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.*

SECTION A   20

1. Attempt all parts:-

1-a.   KPI stands for _____ [CO1]   1

(a) Key Performance Indicators

(b) Key Performance Identife

(c) Key Processes Identifer

(d) OBIEE

1-b.   Data Mart is [CO1]   1

(a) A subset of a data warehouse that is focused on a specific business function or department

(b) A tool for analyzing data

(c) A data visualization tool

(d) A technique for managing data quality

1-c.   Dashboard is ? [CO2]   1

(a) Data mart

(b) Data mining

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(c) Business intelligence

(d) DBMS

1-d.   Dashboard enables [CO2]   1

    (a) Better data visualization

    (b) Faster data retrieval and analysis

    (c) More accurate decision making

    (d) All of above

1-e.   Choose from the following which is not a datatype in Tableau [CO3]   1

    (a) Integer

    (b) Character

    (c) Float

    (d) String

1-f.   The file extensions in Tableau are [CO3]   1

    (a) Tableau Packaged Workbook (.twbx)

    (b) Tableau Data Source(.tds)

    (c) Tableau Workbook (.twb)

    (d) All of the above

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 benefits of data visualization are [CO4]   1

    (a) Better analysis

    (b) Identifying patterns

    (c) Exploring business insights

    (d) All of the above

1-i.   Tableau is [CO5]   1

    (a) A spreadsheet program

    (b) A data visualization and business intelligence tool

    (c) A database management system

    (d) An email client

1-j.   Sometimes, referred to as Power BI online_____.[CO5]   1

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(a) Power BI

(b) Power BI Service

(c) Query Editor

(d) Visual Market Place

2. Attempt all parts:-

2.a.	Define business intelligence with example.[CO1]	2
2.b.	Define Scorecard and it's advantages in Business Intelligence and Data Visualization ? [CO2]	2
2.c.	Write the difference between a Heat map and Tree map ? [CO3]	2
2.d.	Define Story in Tableau.[CO4]	2
2.e.		2
	Mention the important features of Power BI.[CO5]	

SECTION B   **30**

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

3-a.	Discuss the importance of effective & timely decision in Business Intelligence ? [CO1]	6
3-b.	Discuss "Will Business Intelligence become more accessible to non-technical users in the future"? [CO1]	6
3-c.	Explain risk management and risk mitigation ? [CO2]	6
3-d.	Differenciate between .twb and .twbx extension.[CO2]	6
3.e.	Distinguish between Treemaps and Heat Maps with an example.[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.	Describe in detail about visualization in Power BI.[CO5]	6

SECTION C   **50**

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

4-a.	Describe Data Visualization in Business Intelligence with suitable example.[CO1]	10
4-b.	Explain how to design a scalable and flexible BI architecture.[CO1]	10

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

5-a.	Describe data exploration. Explain its compatibilty with drill down procedure.[CO2]	10
5-b.	Differentiate between drill down and drill up procedure.[CO2]	10

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

6-a.   Write the procedure installation of Tableau. Explain in detail.[CO3]   10

6-b.   Describe in detail about Tableau Treemap.[CO3]   10

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

7-a.   Explain Tableau File system also explain its types and extension.[CO4]   10

7-b.   Discuss the different Tableau Products and what is the latest version of Tableau   10
        explain in detail.[CO4]

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

8-a.   State the difference between structured and unstructured data.[CO5]   10

8-b.   Describe in detail Power BI Data Gateway and its applications ? [CO5]   10