		Marks	BL	CO	PO
b.i.	Differentiate exploratory and explanatory data visualization.	4	2	1	1
ii.	Discuss the relationship between the designer, reader and data.	6	2	1	1
27. a.i.	Differentiate dimensions and measures in tableau.	5	3	2	3
ii.	Write a R program to find the levels of factor of a given vector, V containing data 1, 2, 5, 10, 3, 5, 5, 2, 2, 3, NA.	5	3	2	3

(OR)

		Marks	BL	CO	PO
b.	Create a pie chart in R with data, X = (21, 62, 10, 53). Title of the chart should be "sample pie chart". Include "Raja", "Sasi", "Ashwanth", "Adharsh" as labels for the chart. Use rainbow function to colour your chart.	10	3	2	3
28. a.	Discuss the various file formats used in tableau in detail.	10	4	3	4

(OR)

		Marks	BL	CO	PO
b.i.	What are the data types supported in Tableau? Give example for each data type.	5	4	3	4
ii.	Write short notes on different types of tableau filters.	5	4	3	4
29. a.	Discuss the various features of D3.js. in detail.	10	4	4	5

(OR)

		Marks	BL	CO	PO
b.	Write a d3.js code snippet to load data from "data.tsv" file. On successful loading of data, it has to print data as a table in the browser console. If error occurs, then print the error message in the console.	10	4	4	5
30. a.	There should be a logic in the order in which you display the information – justify this with suitable case study.	10	3	5	12

(OR)

		Marks	BL	CO	PO
b.i.	Write short notes on a few strategies for avoiding the spaghetti graph.	5	3	5	12
ii.	Discuss how well data visualization can be done as an alternate to pie charts.	5	3	5	12

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B.Tech. DEGREE EXAMINATION, MAY 2022
Sixth Semester

18CSE490T – BIG DATA VISUALIZATION
(For the candidates admitted from the academic year 2018-2019 to 2019-2020)

Note:
(i) **Part - A** should be answered in OMR sheet within first 40 minutes and OMR sheet should be handed over to hall invigilator at the end of 40th minute.
(ii) **Part - B** should be answered in answer booklet.

Time: 2½ Hours   Max. Marks: 75

PART – A (25 × 1 = 25 Marks)
Answer **ALL** Questions

		Marks	BL	CO	PO
1.	Which of the following is considered as pros of data visualization?	1	4	1	1

(A) It can be accessed quickly be a wider audience
(B) It can misrepresent information
(C) It can be distracting
(D) No pros in data visualization

		Marks	BL	CO	PO
2.	Data can be visualized using _____.	1	1	1	1

(A) Graphs
(B) Charts
(C) Maps
(D) Graphs, charts or maps

		Marks	BL	CO	PO
3.	Doug Laney introduced the 3Vs concept in 2001. They are _____.	1	1	1	1

(A) Velocity, variety, volume
(B) Velocity, veracity, volume
(C) Variety, veracity, volume
(D) Velocity, variety, veracity

		Marks	BL	CO	PO
4.	Which of the following is not used to represent data quality?	1	2	1	3

(A) Accuracy
(B) Relevance
(C) Appropriateness
(D) Visual art

		Marks	BL	CO	PO
5.	Which of the following data is passively created?	1	2	1	3

(A) Recording a sales transaction
(B) Search term on Google
(C) Account creation
(D) Experimental data

		Marks	BL	CO	PO
6.	Which of the following function in R is used to view the dataset in spread sheet like format?	1	3	2	1

(A) disp ( )
(B) view ( )
(C) seq ( )
(D) showsheet ( )

		Marks	BL	CO	PO
7.	Which of the following command in R is used to print an object "X"?	1	3	2	3

(A) printf(X)
(B) printX
(C) print(X)
(D) print[X]

		Marks	BL	CO	PO
8.	What will be the output of the following R code?	1	4	2	4

```
> X ← 1 :4
> X > 2
```
(A) FALSE FALSE TRUE TRUE
(B) F F T T
(C) 1 2 3 4
(D) 2 4 6 8

9. What will be the output of the following R commands listed below: 1 4 2 1
   >data = list("x", "y", "z", 1,2,3)
   >dim (data) = c (3,2)
   >data

   (A) "x" 1   (B) 1   "x"
        "y" 2   2   "y"
        "z" 3   3   "z"
   (C) 1   x   (D) Error
        2   y
        3   z

10. In R programming, if you explicitly want an integer, you need to specify the _____ suffix.   1 1 2 4
    (A) D   (B) R
    (C) I   (D) L

11. Which of the following is not a Tableau field data type?   1 2 3 3
    (A) Number (whole)   (B) String
    (C) Boolean   (D) Float

12. By default, tableau displays measures over time as a _____ graph.   1 2 3 3
    (A) Bar   (B) Line
    (C) Histogram   (D) Scatter plots

13. Which type of chart is not available in tableau?   1 2 3 3
    (A) Heat map   (B) Speed dial
    (C) Bullet chart   (D) Bubble chart

14. How do you identify a discrete field in tableau?   1 3 3 12
    (A) Blue pill in the visualization   (B) Green pill in the visualization
    (C) It is preceded by a #symbol in   (D) When added to the visualization,
         the data window   it produced district values

15. What is an extract in tableau?   1 1 3 12
    (A) That contains formatting settings that control the entire worksheet as well as individual fields in the view
    (B) A saved subset of a data source that you can use to improve performance and analyze offline
    (C) Any field containing qualitative, categorical, information as a dimension. This includes any field with text of dates values
    (D) This refers to the tableau public version

16. Which of the following D3.js command is used to create horizontal axis?   1 3 4 5
    (A) d3.TopAxis ( )   (B) d3.axisTop ( )
    (C) d3.axisHorizon ( )   (D) d3.HorizonAxis ( )

17. D3 is an open source JavaScript library based upon its predecessor the _____ framework.   1 3 4 5
    (A) SVG   (B) Protovis
    (C) VizSQL   (D) Drotovis

18. D3 libraries can be inserted into our projects by the following statement.   1 4 4 5
    (A) <script src = "https://D3.js.org.D3.v4.min.js"> </script>
    (B) <script src = https://D3.js.org.D3.v4.min.js> </script>
    (C) <insert src = "https://D3.js.org.D3.v4.min.js"> </script>
    (D) <insert src = https://D3.js.org.D3.v4.min.js> </script>

19. SVG is _____ used for two dimensional graphics that supports animation and interactivity.   1 4 4 5
    (A) An XML based table format   (B) An XML based image format
    (C) An animation based vector   (D) A data manager

20. Which of the following task is not performed by D3?   1 4 4 4
    (A) Manipulation of DOM   (B) Working with charts
    (C) Compression of data   (D) Work with data

21. The charts that are helpful in making comparisons is/are _____.   1 1 5 4
    (A) Bar charts   (B) Column charts
    (C) Pie charts   (D) Both bar and column charts

22. A system that merges maps and statistics to present data collected over different geographics is _____.   1 4 5 3
    (A) The heat map   (B) A geographical map
    (C) A geographical information   (D) A area chart
         systems

23. What are the benefits of data visualization?   1 2 5 3
    (A) Better analysis   (B) Identifying patterns
    (C) Exploring business insights   (D) Better analysis, identifying patterns, exploring business insights

24. A _____ is a line that provides an approximation of the relationship between the variables.   1 1 5 4
    (A) Spark line   (B) Grid line
    (C) Trend line   (D) Spark

25. Which of the following statement is false?   1 1 5 4
    (A) Data visualization include the ability to absorb information quickly   (B) Data visualization is another form of visual art
    (C) Data visualization decrease the insights and take slower decisions   (D) Data visualization makes complex data more accessible understandable and usable

PART – B (5 × 10 = 50 Marks)
Answer ALL Questions

Marks BL CO PO

26. a.i. List the various types of structured and unstructured data.   5 2 1 1

  ii. Write short notes on 3v's with respect to big data.   5 2 1 1

(OR)