+bx
   B) y=mx
   C) y=ax/ay
   D) y=a*bx

79. In discrete and continuous frequency distributions N= ___ .
   A) the sum of frequency.
   B) number of observations.
   C) minimum value.
   D) maximum value.

80. _____ is used to compare the variability of two or more than two series.
   A) Mean.
   B) Standard deviation.
   C) Coefficient of variation.
   D) Mean deviation.

81. The simplest device for ascertaining whether two variables are related is to prepare a dot chart is called_____ .
   A) graphical method.
   B) scatter diagram method.
   C) method of least square.
   D) concurrent deviation method.

82. A bag contains 10 black and 20 white balls; a ball is drawn at random. What is the probability that it is black?

A) 1/2

B) 1/3

C) 0

D) 3

83. Diagrams are for _____

A) the use of exports.

B) better quantitative picture.

C) better mental appeal

D) the use of imports.

84. Which of the following is not a type of research design?

A) Experimental design

B) Descriptive design

C) Correlational design

D) Probability design

85. What is a research hypothesis?

A) A tentative explanation for a phenomenon

B) A statement that is proven to be true

C) A prediction of what the researcher expects to find

D) A statement of fact

86. What is the purpose of a pilot study?

A) To test the feasibility of the research design

B) To test the reliability and validity of the measures

C) To determine the appropriate sample size

D) To collect preliminary data

87. In five One-Day Internationals, a batsman has scored 31,97,112, 63, and 12 runs. the quality deviation of the info is-

A) 21.78

B) 23.79

C) 25.79

D) 26.77

88. Determine the mode of the decision received seven days in a row: 11,13,13,17,19,23,25
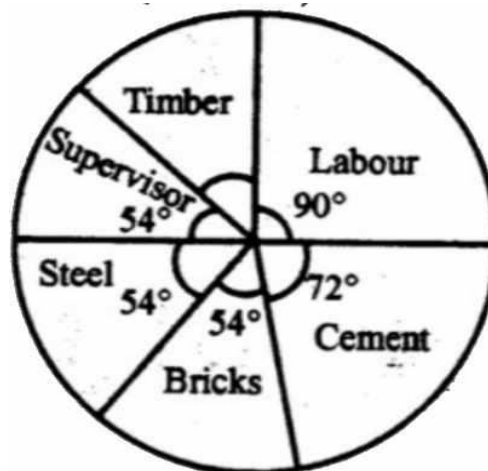
A) 11

B) 13

C) 17

D) 23

89. The following pie chart comprises the cost of constructing one house. The total cost was Rs. 6 lakhs

The amount spent on cement is

    A) Rs.2,00,000
    B) Rs.1,60,000
    C) Rs.1,20,000
    D) Rs.1,00,000

90. Referring to chart below,

the amount spent on cement, steel and supervision is what percent of the total cost of construction?

    A) 40%
    B) 45%
    C) 50%
    D) 55%

91. Table shows the mobile phones sold on different days by different sellers. Read the table carefully and answer the questions.

Mobiles Phones Sellers	Day						
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
P	40	45	48	28	50	24	20
Q	90	92	27	12	16	98	26
R	80	36	30	13	28	62	47
S	60	46	12	64	52	34	76
T	48	18	58	69	70	10	15

Find the difference of mobile phones sold by P and R together on Monday to the mobile phones sold by S and T on Wednesday.

    A) 60
    B) 50
    C) 80
    D) 20

92. Referring to above table, Find the ratio of mobile phones sold by Q on Tuesday and Saturday together to the mobile phones sold by R on Thursday and Sunday together.

    A) 7 : 19
    B) 19 : 5
    C) 19 : 6
    D) 2 : 5

93. The frequency distribution of a numerical data can be graphically represented by a _____
    A) Histogram
    B) Telegram
    C) Monogram
    D) Anagram

94. Which one of the following is not the graphical representation of statistical data:
    A) Bar graph
    B) Histogram
    C) Frequency polygon
    D) Cumulative frequency distribution

95. In a histogram, each class rectangle is constructed with base as
    A) frequency
    B) class-intervals
    C) range
    D) size of the class

96. What does the command \documentclass{article} do in LaTeX?
    A) It sets the document class as an article
    B) It creates a new section in the document
    C) It sets the font style of the document
    D) It creates a new document

97. What does the command \begin{center} do in LaTeX?
    A) It creates a new center-aligned section.
    B) It sets the font size to center aligned.
    C) It creates a new paragraph.
    D) It centers the text or content.

98. Which of the following procedures would not be included in a programme of qualitative research?
    A) Assessment of effect size.
    B) Development of appropriate research questions.
    C) Clarification of the logic linking the data to research propositions.
    D) Explanation of criteria for data interpretation.

99. What is the most common method of data collection in quantitative research?
    A) Interviews
    B) Focus groups
    C) Observation
    D) Surveys/questionnaires

100. Which statistical test is used to determine if there is a significant difference between the means of two or more groups in quantitative research?
    A) t-test
    B) ANOVA (Analysis of Variance)
    C) Chi-square test
    D) Regression analysis