Roll No.----------

Paper Code		
3	4	7

(To be filled in the OMR Sheet)

प्रश्नपुस्तिका क्रमांक
Question Booklet No.

O.M.R. Serial No. | | | | | | | | |

प्रश्नपुस्तिका सीरीज
Question Booklet Series

A

BBA (Second Semester) Examination, July-2022

BBA-206(N)

Business Statistics

Time : 1:30 Hours **Maximum Marks-100**

जब तक कहा न जाय, इस प्रश्नपुस्तिका को न खोलें

निर्देश :–

1. परीक्षार्थी अपने अनुक्रमांक, विषय एवं प्रश्नपुस्तिका की सीरीज का विवरण यथास्थान सही– सही भरें, अन्यथा मूल्यांकन में किसी भी प्रकार की विसंगति की दशा में उसकी जिम्मेदारी स्वयं परीक्षार्थी की होगी।
2. **इस प्रश्नपुस्तिका में 100 प्रश्न हैं, जिनमे से केवल 75 प्रश्नों के उत्तर परीक्षार्थियों द्वारा दिये जाने है। प्रत्येक प्रश्न के चार वैकल्पिक उत्तर प्रश्न के नीचे दिये गये हैं। इन चारों में से केवल एक ही उत्तर सही है। जिस उत्तर को आप सही या सबसे उचित समझते हैं, अपने उत्तर पत्रक (O.M.R. ANSWER SHEET) में उसके अक्षर वाले वृत्त को काले या नीले बाल प्वांइट पेन से पूरा भर दें। यदि किसी परीक्षार्थी द्वारा किसी प्रश्न का एक से अधिक उत्तर दिया जाता है, तो उसे गलत उत्तर माना जायेगा।**
3. प्रत्येक प्रश्न के अंक समान हैं। आप के जितने उत्तर सही होंगे, उन्हीं के अनुसार अंक प्रदान किये जायेंगे।
4. सभी उत्तर केवल ओ०एम०आर० उत्तर पत्रक **(O.M.R. ANSWER SHEET)** पर ही दिये जाने हैं। उत्तर पत्रक में निर्धारित स्थान के अलावा अन्यत्र कहीं पर दिया गया उत्तर मान्य नहीं होगा।
5. ओ०एम०आर० उत्तर पत्रक **(O.M.R. ANSWER SHEET)** पर कुछ भी लिखने से पूर्व उसमें दिये गये सभी अनुदेशों को सावधानीपूर्वक पढ़ लिया जाय।
6. परीक्षा समाप्ति के उपरान्त परीक्षार्थी कक्ष निरीक्षक को अपनी ओ०एम०आर० शीट उपलब्ध कराने के बाद ही परीक्षा कक्ष से प्रस्थान करें।
7. निगेटिव मार्किंग नहीं है।

महत्वपूर्ण :– **प्रश्नपुस्तिका खोलने पर प्रथमतः जॉच कर देख लें कि प्रश्नपुस्तिका के सभी पृष्ठ भलीभॉति छपे हुए हैं। यदि प्रश्नपुस्तिका में कोई कमी हो, तो कक्ष निरीक्षक को दिखाकर उसी सीरीज की दूसरी प्रश्नपुस्तिका प्राप्त कर लें।**

1. In case of simple correlation, the number of variables involved are

(A) 1

(B) 2

(C) 3

(D) 4

2. As the value of x increases, if value of y decreases, then coefficient of correlation will be

(A) Positive

(B) Negative

(C) Zero

(D) None of the above

3. Maximum value of correlation is

(A) 2

(B) 1.5

(C) 1

(D) 0

4. Correlation between income and demand is

(A) Negative

(B) Positive

(C) Neutral

(D) None of the above

5. In case of calculation of correlation-

List - I	List - II
(i) Scatter diagram	(a) Actual figures
(ii) Pearson method	(b) Graphic method
(iii) Spearman method	(c) Ranking

(A) i-a, ii-b, iii-c

(B) i-b, ii-a, iii-c

(C) i-c, ii-b, iii-a

(D) i-a, ii-c, iii-b

6. Relation between two variables is determined by:

(A) Regression

(B) Mean

(C) Correlation

(D) Dispersion

7. Spearman's method of calculating coefficient of correlation is based on:

(A) Position

(B) Rank

(C) Actual pictures

(D) None of the above

8. If there is a very strong correlation between two variables, then the correlation coefficient must be:

(A) Any value larger than 1

(B) Much smaller than 0, if the correlation is negative

(C) Much larger than 0, regardless of whether the correlation is negative or positive

(D) None of these alternatives is correct

9. In regression analysis, the variable that is being predicted is the:

(A) Response, or dependent, variable

(B) Independent variable

(C) Intervening variable

(D) Is usually x

10. If the coefficient of determination is a positive value, then the regression equation:

(A) Must have a positive slope

(B) Must have a negative slope

(C) Could have either a positive or a negative slope

(D) Must have a positive y intercept

11. If the correlation coefficient is 0.8, the percentage of variation in the response variable explained by the variation in the explanatory variable is:

(A) 0.80%

(B) 80%

(C) 0.64%

(D) 64%

12. A parameter is:

(A) A sample characteristic

(B) A population characteristic

(C) Unknown

(D) Normal normally distributed

13. Failing to reject the null hypothesis when it is false is:

(A) Type III error

(B) Type I error

(C) Type IV error

(D) Type II error

14. A statistic is:

(A) A sample characteristic

(B) A population characteristic

(C) Unknown

(D) Normally distributed

15. When asked questions concerning personal hygiene, people commonly lie. This is an example of:

(A) Sampling bias

(B) Confounding

(C) Non- response bias

(D) Response bias

16. The observation which occurs most frequently in a sample is the:

(A) Median

(B) Mean deviation

(C) Standard deviation

(D) Mode

Q. 17-18 refer to the information below-

The following scores were obtained by eleven footballers in a goal-shoot competition:

5 3 6 8 7 8 3 11 6 3 2 4

17. The modal score was:

(A) 3

(B) 6

(C) 8

(D) 11.5

18. The median score was:

(A) 3

(B) 5

(C) 8

(D) 11

19. What is the arithmetic mean of the data set: 4, 5, 0, 10, 8 and 3?

(A) 5

(B) 6

(C) 7

(D) 5

20. The mean, mode, and median of the data set: 5, 4, 10, 12, 1, 5, 3, 7, 15 and 8 is respectively_____.

(A) 5, 6, 7

(B) 7, 6, 5

(C) 6, 5, 7

(D) 7, 5, 6

21. In statistics, a sample means _____.

(A) A portion of the sample

(B) A portion of the population

(C) All the items under investigation

(D) None of the above

22. Sum of deviations will be zero if it is taken from _____.

(A) Mean

(B) Mode

(C) Median

(D) Standard Deviation

23. If mean, median, and mode are all equal then distribution will be _____.

(A) Positive Skewed

(B) Negative Skewed

(C) Symmetrical

(D) None of these

24. The shape of symmetrical distribution is _____.

(A) U shaped

(B) Bell shaped

(C) J shaped

(D) None of these

25. Study of scatteredness of observations is known as _____.

(A) Measure of dispersion

(B) Standard deviation

(C) Measure of central tendency

(D) None of the above

26. Standard deviation is always_____.

(A) Negative

(B) Positive

(C) Zero

(D) None of the above

27. The arithmetic average of the absolute deviation of a series known as the _____.

(A) Standard deviation

(B) Coefficient of mean deviation

(C) Mean deviation

(D) None of the above

28. If the difference of the third and first quartiles is divided by the sum of the third and first quartiles, then it is known as_____.

(A) Quartile

(B) Coefficient of mean deviation

(C) Coefficient of quartile deviation

(D) None of the above

29. The average of squared deviations about the arithmetic mean for a set of numbers is called _____.

(A) Standard deviation

(B) Coefficient of mean deviation

(C) Mean deviation

(D) Variance

30. The degree to which numerical data tend to spread about an average value called_____.

(A) Constant

(B) Flatness

(C) Variation

(D) Skewness

31. If all the scores on examination cluster around the mean, the dispersion is said to be_____.

(A) Small

(B) Large

(C) Normal

(D) Symmetrical

32. The measure of dispersion which uses only two observations is called_____.

(A) Mean

(B) Median

(C) Range

(D) Coefficient of variation

33. A Type I error occurs when: (Hint: When we use test statistics to tell us about the true state of the world, we're trying to see whether there is an effect in our population.):

(A) We conclude that there is not an effect in the population when in fact there is

(B) We conclude that the test statistic is significant when in fact it is not

(C) The data we have typed into SPSS is different from the data collected

(D) We conclude that there is an effect in the population when in fact there is not

34. The measures used to calculate the variation present among the observations in the unit of the variable is called

(A) Relative measures of dispersion

(B) Coefficient of skewness

(C) Absolute measures of dispersion

(D) Coefficient of variation

35. In quality control of manufactured items, the most common measure of dispersion is:

(A) Range

(B) Average deviation

(C) Standard deviation

(D) Quartile deviation

36. The average of squared deviations from mean is called:

(A) Mean deviation

(B) Variance

(C) Standard deviation

(D) Coefficient of variation

37. The value of standard deviation changes by a change of:

(A) Origin

(B) Scale

(C) Algebraic signs

(D) None

38. Which of the following statements is correct?

(A) The standard deviation of a constant is equal to unity

(B) The sum of absolute deviations is minimum if these deviations are taken from the mean

(C) The second moment about origin equals variance

(D) The variance is positive quantity and is expressed in square of the units of the observations

39. To compare the variation of two or more than two series, we use:

(A) Combined standard deviation

(B) Corrected standard deviation

(C) Coefficient of variation

(D) Coefficient of skewness

40. Three factories A, B, C have 100, 200 and 300 workers respectively. The mean of the wages is the same in the three factories. Which of the following statements is true?

(A) There is greater variation in factory C

(B) Standard deviation in factory A is the smallest

(C) Standard deviation in all the three factories are equal

(D) None of the above

41. Departure from symmetry is called:

(A) Second moment

(B) Kurtosis

(C) Skewness

(D) Variation

42. For a positively skewed distribution, mean is always:

(A) Less than the median

(B) Less than the mode

(C) Greater than the mode

(D) Difficult to calculate

43. If mean=25, median=30 and standard deviation=15, the distribution will be:

(A) Symmetrical

(B) Positively skewed

(C) Negatively skewed

(D) Normal

44. If the sum of deviations from median is not zero, then a distribution will be:

(A) Symmetrical

(B) Skewed

(C) Normal

(D) All of the above

45. Which of the following is correct in a negatively skewed distribution?

(A) The arithmetic mean is greater than the mode

(B) The arithmetic mean is greater than the median

(C) (Q3-Median) = (Median-Q1)

(D) (Q3-Median) < (Median-Q1)

46. In a symmetrical distribution Q1 =20 and median=30. The value of Q3 is:

(A) 50

(B) 35

(C) 40

(D) 25

47. The degree of peaked ness or flatness of a unimodal distribution is called:

(A) Skewness

(B) Symmetry

(C) Dispersion

(D) Kurtosis

48. The value of $\beta 2$ can be:

(A) Less than 3

(B) Greater than 3

(C) Equal to 3

(D) All of the above

49. In a normal (mesokurtic) distribution:

(A) $\beta 1 = 0 \; and \; \beta 2 = 3$

(B) $\beta 1 = 3 \; and \; \beta 2 = 0$

(C) $\beta 1 = 0 \; and \; \beta 2 > 3$

(D) $\beta 1 = 0 \; and \; \beta 2 < 3$

50. A dice is thrown. Find the probability of getting an even number:

(A) 2/3

(B) 1

(C) 5/6

(D) 1/2

51. Two coins are thrown at the same time. Find the probability of getting both heads:

(A) 3/4

(B) 1/4

(C) 1/2

(D) 0

52. Two dice are thrown simultaneously. The probability of getting a sum of 9 is:

(A) 1/10

(B) 3/10

(C) 1/9

(D) 4/9

53. If two events are independent, then:

(A) They may or may not be mutually exclusive

(B) The sum of their probabilities may or may not be equal to one

(C) Their intersection may or may not be zero

(D) None of these alternatives is correct

54. A numerical description of the outcome of an experiment is called a:

(A) Descriptive statistic

(B) Probability function

(C) Variance

(D) Random variable

55. In hypothesis testing, the hypothesis tentatively assumed to be true is:

(A) The alternative hypothesis

(B) The null hypothesis

(C) Either the null or the alternative

(D) None of these alternatives is correct

56. When we throw a coin then what is the probability of getting a tail?

(A) 2

(B) 1/2

(C) 5

(D) 0

57. When we throw two dice then what is the probability of getting a sum 2?

(A) 2/9

(B) 1/12

(C) 1/3

(D) All of these

58. Events which can never occur together in probability theories then it is classified as:

(A) Mutually exclusive events

(B) Collectively exclusive events

(C) Mutually exhaustive events

(D) None of these

59. All possible outcomes for a random experiment are called?

(A) Sample space

(B) Event space

(C) Numerical space

(D) Both (B) and (C)

60. The probability of an event cannot be:

(A) Equal to zero

(B) Greater than zero

(C) Equal to one

(D) Less than zero

61. A measure of the chance that an uncertain event will occur:

(A) An experiment

(B) An event

(C) A probability

(D) A trial

62. The probability of all possible outcomes of a random experiment is always equal to:

(A) One

(B) Zero

(C) Infinity

(D) All of the above

63. Which of the following cannot be taken as probability of an event?

(A) 0

(B) 0.5

(C) 1

(D) -1

64. If an event contains more than one sample points, it is called a:

(A) Simple event

(B) Compound event

(C) Impossible event

(D) Certain event

65. Which statement is false?

(A) The classical definition applies when there are n equally likely outcomes to an experiment

(B) The empirical definition occurs when number of times an event happens is divided by the number of observations

(C) A subjective probability is based on whatever information is available

(D) The general rule of addition is used when the events are mutually exclusive

66. A letter is chosen at random from the word "Statistics". The probability of getting a vowel is:

(A) 1/10

(B) 2/10

(C) 3/10

(D) 4/10

67. When two coins are tossed, the possible outcomes are:

(A) 2

(B) 4

(C) 1

(D) None of them

68. Two cards are selected at random with replacement from a pack of 52 playing cards. The possible outcomes are:

(A) 52×52

(B) 52

(C) 1326

(D) 2

69. Two balls are selected at random with replacement from a bag containing 3 red, 3 black and 2 green balls. The possible outcomes are:

(A) 8

(B) 64

(C) 16

(D) 2

70. The probability of drawing any one spade card is:

(A) 1/13

(B) 1/4

(C) 4/13

(D) 1/52

71. If P(A/B) = P(A) and P(A/B) = P(B), then A and B are:

(A) Mutually exclusive

(B) Dependent

(C) Equally likely

(D) Independent

72. When two dice are rolled, the maximum total on the two faces of the dice will be:

(A) 6

(B) 36

(C) 12

(D) 2

73. If A and B are not-mutually exclusive events, then:

(A) $P\ (A \cup B)+P(A \cap B) = P(A) + P(B)$

(B) $P\ (A \cup B) = P(A) + P(B)$

(C) $P\ (A \cup B) = P(A).P(B)$

(D) $P\ (A \cap B) = P(A) + P(B)$

74. If A and B are independent events, then:

(A) $P\ (A \cup B) = P(A) + P(B)$

(B) $P\ (A \cap B) = P(A).P(B)$

(C) $P\ (A \cap B) = P(A) + P(B)$

(D) $P(A) = P(B)$

75. Simple random samples can be drawn with of help of:

(A) Random numbers table

(B) Chit Method

(C) Roulette wheel

(D) All the above

76. Sampling frame is a list of:

(A) A list of units of a population

(B) A list of random numbers

(C) A list of natural numbers

(D) None

77. The error in a survey other than sampling error is known as:

(A) Sampling error

(B) Non-sampling error

(C) Formula error

(D) None

78. If the sample sizes are large from the population, then which error will contribute more errors:

(A) Sampling error

(B) Non-sampling error

(C) Both (A) & (B)

(D) None

79. If each and every unit of a population has an equal chance of being included in the sample, it is called:

(A) Restricted sampling

(B) Unrestricted sampling

(C) Purposive sampling

(D) Subjective sampling

80. Problem of non-response has:

(A) No solution

(B) Can be solved

(C) No meaning

(D) None

81. Null and alternative hypotheses are statements about:

(A) Population parameters

(B) Sample parameters

(C) Sample statistics

(D) It depends- sometimes population parameters and sometimes sample statistics

82. A result is called "statistically significant" whenever:

(A) The null hypothesis is true

(B) The alternative hypothesis is true

(C) The p-value is less or equal to the significance level

(D) The p-value is larger than the significance level

83. In hypothesis testing, a Type 2 error occurs when:

(A) The null hypothesis is not rejected when the null hypothesis is true

(B) The null hypothesis is rejected when the null hypothesis is true

(C) The null hypothesis is not rejected when the alternative hypothesis is true

(D) The null hypothesis is rejected when the alternative hypothesis is true

84. What is the arrangement of data in rows and columns known as?

(A) Frequency distribution

(B) Cumulative frequency distribution

(C) Tabulation

(D) Classification

85. When the quantitative and qualitative data are arranged according to a single feature, what is the tabulation known as?

(A) One-way

(B) Bivariate

(C) Manifold division

(D) Dichotomy

86. Classification is applicable in case of:

(A) Normal characters

(B) Quantitative characters

(C) Qualitative characters

(D) Both (B) and (C)

87. when data are arranged at regular interval of time, the classification is called:

(A) Qualitative

(B) Quantitative

(C) Chronological

(D) Geographical

88. The frequency distribution according to individual variate values is called:

(A) Discrete frequency distribution

(B) Cumulative frequency distribution

(C) Percentage frequency distribution

(D) Continuous frequency distribution

89. A series arranged according to each and every item is known as:

(A) Discrete series

(B) Continuous series

(C) Individual series

(D) Time series

90. The largest and the smallest values of any given class of a frequency distribution are called:

(A) Class Intervals

(B) Class marks

(C) Class boundaries

(D) Class limits

91. The extreme values used to describe the different Classes in a frequency distribution are called:

(A) Class intervals

(B) Class boundaries

(C) Class limits

(D) Cumulative frequency

92. The Class marks are given below:

10, 12, 14, 16, 18. The first Class of the distribution is:

(A) 9----12

(B) 10.5----12.5

(C) 9-----11

(D) 10----12

93. The Class interval is the difference between:

(A) Two extreme values

(B) Two successive frequencies

(C) Two successive upper limits

(D) Two largest values

94. The relative frequency multiplied by 100 is called:

(A) Percentage frequency

(B) Cumulative frequency

(C) Bivariate frequency

(D) Simple frequency

95. A frequency distribution formed considering two variables at a time is called:
(A) Univariate frequency distribution
(B) Bivariate frequency distribution
(C) Trivariate frequency distribution
(D) Bimodal distribution

96. A source note in a statistical table is given:
(A) At the end of a table
(B) In the beginning of a table
(C) In the middle of a table
(D) Below the body of a table

97. The headings of the columns of a table are called:
(A) Stubs
(B) Captions
(C) Footnotes
(D) Source notes

98. A pie diagram is represented by a:
(A) Rectangle
(B) Circle
(C) Triangle
(D) Square

99. The suitable diagram to represent the data relating to the monthly expenditure on different items by a family is:
(A) Historigram
(B) Histogram
(C) Multiple bar diagram
(D) Pie diagram

100. The graph of the cumulative frequency distribution is called:
(A) Histogram
(B) Frequency polygon
(C) Pictogram
(D) Ogive

******

Rough Work / रफ कार्य

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