Printed Page:-04 **Subject Code:- BMBA0204**

Roll. No:

NOIDA INSTITUTE OF ENGINEERING AND TECHNOLOGY, GREATER NOIDA

(An Autonomous Institute Affiliated to AKTU, Lucknow)

MBA

SEM: II - THEORY EXAMINATION (2024 - 2025)

Subject: Introduction to Business Analytics

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

1. Attempt all parts:-

1-a. Business analytics is primarily concerned with which type of data?(CO1, K1) 1

(a) Qualitative data

(b) Quantitative data

(c) Primary data

(d) Secondary data

1-b. Select the one which is NOT a key component of business analytics. (CO1, K1) 1

(a) Data collection

(b) Data analysis

(c) Data visualization

(d) Data destruction

1-c. The function used to find the smallest value in a range in Excel is: (CO2, K1) 1

(a) MIN()

(b) MAX()

(c) SUM()

(d) AVERAGE()

1-d. The VLOOKUP function in Excel helps user in doing…... (CO2, K1) 1

(a) Searches for a value in the leftmost column of a table and returns a corresponding value from a specified column

(b) Searches for a value in the top row of a table and returns a corresponding value from

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a specified row

(c) Returns the sum of a range of cells

(d) Returns the average of a range of cells

1-e. The relationship between two variables is considered non-linear if: (CO3, K1) 1

(a) The change in one variable results in a constant change in another variable.

(b) The change in one variable results in a fluctuating change in another variable.

(c) The variables do not change.

(d) Both variables change at the same rate.

1-f. The mode is particularly useful for which type of data?(CO3, K1) 1

(a) Continuous data

(b) Categorical data

(c) Nominal data

(d) Ordinal data

1-g. The main objective of anomaly detection in data mining is. (CO4, K1) 1

(a) To find clusters of similar data points

(b) To identify unusual data records

(c) To predict future values

(d) To reduce the number of features in a dataset

1-h. Out of given options, select the technique which is used to assess the predictive performance of a regression model? (CO4, K1) 1

(a) Clustering

(b) Principal component analysis (PCA)

(c) Cross-validation

(d) Decision trees

1-i. Trends in time series data using graphs can be identified by?(CO5, K1) 1

(a) By observing short-term fluctuations

(b) By observing long-term systematic changes or movements

(c) By observing random noise

(d) By observing seasonal variations

1-j. The model which combines both autoregressive and moving average components? (CO5, K1) 1

(a) AR model

(b) MA model

(c) ARIMA model

(d) Seasonal model

2. Attempt all parts:-

2.a. Define descriptive analytics. (CO1, K1) 2

2.b. State the purpose of the 'AutoSum' button. (CO2, K2) 2

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2.c.	Define skewness. (CO3, K2)	2
2.d.	Explain dependent variable. (CO4, K2)	2
2.e.	Highlight the ways of identifying trend in time series forecasting. (CO5, K3)	2

SECTION-B 30

3. Answer any five of the following:-

3-a.	"Steps in the business analytics process are sequential." Comment. (CO1, K2)	6
3-b.	Describe four data classification measurement scales. (CO1, K2)	6
3-c.	Describe the process to format a cell to display a specific date format. (CO2, K3)	6
3-d.	Elaborate the chart types used for data visualization in MS Excel. (CO2, K2)	6
3.e.	Discuss the advantages and disadvantages of using the mode as a measure of central tendency. (CO3, K2)	6
3.f.	Discuss the ethical considerations in AI development and deployment. (CO4, K4)	6
3.g.	Explain the role of time series forecasting in financial planning. (CO5, K4)	6

SECTION-C 50

4. Answer any one of the following:-

4-a.	Explain the relationship of analytics and business intelligence to the subject of business analytics. (CO1, K2)	10
4-b.	Define data structure. Explain the types of data with examples.(CO1, K2)	10

5. Answer any one of the following:-

5-a.	Describe the steps to create a comprehensive budget spreadsheet in Excel, including setting up categories, using formulas, and generating charts for visual representation. (CO2, K4)	10
5-b.	Discuss the use of advanced functions such as VLOOKUP, HLOOKUP, INDEX, and MATCH in Excel. Include examples demonstrating how to use these functions to search and retrieve data.(CO2, K3)	10

6. Answer any one of the following:-

6-a.	Discuss the limitations of using a single measure of central tendency to describe a dataset. Provide examples to illustrate situations where multiple measures are necessary.(CO3, K2)	10
6-b.	Define the concept of measures of location in statistics and explain their importance in data analysis. Provide examples to illustrate your explanation. (CO3, K2)	10

7. Answer any one of the following:-

7-a.	Discuss how AI is transforming industries like healthcare, finance, and manufacturing, and its implications for the workforce. (CO4, K3)	10
7-b.	Define unsupervised learning. Compare and contrast it with supervised learning, highlighting their advantages and disadvantages. (CO4, K2)	10

8. Answer any one of the following:-

8-a.	Discuss the impact of big data and real-time data on time series forecasting.	10

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Elaborate the opportunities and challenges presented by these advancements.(CO5, K2)

8-b. Provide a detailed example of a business scenario where time series forecasting is crucial. Explain the steps and methods used in the forecasting process. (CO5, K4) 10

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