

## WORKSHEET – Data Visualization

1	<p><b>Which of the following is a characteristic of data visualization-</b></p> <ol style="list-style-type: none"> <li>1. Converts information</li> <li>2. Involves visuals</li> <li>3. Simplifies understanding</li> <li>4. All of above</li> </ol>
2	<p>Histogram represents quantitative data and Bar charts represents categorical data.</p> <ol style="list-style-type: none"> <li>1. True, False</li> <li>2. True, True</li> <li>3. False, true</li> <li>4. False, False</li> </ol>
3	<p>Bars can be recorded in Histogram-</p> <ol style="list-style-type: none"> <li>1. True</li> <li>2. False</li> </ol>
4	<p>Histograms have gaps between bars while in Bar graph bar are adjacent to each other-</p> <ol style="list-style-type: none"> <li>1. True, False</li> <li>2. True, True</li> <li>3. False, true</li> <li>4. False, False</li> </ol>
5	<p>In case of 1 categorical data and 1 quantitative data which visualization option is most suitable-</p> <ol style="list-style-type: none"> <li>1. Bar chart</li> <li>2. Histogram</li> <li>3. Scatter Chart</li> <li>4. All</li> </ol>
6	<p>Box plot cannot be used to compare different quantitative attributes and Box plot can detect outliers-</p> <ol style="list-style-type: none"> <li>1. True, False</li> <li>2. True, True</li> <li>3. False, true</li> <li>4. False, False</li> </ol>
7	<p>Which of the following create Pie chart from data frame-</p> <ol style="list-style-type: none"> <li>1. df.pie()</li> <li>2. df.plot.pie()</li> <li>3. df.plot(kind='pie')</li> <li>4. All of above</li> </ol>
8	<p>Which of the following statement limits both x and y axes to the interval [0, 7]?</p> <ol style="list-style-type: none"> <li>1. plt.xlim(0, 7)</li> <li>2. plt.ylim(0, 7)</li> <li>3. plt.xyylim(0, 7)</li> <li>4. plt.axis( [0, 7, 0, 7])</li> </ol>
9	<p>Define two terminology in respect of Boxplot()-</p> <ol style="list-style-type: none"> <li>1. Labels</li> <li>2. notch</li> </ol>

10	Write a program to plot the line chart for the first 10 values of x start from 1 for the function $y=x^2$
11	What is the purpose of patch_artist attribute in boxplot() – <ol style="list-style-type: none"> <li>1. To make the outline</li> <li>2. To set the size of the box plot</li> <li>3. To fill the box plot</li> <li>4. None</li> </ol>
12	What are bins in histogram – <ol style="list-style-type: none"> <li>1. Non overlapping intervals</li> <li>2. Overlapping intervals.</li> <li>3. Set of intervals.</li> <li>4. None.</li> </ol>
13	How can we find the maximum in boxplot().
14	<b>Which of the following option is correct-</b> <ol style="list-style-type: none"> <li>1. Markers are used to plot the points.</li> <li>2. C or colors are used to set the colors.</li> <li>3. “b” is the color abbreviation for black color.</li> <li><b>4. None.</b></li> </ol>
15	Which of the following is not a line style for the line of plot chart? <ol style="list-style-type: none"> <li>1. solid</li> <li>2. dot-dash</li> <li>3. dotted</li> <li>4. dashed</li> </ol>
16	Which of the following default color for marker points will display for scatter function? <ol style="list-style-type: none"> <li>1. Red</li> <li>2. Green</li> <li>3. Blue</li> <li>4. yellow</li> </ol>
17	Frequency polygons make it easy to compare two or more distributions on the same set of axes. <ol style="list-style-type: none"> <li>1. True</li> <li>2. False</li> </ol>
18	The interquartile range <b>IQR</b> always be 25 <sup>th</sup> to 75 <sup>th</sup> percentile- <ol style="list-style-type: none"> <li>1. True</li> <li>2. False</li> </ol>
19	Legends can be dynamically changed- <ol style="list-style-type: none"> <li>1. True</li> <li>2. False</li> </ol>
20	Legends are used to explain what each line means in the current figure- <ol style="list-style-type: none"> <li><b>1. True</b></li> <li><b>2. False</b></li> </ol>

21	Which of the following is the correct way to install matplotlib? <ol style="list-style-type: none"> <li>1. pip matplotlib install</li> <li>2. install matplotlib</li> <li>3. matplotlib install</li> <li>4. pip install matplotlib</li> </ol>
22	Box plot is also known as _____
23	<b>To save the graph with the file name SachinScore.png-</b> <ol style="list-style-type: none"> <li>1. import matplotlib.pyplot as plt</li> <li>2. against=['Delhi','Chennai','Chandigarh','Hyderabad']</li> <li>3. runs=[42,15,78,90]</li> <li>4. _____ # Statement1</li> <li>5. _____ # Statement2</li> <li>6. _____ # Statement3</li> </ol>
24	Frequency polygons usually good choice for displaying _____
25	A Scatter chart is often used to identify _____ between two variables.
26	What is the difference between Scatter chart and Line Chart?
27	What do you mean by Frequency polygon?
28	What do you mean by xlim() and ylim()?
29	<b>Write a program to plot the line chart with the following functionality-</b> <ol style="list-style-type: none"> <li>1. Marker should be as star</li> <li>2. Line color should be green</li> <li>3. Edge color of marker should be black</li> <li>4. Width of line should be 13</li> <li>5. Line style should be dash-dot</li> </ol> X=[0,1,2,3,4,5,6,7,8,9] Y= [40,12,45,78,80,35,64,79,45,19]
30	<b>How you can save a plot to a file.</b>
31	How you can create a horizontal Bar graph.
32	What is scatter chart? Explain with suitable example
33	Why bins are used in histogram.
34	What is the difference between Pie Chart and Scatter chart?
35	Create a pie chart with a suitable example.