



BRAINWARE UNIVERSITY

Term End Examination 2021 - 22

Programme – Bachelor of Science in Information Technology

Course Name – Data Visualization

Course Code - BAIC402

(Semester IV)

Time allotted : 1 Hrs.15 Min.

Full Marks : 60

[The figure in the margin indicates full marks.]

Group-A

(Multiple Choice Type Question)

1 x 60=60

Choose the correct alternative from the following :

- (1) Which one of the given era is represented with concerned with physical measurement of time, distance, space, surveying etc?

a) 1600–1699	b) 1700–1799
c) 1800–1850	d) 1850–1900
- (2) In _____ era Bar graph, Line chart, histograms and Scatter plots were invented.

a) 1600–1699	b) 1700–1799
c) 1800–1850	d) 1850–1900
- (3) _____ graphs are great at visualizing your geographically data by location.

a) Line Chart	b) Map
c) Scatter plot	d) Stacked bar chart
- (4) Which one of the given graphs is used to compare data to itself rather than seeing a total?

a) Line Chart	b) Column graph
c) Scatter plot	d) Stacked bar chart
- (5) Which of the following statement about qualitative data are not accurate?

a) Qualitative data is collected from a desk, e.g. by using Google	b) The quality of qualitative data depends to a large extent on the way it is interpreted
c) Qualitative data is often collected using informal group discussions	d) The quality of qualitative data can be affected if one person dominates the group discussion
- (6) In-depth research into the reasons behind customers' behaviour, definition of _____

a) Qualitative data	b) Focus group
c) Quantitative data	d) Non-Primitive data
- (7) "Many parents feel guilty when buying ready-meals", example of _____

a) Qualitative data	b) Quantitative data
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- c) Primitive data
 (8) "Most owners of diesel cars think that their exhaust emissions are no worse than petrol cars", example of _____
 a) Qualitative data
 c) Primitive data
 (9) "More people like blue packaging than like red", example of _____
 a) Qualitative data
 c) Primitive data
 (10) Component bar charts are used when data is divided into:
 a) Parts
 c) Circles
 (11) A(n) _____ is a graphical representation in which the sample space is represented by a rectangle and events are represented as circles
 a) Frequency polygon
 c) Venn diagram
 (12) A graphical method of representing the sample points of a multiple-step experiment is
 a) A frequency polygon
 c) An ogive
 (13) Which of the following is an example of compressed data:
 a) Histogram
 c) Frequency distribution
 (14) A Histogram containing a set of
 a) Adjacent Rectangles
 c) Adjacent squares
 (15) What is Data Visualization?
 a) It is the graphical representation of information and data
 c) It is the character representation of information and data
 (16) Data Visualization is also an element of the broader.....
 a) data process architecture
 c) deliver presentation architecture
 (17) Which methods shows hierarchical data in a nested format?
 a) Treemaps
 c) Area charts
 (18) What are specific examples of methods to visualize data?
 a) Area Chart
 c) Dot Distribution Map
 (19) What are the benefits of data visualization?
 a) Better analysis
 c) Exploring business insights
 (20)is used to query and edit graphical settings.
 a) par()
 c) cum()
 (21)groups values of a variable into larger bins.
- d) Non-Primitive data
 b) Quantitative data
 d) Non-Primitive data
 b) Quantitative data
 d) Non-Primitive data
 b) Groups
 d) None of these
 b) Histogram
 d) Tree diagram
 b) A histogram
 d) A tree diagram
 b) Ungrouped data
 d) Tabulation
 b) Non-Adjacent rectangles
 d) Adjacent triangles
 b) It is the numerical representation of information and data
 d) None of these
 b) data presentation architecture
 d) None of these
 b) Scatter plots
 d) Population pyramids
 b) Bubble Cloud
 d) All of these
 b) Identifying patterns
 d) All of these
 b) plot()
 d) anova()

- a) cut
c) col.max(x)
- b) stem
d) which.max(x)
- (22)helps in designing effective tables and charts for data visualization.
- a) PivotTable
c) Scatter charts
- b) Data-ink ratio
d) Crosstabulation
- (23) The charts that are helpful in making comparison between
- a) Bar charts
c) Pie charts
- b) column charts
d) Both Bar & Column Charts
- (24) A data visualization tool that updates in real time and gives multiple outputs is called.....
- a) a data dashboard
c) a data table
- b) a metrics table
d) None of these
- (25) A....is a line that provides an approximation of the relationship between the variables.
- a) sparkline
c) trendline
- b) gridline
d) none of these
- (26) By default plot() function plots a
- a) Bar chart
c) Pie chart
- b) Line chart
d) Horizontal Bar chart
- (27) To represent a proportionate contribution of individual data we can use chart
- a) Line
c) Pie
- b) Bar
d) Scatter
- (28) Which of the following is best suitable chart to show data correlation?
- a) Bar
c) Pie
- b) Histogram
d) Scatter
- (29)chart display only one data series at a time.
- a) Line
c) Pie
- b) Bar
d) Scatter
- (30) Which of the following does not visualize data?
- a) Charts
c) Shapes
- b) Maps
d) Graphs
- (31) To compare data we can use....chart
- a) Line
c) Pie
- b) Bar
d) Scatter
- (32) which of the following is incorrect regarding Data Visualization?
- a) Data Visualization is immensely useful in data analysis
c) Data Visualization is a graphical representation of data
- b) Visualizing large and complex data does not produce effective results
d) Decision makers use data visualization to understand business problems easily and build strategies.
- (33) The best suitable real life example of data visualization is
- a) Percent of population of by age group in india
c) Solar system drawing
- b) Google Analytics
d) Both a and b
- (34) A figure/chart contains _____
- a) Plotting area
c) Axis labels
- b) Legend
d) All of these

- (35) Values which are displayed on y-axis is called _____
- a) y ticks
 - b) x ticks
 - c) xy ticks
 - d) None of these
- (36) A _____ plot is a graph that shows the frequency of data along a number line.
- a) line
 - b) box
 - c) histogram
 - d) bargraph
- (37) Which are cons of data visualization?
- a) It conveys a lot of information in a small space.
 - b) It makes your report more visually appealing.
 - c) visual data is distorted or excessively used.
 - d) None Of these
- (38) Which one of the following is most basic and commonly used techniques?
- a) Line charts
 - b) Scatter plots
 - c) Population pyramids
 - d) Area charts
- (39) _____ is used for density plots?
- a) par
 - b) lm
 - c) kde
 - d) C
- (40) Which of the following is appropriate to graph a single continuous variable?
- a) Waffle chart
 - b) Histogram
 - c) Bar chart
 - d) Pie chart
- (41) Which of the following is not a recommended type of graph?
- a) Pie chart
 - b) Bar chart
 - c) Waffle chart
 - d) Density plot
- (42) Which of the following are types of correlation?
- a) Positive and Negative
 - b) Simple, Partial and Multiple
 - c) Linear and Nonlinear
 - d) All of these
- (43) Which of the following statements is true for correlation analysis?
- a) It is a bivariate analysis
 - b) It is a multivariate analysis
 - c) It is a univariate analysis
 - d) Both a and c
- (44) Which of the following statements is true about the correlational analysis between two sets of data?
- a) The correlational analysis between two sets of data is known as a simple correlation
 - b) The correlational analysis between two sets of data is known as multiple correlation
 - c) The correlational analysis between two sets of data is known as partial correlation
 - d) None of these
- (45) A common example of a dendrogram is a _____
- a) graph
 - b) chart
 - c) playoff tournament display
 - d) table
- (46) Which one of the following refers to correlation?
- a) The causal relationship between two variables.
 - b) The association between two variables.
 - c) The proportion of variance that two variables share.
 - d) A statistical method that can only be used with a correlational research design.
- (47) Which one of the given options tells us about the coefficient of determination?
- a) The proportion of variance in X accounted for by the mean of Y.
 - b) The proportion of variance in Y accounted for by X.
 - c) The mean value of Y.
 - d) The mean value of X.

- (48) Which of the following indicates the strongest relationship?
- | | |
|--------------|---------------|
| a) $r = .5$ | b) $r = .09$ |
| c) $r = -.6$ | d) $r^2 = .2$ |
- (49) _____ is the number of edges present in a complete graph having n vertices.
- | | |
|------------------|--------------------------------------|
| a) $(n*(n+1))/2$ | b) $(n*(n-1))/2$ |
| c) N | d) Information given is insufficient |
- (50) A tree diagram includes parent and _____ nodes.
- | | |
|-------------|------------|
| a) Child | b) Sibling |
| c) Tree map | d) Cousin |
- (51) Tree maps are best for displaying large data sets in which the data is _____.
- | | |
|-----------------|------------|
| a) Unstructured | b) Random |
| c) Hierarchical | d) Unknown |
- (52) Which one of the following is the benefit of a tree map?
- | | |
|---|--|
| a) It shows moving averages and trends. | b) It shows a large amount of structured data in an easy-to-read format. |
| c) It shows small data set. | d) It can be changed into a flowchart. |
- (53) In which era Bar graph, Line chart, histograms and Scatter plots were invented?
- | | |
|--------------|--------------|
| a) 1600–1699 | b) 1700–1799 |
| c) 1800–1850 | d) 1850–1900 |
- (54) Which one of the given options could be the possible reason(s) for producing two different dendrograms $\begin{Bmatrix} \text{L} \\ \text{SEP} \end{Bmatrix}$ using agglomerative clustering algorithm for the same dataset?
- | | |
|----------------------------|------------------------|
| a) Proximity function used | b) Of data points used |
| c) Of variables used | d) All of these. |
- (55) Which one of the given options tell us about the coefficient of determination?
- | | |
|---|--|
| a) The proportion of variance in X accounted for by the mean of Y . | b) The proportion of variance in Y accounted for by X . $\begin{Bmatrix} \text{L} \\ \text{SEP} \end{Bmatrix}$ |
| c) The mean value of Y . $\begin{Bmatrix} \text{L} \\ \text{SEP} \end{Bmatrix}$ | d) The mean value of X . |
- (56) Which of the given method of analysis does not classify variables as dependent or independent?
- | | |
|-------------------------|--------------------------|
| a) Regression analysis | b) Discriminant analysis |
| c) Analysis of variance | d) Factor analysis |
- (57) Factor analysis is a(n) _____ in that the entire set of interdependent relationships is examined.
- | | |
|-------------------------------------|-------------------------|
| a) KMO measure of sampling adequacy | b) Orthogonal procedure |
| c) Interdependence technique | d) Varimax procedure |
- (58) Factor analysis can be used in which of the following circumstances?
- | | |
|--|--|
| a) To identify underlying dimensions, or factors, that explain the correlations among a set of variables. | b) To identify a new, smaller set of uncorrelated variables to replace the original set of correlated variables in subsequent multivariate analysis. |
| c) To identify a smaller set of salient variables from a larger set for use in subsequent multivariate analysis. | d) All of these. |
- (59) _____ are simple correlations between the variables and the factors.
- | | |
|-------------------------|--------------------|
| a) Factor scores | b) Factor loadings |
| c) Correlation loadings | d) All of these. |

(60) _____ should be used when factors in the population are likely to be strongly correlated.

- a) Orthogonal rotation
- c) Oblique rotation

- b) The varimax procedure
- d) All of these.