H   Roll No. ....

MB–402(BA1)

M. B. A. (FOURTH SEMESTER)

END SEMESTER

EXAMINATION, May, 2023

DATA VISUALIZATION FOR MANAGER

Time : Three Hours

Maximum Marks : 100

Note : (i) This question paper contains two Sections-Section A and B

(ii) Both Sections are compulsory

(iii) Answer any two sub-questions among (a), (b) & (c) in each main question of Section A. Each sub-question carries 10 marks.

(iv) Section B consisting of Case Study is compulsory. Section B is of 20 Marks.

P. T. O.

Section—A

1. (a) Explain the information visualization applications and system based on data type.   (CO1)

   (b) Why is ethics important when creating data visualizations and what are some ethical considerations to keep in mind ?   (CO2)

   (c) What is multivariate visualization and how does it differ from other types of visualization ?   (CO3)

2. (a) What are some advanced Excel techniques for data visualization ?   (CO1)

   (b) How can you use data bars, sparklines, box plots, mapping and bullet charts to create effective visualizations ?   (CO3)

   (c) What are the Shaffer 4 C's of Data Visualization and how can they be used to create effective visualizations ?   (CO4)

3. (a) What are some advanced Tableau topics related to interactive visualization and data story-telling ?   (CO1)

   (b) How can you evaluate the effectiveness of data visualizations in communicating complex information to stakeholders within your organization and what steps can you take to improve their clarity and impact ?   (CO2)

   (c) Apply R integration to create advanced visualizations and analyses of geospatial data. How can you leverage R packages and libraries to generate new insights and reveal patterns in the data that may be difficult to see using standard data visualization tools ?   (CO4)

4. (a) What are the different factors that affect the accuracy and reliability of geocoding tools for mapping data ?   (CO1)

   (b) Evaluate the effectiveness of different map projections for displaying geographic data. How do they distort the representation of the Earth's surface and what impact does this have on data analysis ?   (CO3)

   (c) Design a comprehensive plan to align business objectives with the use of

business intelligence and analytics that ensures stakeholder buy-in and participation throughout the process and evaluate the potential benefits and risks of each strategy to determine the most effective approach. (CO4)

Section—B

5. **Case Study :** (20 Marks) (CO5)

In a healthcare organization, the leadership team wanted to improve patient outcomes and reduce costs. They decided to use data visualization to identify patterns and trends in patient data that would help them make informed decisions. They engaged all stakeholders, including doctors, nurses, and administrative staff, to create a shared vision of how data visualization could help achieve their goals.

Questions :

(a) Develop a comprehensive plan to implement data visualization in a healthcare organization, taking into account factors such as data accessibility,

user needs and technological infrastructure and analyze the factors that contributed to the success of using data visualization in this healthcare organization, including any challenges that were overcome.

(b) Develop a framework for evaluating the impact of data visualization on healthcare outcomes in this specific organization, using a combination of quantitative and qualitative measures. Identify key metrics such as patient satisfaction, clinical outcomes and cost savings that will be used to measure success.