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NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

B.Tech

SEM:II CARRY OVER THEORY EXAMINATION - AUGUST 2023

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. | The main purpose of data visualization in BI architecture is ? [CO1] | 1 |
| | (a) To store and manage data | |
| | (b) To analyze data | |
| | (c) To generate reports | |
| | (d) To communicate insights | |
| 1-b. | Choose the characteristic of a data warehouse ? [CO1] | 1 |
| | (a) High concurrency access for transactional processing | |
| | (b) Support for real-time data ingestion | |
| | (c) Focus on current, operational data | |
| | (d) Large volumes of historical data | |
| 1-c. | The primary goal of business intelligence design and development is ? [CO2] | 1 |
| | (a) data mining | |
| | (b) customer managed relationship | |
| | (c) permission marketing | |

- (d) User-level metadata
- 1-d. Mobile Business Intelligence is ? [CO2] 1
- (a) Data visualisation tools
 - (b) BI Tools
 - (c) Data representation tool
 - (d) All of the above
- 1-e. The Join used in Blending ? [CO3] 1
- (a) NONE
 - (b) Right join
 - (c) LEFT join
 - (d) OUTER JOIN
- 1-f. The best Feature of Tableau are except_____ ? [CO3] 1
- (a) Collaboration of data
 - (b) Data Blending
 - (c) Real time analysis
 - (d) Data is more small and fit
- 1-g. Choose which is not a step in the data cleaning process ? [CO4] 1
- (a) Structuring the data
 - (b) Sorting the data
 - (c) Filtering the data
 - (d) Visualizing the data
- 1-h. In Tableau, what does the "Worksheet" option do when customizing a tooltip ? [CO4] 1
- (a) Applies the tooltip to the entire worksheet
 - (b) Applies the tooltip to a specific mark or data point
 - (c) Allows users to add custom text to the tooltip
 - (d) None of the above
- 1-i. Power View is ? [CO5] 1
- (a) A data visualization tool
 - (b) A data modeling tool
 - (c) A data integration and transformation tool
 - (d) A data analysis tool
- 1-j. A ___ is best used when measuring two or more values against one another, 1

since a prominent feature of most chart visualizations is an X-axis and Y-axis ?
[CO5]

- (a) Custom visualizations
- (b) Geospatial visualizations
- (c) Chart visualization
- (d) Text Visualizations

2. Attempt all parts:-

- 2.a. Differentiate between data, information and knowledge ? [CO1] 2
- 2.b. List the different types of business intelligence ? [CO2] 2
- 2.c. Write the difference between a Heat map and Tree map ? [CO3] 2
- 2.d. Define Data Interpreter ? [CO4] 2
- 2.e. Mention the typical users of Power BI ? [CO5] 2

SECTION B

30

3. Answer any five of the following:-

- 3-a. Discuss the importance of effective & timely decision in Business Intelligence ? [CO1] 6
- 3-b. Explain how mobile BI contribute to the overall effectiveness of a BI solution ? [CO1] 6
- 3-c. Explain risk management and risk mitigation ? [CO2] 6
- 3-d. Write real world example of business intelligence Project ? [CO2] 6
- 3.e. Discuss the differences between Tableau and other traditional BI tools ? [CO3] 6
- 3.f. Explain pivot table different from a summary table ? [CO4] 6
- 3.g. Describe how Power Pivot fits into the Power BI ecosystem and its key features ? [CO5] 6

SECTION C

50

4. Answer any one of the following:-

- 4-a. State the most challenging BI component to work with and explain all working process in detail? [CO1] 10
- 4-b. Explain the role of ETL tools in a BI architecture, name an ETL tool also state the functioning and advantages of using ETL tools ? [CO1] 10

5. Answer any one of the following:-

- 5-a. Describe data leakage in the context of data analysis and also explain what problems may arise from it. List the strategies which can be applied to avoid it? 10

[CO2]

- 5-b. Explain the importance of stakeholder involvement in risk management in business intelligence, and how can stakeholders be effectively engaged ? [CO2] 10

6. Answer any one of the following:-

- 6-a. Write the steps to customize and format the charts created in Tableau in detail ? [CO3] 10
- 6-b. Describe Different Types of Tableau also describe how Can You Schedule a Workbook in Tableau after Publishing it in detail ? [CO3] 10

7. Answer any one of the following:-

- 7-a. Describe Virtualization in Business Analytics using Detail Panel with an example ? [CO4] 10
- 7-b. Describe which types of Data Types Tableau support explain each one of them in detail ? [CO4] 10

8. Answer any one of the following:-

- 8-a. Describe in detail Power BI Data Gateway and its applications ? [CO5] 10
- 8-b. Discuss in detail Power BI Desktop and its features, also explain how much essential it is in current business scenario ? [CO5] 10

2022-23 Jan - June