NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

B.Tech

SEM: VI - THEORY EXAMINATION (2023 - 2024)

Subject: Business Intelligence and Data Visualization

Time: 3 Hours   Max. Marks: 100

General Instructions:

IMP: *Verify that you have received the question paper with the correct course, code, branch etc.*

1. *This Question paper comprises of* **three Sections -A, B, & C.** *It consists of Multiple Choice Questions (MCQ's) & Subjective type questions.*

2. *Maximum marks for each question are indicated on right -hand side of each question.*

3. *Illustrate your answers with neat sketches wherever necessary.*

4. *Assume suitable data if necessary.*

5. *Preferably, write the answers in sequential order.*

6. *No sheet should be left blank. Any written material after a blank sheet will not be evaluated/checked.*

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SECTION A   **20**

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1. Attempt all parts:-

1-a.   Business intelligence (BI) is a broad category of application programs which includes _____. (CO1)   1

        (a) Decision Support

        (b) Data Mining

        (c) Olap

        (d) None

1-b.   The component of BI architecture that is responsible for storing historical data (CO1)   1

        (a) OLAP engine

        (b) Data warehouse

        (c) ETL tool

        (d) Data mart

1-c.   An API is (CO2)   1

        (a) TRUE

(b) False

(c) Can be true or false

(d) one-to-one marketing

1-d.   The potential challenge of dashboard and scorecard development is (CO2)   1

(a) Files

(b) OLTP

(c) RDBMS

(d) CREATE

1-e.   The components of a Dashboard are (CO3)   1

(a) Vertical

(b) Horizontal

(c) Image Extract

(d) All of the above

1-f.   The identification of a continuous field in Tableau is (CO3)   1

(a)   It is identified by blue pill in the visualization

(b) It is identified by green pill in the visualization

(c) It is preceded by a symbol in the data window

(d)   When added to the visualization, it provides distinct values

1-g.   The hierarchical data in a nested format is shown by (CO4)   1

(a)   Treemaps

(b) Scatter plots

(c) Area charts

(d) Population pyramids

1-h.   The purpose of cleaning up data is (CO4)   1

(a) To make it more visually appealing

(b) To improve performance

(c) To eliminate irrelevant data

(d) All of the above

1-i.   Creates the connection between Power BI cloud-based data and the data source located on-premises_____.(CO5)   1

(a) Report view

(b) Query editor

(c) Power BI service

          (d) Gateway

1-j.	The key feature of Power BI is (CO5)	1

          (a) Ability to create and share dashboards

          (b) Ability to create spreadsheets

          (c) Ability to edit images

          (d) Ability to create logos

2. Attempt all parts:-

2.a.	List some common data sources used in a Business Intelligence solution.(CO1)	2
2.b.	Define mobile business intelligence.(CO2)	2
2.c.	State some ways to improve the performance of Tableau. (CO3)	2
2.d.	Define Sorted list. (CO4)	2
2.e.	State the differences between Tableau and Power BI . (CO5)	2

SECTION B   **30**

3. Answer any <u>five</u> of the following:-

3-a.	Discuss the solutions offered by BI.(CO1)	6
3-b.	Discuss various Business intelligence tools which are using in real life.(CO1)	6
3-c.	Write about business intelligence reporting tool.(CO2)	6
3-d.	Enlighten the problems that business intelligence solve in IT industries.(CO2)	6
3.e.	Categorize dimensions in Tableau. Write the names of Various Dimensions.(CO3)	6
3.f.	Justify your answer with example "Why is it important for data scientists to focus on storytelling and presentation skills".(CO4)	6
3.g.	Discuss the types of relationships in Power BI.(CO5)	6

SECTION C   **50**

4. Answer any <u>one</u> of the following:-

4-a.	State your views on "Will Business Intelligence become more integrated with other technologies in the future".(CO1)	10
4-b.	Differentiate between Big Data and Business Intelligence. (CO2)	10

5. Answer any <u>one</u> of the following:-

5-a.	Justify the terms Risk Probability and Risk Impact. Give suitable examples of both..(CO2)	10
5-b.	Differenciate between Business Intelligence and Business Analytics with an example.(CO2)	10

6. Answer any <u>one</u> of the following:-

6-a.   Write the steps to customize your visualization in Tableau, such as adjusting   10
colors, fonts, and labels.(CO3)

6-b.   Describe about the axis range and visualization Charts with relevant example.(10
CO3)

7. Answer any <u>one</u> of the following:-

7-a.   Differentiate Tableau Reader and Tableau online by defining them in brief. (10
CO4)

7-b.   Describe Virtualization using Detail Panel with an example.(CO4)   10

8. Answer any <u>one</u> of the following:-

8-a.   Elaborate Bookmark in Power BI and why bookmark is used. (CO5)   10

8-b.   Discuss the Power BI suite of products and how they fit into Power BI   10
ecosystem.(CO5)