Printed Page:-   **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 (2023 - 2024)
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.

SECTION-A   20

1. Attempt all parts:-

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

       (a)   Qualitative data

       (b)   Quantitative data

       (c)   Primary data

       (d)   Secondary data

1-b.   One of the primary benefits of using business analytics in organizations is?(CO1)   1

       (a)   Reducing employee turnover

       (b)   Enhancing data security

       (c)   Improving decision-making processes

       (d)   Increasing the number of products offered

1-c.   MS Excel is a _____.(CO2)   1

       (a)   Database Management Software

       (b)   Presentation software

       (c)   Workbook software

       (d)   Spreadsheet software

1-d.   In Excel you can open the Highlight Changes dialog box by choosing Track Changes from the _____ Menu.(CO2)   1

       (a)   Edit

       (b)   Insert

(c) Format

(d) Tools

1-e. The measure of central tendency which is calculated by summing up all values in a dataset and dividing by the total number of values?(CO3) 1

(a) Median

(b) Mode

(c) Mean

(d) Geometric Mean

1-f. The mean is sensitive to which of the following?(CO3) 1

(a) Outliers

(b) Median values

(c) Mode values

(d) Central values

1-g. One of the key assumption of simple linear regression is.(CO4) 1

(a) The relationship between variables is non-linear

(b) The residuals are dependent

(c) The variance of errors is constant

(d) The independent variable is categorical

1-h. In the regression equation $Y=\beta 0+\beta 1X+\epsilon$, what does $\beta 1$ represent?(CO4) 1

(a) The y-intercept

(b) The error term

(c) The slope of the regression line

(d) The predicted value of Y

1-i. The term "trend" in time series analysis refers to?(CO5) 1

(a) Short-term fluctuations in data

(b) Long-term systematic changes or movements in data

(c) Random noise in data

(d) Seasonal variations in data

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

2. Attempt all parts:-

2.a. Define business analytics.(CO1) 2

2.b. Differentiate between a row and a column.(CO2) 2

2.c. Define range as a measure of variability.(CO3) 2

2.d.	Define artificial intelligence.(CO4)	2
2.e.	State the applications of time series forecasting.(CO5)	2

SECTION-B 30

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

3-a.	Elucidate the applications of business analytics.(CO1)	6
3-b.	Differentiate between business analytics and business intelligence.(CO1)	6
3-c.	Differentiate between relative and absolute cell references in Excel. Provide an example of each.(CO2)	6
3-d.	Discuss the process of creating a chart in Excel. Mention the different types of charts available in MS Excel.(CO2)	6
3-e.	Define variance. Explain the process of calculating variance for a dataset.(CO3)	6
3-f.	Elaborate on the steps involved in data mining process.(CO4)	6
3-g.	Discuss the use of moving average models in time series forecasting.(CO5)	6

SECTION-C 50

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

4-a.	Explain the classification of analytics with the help of relevant examples.(CO1)	10
4-b.	Explain the concept of Data-driven decision making. Outline the benefits of data driven decision making.(CO1)	10

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

5-a.	Describe the steps to apply conditional formatting to a dataset in Excel. Give an example where this might be useful.(CO2)	10
5-b.	Define pivot tables and describe their benefits in data analysis. Provide an example scenario where a pivot table would be useful.(CO2)	10

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

6-a.	Describe the process of calculating the mean, median, and mode for a grouped frequency distribution. Provide an example with a detailed calculation.(CO3)	10
6-b.	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)	10

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

7-a.	Discuss the interrelationship between machine learning, data mining, and AI, and their combined impact on business decision-making.(CO4)	10
7-b.	Describe the role of AI in the future of work and its impact on various industries.(CO4)	10

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

8-a.	Discuss the impact of big data and real-time data on time series forecasting. Elaborate the opportunities and challenges presented by these advancements.(CO5)	10
8-b.	Discuss the use of time series forecasting in financial markets. Explain how can	10

businesses leverage these forecasts for strategic planning?(CO5)

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