BRAINWARE UNIVERSITY

Term End Examination 2020 - 21

Programme – Bachelor of Business Administration in Hospital Management

Course Name – Statistics for Business Decisions

Course Code - BBAHMC102

Semester / Year - Semester I

Time allotted : 75 Minutes Full Marks : 60

[The figure in the margin indicates full marks. Candidates are required to give their answers in their own words as far as practicable.]

Group-A

(Multiple Choice Type Question) 1 x 60=60

1. *(Answer any Sixty)*

(i) The variable “Gender” can be regarded as being, in general

a) qualitative and ratio level
b) quantitative
c) qualitative and nominal level
d) qualitative and ordinal level

(ii) Which one of these statistics is unaffected by outliers?

a) Mean
b) Interquartile range
c) Standard deviation
d) Range

(iii) In a week the prices of a bag of rice were 350,280, 340, 290, 320, 310, and 300. The range is

a) 70
b) 90
c) 100
d) 60

(iv) Find the median of the following data: 160, 180, 200, 280, 300, 320, 400

a) 140
b) 180
c) 280
d) 300

(v) Census reports used as a source of data is

a) Primary Source
b) Secondary Source
c) Organized data
d) none of the above

(vi) The weights of students in a college/ school is a

a) Discrete variable
b) Continuous Variable
c) Qualitative Variable
d) None of these

(vii) The number of accidents in a city during 2010 is

a) Discrete variable
b) Continuous Variable
c) Qualitative Variable
d) None of these

(viii) The first hand and unorganized form of data is called

a) Secondary Data
b) Organized Data
c) Primary Data
d) None of these

(ix) Arithmetic Mean is ———- affected by extreme values

a) highly
b) less
c) not
d) none of these

(x) The measure of Dispersion can never be

a) Positive
b) Negative
c) 0
d) 1

(xi) Which one is the not measure of dispersion?

a) Range
b) Variance
c) Mean
d) Inter-quartile Range

(xii) Which of the following is a relative measure of dispersion?

a) Standard deviation
b) Variance
c) Co-efficient of variation
d) None of these

(xiii) Which of the following is not a measure of dispersion

a) Skewness
b) Mean Deviation

c) Standard Deviation
d) Quartile Deviation

(xiv) Which one of the following is a measure of dispersion

a) Median
b) Skewness
c) Mean
d) Standard Deviation

(xv) Considering sales, coefficient of variation for product X is 9.3% and coefficient of variation for product Y is 8.9% then sales fluctuation of

a) product X is higher
b) product Y is higher
c) product X is lower
d) product X and Y is lower

(xvi) Considering standard deviation, mean absolute deviation is equal to

a) 5?4?
b) 5?8?
c) 4?5?
d) 7?8?

(xvii) For set of values, percentage of values that lies within population mean plus four standard deviations of population is

a) 0.8375
b) 0.9375
c) 0.95
d) 0.9875

(xviii) If positive square root is taken of population variance then calculated measure is transformed into

a) standard root
b) standard deviation
c) standard variance
d) sample variance

(xix) The correlation coefficient is used to determine

a) A specific value of the y-variable given a specific value of the x-variable
b) A specific value of the x-variable given a specific value of the y-variable
c) The strength of the relationship between the x and y variables
d) None of these

(xx) Correlation between rainfall and population is

a) Negative
b) Positive
c) Zero
d) None of these

(xxi) Range of the coefficient of correlation is

a) 2
b) ± 1
c) ± 0.5
d) ± 0.25

(xxii) As the value of x increases, if y also increases, then coefficient of correlation will be

a) Positive
b) Negative
c) Zero
d) None of these

(xxiii) One use of a regression line is

a) to determine if any x-values are outliers.
b) to determine if any x-values are outliers.
c) to determine if a change in x causes a change in y
d) to determine if a change in x causes a change in y

(xxiv) If two variables oppose each other, the correlation will be

a) Positive Correlation
b) Zero Correlation
c) Perfect Correlation
d) Negative Correlation

(xxv) 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

(xxvi) In case there is no relation between two variables, value of coefficient of correlation will be

a) -2
b) 1

c) 0 d) 2

(xxvii) Maximum value of correlation is

a) 2 b) 1.5

c) 1 d) 0

(xxviii) Which of the following indicates the strongest relationship?

a) r = 0.5 b) r = .09

c) r = 0.2 d) r = -0.6

(xxix) In case there is a perfect relation between two variables, value of coefficient of correlation will be

a) -2 b) =1/-1

c) 0 d) 2

(xxx) In regression, the equation that describes how the response variable (y) is related to the explanatory variable (x) is:

a) the correlation model b) the regression model

c) used to compute the correlation coefficient d) None of these alternatives is correct

(xxxi) If the correlation coefficient is a positive value, then the slope of the regression line

a) must also be positive b) can be either negative or positive

c) can be zero d) cannot be zero

(xxxii) In the model Y=mX+a Y is also known as the:

a) Predictor variable b) Independent variable

c) Predicted (dependent) variable d) Explanatory variable

(xxxiii) Which of the following can’t be a component for a time series plot?

a) Seasonality
b) Trend
c) Cyclical
d) Regression

(xxxiv) Time series methods

a) Discover a pattern in historical data and project it into the future.
b) Include cause-effect relationships
c) Are useful when historical information is not available
d) All of the alternatives are true.

(xxxv) Seasonal components

a) Cannot be predicted
b) Are regular repeated patterns
c) Are long runs of observations above or below the trend line.
d) Reflect a shift in the series over time.

(xxxvi) Short-term, unanticipated, and nonrecurring factors in a time series provide the random variability known as

a) uncertainty.
b) The forecast error.
c) The residuals.
d) The irregular component.

(xxxvii) Forecast errors

a) are the difference in successive values of a time series
b) are the differences between actual and forecast values
c) should all be non-negative
d) should be summed to judge the goodness of a forecasting model

(xxxviii) One of the classifications of time series is that they can be either

a) Categorical or ordinal
b) Stationary or non-stationary
c) inflationary or non-inflationary
d) None of the above

(xxxix) If a value is missing in a time series we can do one of the following

a) Just copy the previous value
b) Estimate it as an average between two neighboring values

c) take the overall mean as the best estimate of it
d) Ignore it

(xl) Linear trend is calculated as Tt = 28.5 + .75t. The trend projection for period 15 is

a) 11.25
b) 28.5
c) 39.75
d) 44.25

(xli) A fire in a factory delaying production for some weeks is

a) Secular Trend
b) Irregular Trend
c) Seasonal Trend
d) Cyclical Trend

(xlii) In moving average method we cannot find trend values of some

a) Starting Points
b) Starting and end points
c) End Period
d) Middle Period

(xliii) Prosperity, Recession and depression in a business is an example of

a) Secular Trend
b) Irregular Trend
c) Cyclical Trend
d) Seasonal Trend

(xliv) Index numbers can be used for:

a) Forecasting
b) Fixed Prices
c) Different Prices
d) Constant Prices

(xlv) Index for base period is always taken as:

a) 100
b) 0
c) 1
d) 200

(xlvi) When the prices of rice are to be compared, we compute

a) Volume Index
b) Value Index
c) Price Index
d) Aggregative Index

(xlvii) An index number is used:

a) To measure changes in demand
b) To measure changes in quantity
c) To measure changes in price
d) To measure changes in a variable over time

(xlviii) The Laspeyres and Paasche index are examples of

a) Weighted price index only
b) Weighted quantity index only
c) Weighted index numbers
d) Aggregate index numbers

(xlix) A simple aggregate price index:

a) Considers relative quantities
b) Compares relative quantities to relative prices
c) Compares absolute prices to absolute quantities
d) Ignores relative quantities

(l) What is the probability of getting exactly two "tails" in four tosses of a fair coin?

a) . 3/8
b) 5/8
c) . 1/2
d) . 1/8

(li) Probability of second event in situation if first event has been occurred is classified as

a) series probability
b) conditional probability
c) joint probability
d) dependent probability

(lii) Probability without any conditions of occurrence of an event is considered as

a) conditional probability
b) marginal probability
c) non conditional probability
d) occurrence probability

(liii) If you rolled a 6-sided dice, what is the probability of rolling a 3?

a) 1/6 b) 2/3

c) 3/6 d) 3/3/

(liv) If you flipped 2 coins, what is the probability that both will land on tails?

a) 2/4/ b) . ¾

c) ¼ d) 0/4

(lv) In a Venn diagram used to represent probabilities, sample space of events is represented by

a) square b) triangle

c) circle d) rectangle

(lvi) For two events, probability of occurrence of both events at same time or occurrence in series is classified as

a) joint probability b) dependent probability

c) series probability d) conditional probability

(lvii) Considering combination rule of counting outcome, value of 5! Is

a) 5 b) 120

c) 20 d) 42

(lviii) The graph of a frequency distribution is called

a) Curve b) Bar chart

c) Histogram d) Ogive

(lix) In constructing a histogram, if the class interval size of one class is double than others, then the width of that bar should be

a) Doubled b) Half

c) One d) Quarter

(lx) Total angles in Pie chart are

a) 360 degree
b) 270 degree
c) 180 degree
d) 300 degree