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Total No. of Pages : 03

Total No. of Questions : 17

**MBA (Sem.-4)**

**DATA VISUALIZATION FOR MANAGERS**

**Subject Code : MBA-963-18**

**M.Code : 78031**

**Date of Examination : 14-01-2023**

**Time : 3 Hrs.**

**Max. Marks : 60**

**INSTRUCTIONS TO CANDIDATES :**

1. **SECTION-A** contains **EIGHT** questions carrying **TWO** marks each and students has to attempt **ALL** questions.
2. **SECTIONS-B** consists of **FOUR** Subsections : **Units-I, II, III & IV**. Each Subsection contains **TWO** questions each carrying **EIGHT** marks each and students have to attempt any **ONE** question from each Subsection.
3. **SECTION-C** is **COMPULSORY** and consists of **ONE** Case Study carrying **TWELVE** marks.

**SECTION-A**

**Write briefly:**

1. What is data visualization?
2. What is the utility of the bar plot?
3. What is ELT?
4. What is Data Integration?
5. What is the Shaffer 4C's Data Visualization?
6. What are KPI's?
7. What are Dashboards?
8. What is meant by storyboards?

## **SECTION-B**

### **UNIT-I**

9. As the Data visualization has evolved from simple graphs to complex dashboards. What are the factors that are responsible for this drastic change? Explain in detail with context to the field of management and data science.

**10. Explain the applications of the following concepts in data visualizations:**

- a. Data reduction
- b. Decision models
- c. Exploratory visualizations.

### **UNIT-II**

11. What is the difference between ETL and ELT? Also, explain the importance of ETL in business intelligence by giving relevant examples.
12. What do you mean by 'predictive modelling'? Explain this concept in detail by relating it to different scenarios in which predictive modelling can be applied.

### **UNIT-III**

13. What is the relevance of KPI's in finance organizations? Explain in detail by giving suitable examples from the viewpoint of managers.

**14. Explain the following terms by giving relevant examples:**

- a. Design Principles
- b. Data modelling for Analytics.

### **UNIT-IV**

15. What is meant by infographics? Explain in detail how the infographics can be used by the sales department in a business organization?
16. What do you mean by storytelling? Explain in detail in which context it can be applied in analyzing and presenting the data. Also, explain the role of the audience in building a story from different visualizations.

## **SECTION-C**

**17. Case Study:**

Profitable Bank is a commercial bank operating across the country since 2000. It started with a limited number of branches in Punjab, India. The services provided by the bank

gradually expanded beyond the state. The bank massively expanded by acquiring regional banks in the country. Besides basic credit and risk services, it diversified into financial services such as insurance services, foreign trade and money market. By the end of financial year 2008, the bank had a presence over the majority of the country by operating through 700 branches all over India.

To stay competitive in the present era, the bank offers modern applications such as mobile banking and internet banking. To increase its physical presence and make debit facilities easier, the bank has more than 1500 ATMs across the country. Today, the bank is a leading bank in the country with very high customer satisfaction and products and services that are tailored to the needs of the customer segments. The bank has a marked presence in loan facilities, credit and debit cards and insurance services.

However, the massive expansion implies a larger client base which implies immensely large data to manage. Also since banks have a high number of transactions each day, this means that banks have huge operational and transactional databases. Extracting meaningful information from transactional databases is a complex task since updates occur very often and data in the transactional database is not standardized. Also, the flow of information in the bank across different departments and with clients and customers increased. The bank did not have the requisite database to support increasing data. The current technology has limited capabilities in terms of storage, analytical abilities and robustness.

Since transactional data is not cleansed, there might be redundant data which implies that queries run on such data would take longer to execute, and therefore the reports would be delayed. This in turn implies that management could not get the requisite information on time which is required to take important decisions, and at certain times, this would also obstruct the tactical decisions in the bank. Clearly, the advancement was required in the existing technology, and the only viable solution was a ***Data Warehouse***.

#### **Questions:**

1. Discuss the reasons why the Profitable Bank needed to build the Data Warehouse.
2. What suggestions you will give Profitable Bank for successful implementation of Data Warehouse.

**NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.**