NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA
(An Autonomous Institute Affiliated to AKTU, Lucknow)
B.Tech
SEM: V - 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. 　　_____ is a category of applications and technologies for presenting and analyzing corporate and external data.(CO1)　　　　　　　　1

　　(a)　MIS

　　(b)　DIS

　　(c)　EIS

　　(d)　CPM

1-c. 　　Dashboard, Scorecard & Reports are the part of_____(CO2)　　1

　　(a)　DBMS

　　(b)　Data Mart

　　(c)　Relational Algebra

　　(d)　Data Visualisation

1-d. 　　NumPy is_____(CO2)　　　　　　　　　　　　　　　　1

　　(a)　BI tool

　　(b)　Map

(c)   Charts

(d)   Python Library

1-e.   Tableau File Extension is_____(CO3)   1

(a)   twbx

(b)   twby

(c)   twbw

(d)   twbz

1-f.   Dimension in TABLEAU is (CO3)   1

(a)   A measure that is computed based on the values of one or more dimensions

(b)   A column in a data source that contains categorical data

(c)   A data type used to represent numerical values

(d)   A type of join used to combine data from multiple tables

1-g.   Data can be visualized using_____(CO4)   1

(a)   Graphs

(b)   Charts

(c)   Maps

(d)   All of the above

1-h.   Data visualization is also an element of the broader _____.(CO4)   1

(a)   Deliver presentation architecture

(b)   Data presentation architecture

(c)   Dataset presentation architecture

(d)   Data process archietecture

1-i.   A customer may purchase 1 or many products. So the relationship between the customer table and the products table will be_____.(CO5)   1

(a)   One to Many

(b)   Many to Many

(c)   Many to One

(d)   One to One

1-j.   Contains transactional data or facts of a business process_____.(CO5)   1

(a)   Fact table

(b)   Query table

(c)   Dimension table

(d)   Power BI table

2. Attempt all parts:-

2.a.   Explain importance of effective & timely decision.(CO1)   2

2.b.   Define Software Development Kit(SDK). (CO2)   2

2.c.   List out Tableau File Extensions.(CO3)   2

| 2.d. | Describe best libraries for data visualization in python.(CO4) | 2 |
| 2.e. | Elaborate Power BI-Embedded.(CO5) | 2 |

SECTION-B   30

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

3-a.	Describe the structure of DSS with diagram.(CO1)	6
3-b.	Explain OLAP.(CO1)	6
3-c.	Explain Risk Mitigation with suitable diagram.(CO2)	6
3-d.	Difference between drill down and drill up procedure.(CO2)	6
3.e.	Describe in detail about Tableau Treemap.(CO3)	6
3.f.	Write the step by step procedure of Sharing visualization in Tableau Online.(CO4)	6
3.g.	List and explain five Data Visualization tools.(CO5)	6

SECTION-C   50

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

| 4-a. | Describe BI architecture in detail.(CO1) | 10 |
| 4-b. | Differentiate between Business Intelligence and Business Analytics in detail with example .(CO1) | 10 |

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

| 5-a. | Describe information gathering procedure of BI with example .(CO2) | 10 |
| 5-b. | Describe the role of BI developer in Business Intelligence.(CO2) | 10 |

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

| 6-a. | Describe the basic charts used in Tableau with diagrams in detail.(CO3) | 10 |
| 6-b. | Describe about TABLEAU products.(CO3) | 10 |

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

| 7-a. | Explain step by step procedure of exporting files in Tableau. (CO4) | 10 |
| 7-b. | Describe the difference between TABLEAU and Power BI in detail. (CO4) | 10 |

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

| 8-a. | Discuss the Power BI ecosystem in detail.(CO5) | 10 |
| 8-b. | Describe about the three views on the Power BI desktop. Explain with suitable diagram.(CO5) | 10 |