

Total No. of Questions : 5]

PE-5990

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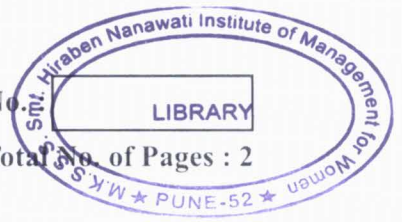
S.Y.M.B.A.

BA 615 MJ : BIG DATA ANALYTICS

(2024 Pattern) (Semester - III)

SEAT No.

[Total No. of Pages : 2



Time : 2½ Hours]

[Max. Marks : 50

Instructions to the candidates:

- 1) All questions are compulsory.
- 2) All questions carry equal marks.

Q1) Answer the following questions (any five) :

[5 × 2 = 10]

- a) Define Big Data.
- b) Explain Velocity as a characteristics of Big Data.
- c) Define structured and unstructured data, giving one example of each.
- d) What is a data lake?
- e) Define predictive analytics.
- f) What is HDFS (Hadoop Distributed File System)?
- g) What is meant by customer churn prediction?
- h) Define GDPR (General Data Protection Regulation).

Q2) Answer the following any 2 :

[2 × 5 = 10]

- a) Explain the importance of data quality and data governance in ensuring effective and reliable business decision-making.
- b) Explain how data is stored and managed using data warehouses and data lakes, highlighting their key features and uses.
- c) Explain the role of Big Data in enabling digital transformation and in building a data-driven organizational culture.

P.T.O.

Q3) Answer the following (any one) : **[1 × 10 = 10]**

- a) Explain Big Data architecture and frameworks. Give an overview of the Hadoop ecosystem, including HDFS, MapReduce, and Hive.
- b) Analyze the steps involved in data preprocessing, illustrating how cleaning, integration, and transformation improve data quality for analytics.

Q4) Answer the following (any one) : **[1 × 10 = 10]**

- a) Analyze the use of analytical models such as regression, clustering, and classification in customer analytics and marketing analytics.
- b) Explain how selecting appropriate Big Data technologies based on business requirements, along with effective collaboration between business managers and technical teams, contributes to the successful implementation of Big Data solutions.

Q5) Answer the following (any one) : **[1 × 10 = 10]**

- a) A large telecom service provider in India is experiencing a growing problem of customer churn, particularly among digitally active customers. Many customers are switching to competitors due to better service quality, personalized offers, and faster complaint resolution.

The company collects large volumes of data such as call records, internet usage details, billing and payment information, customer complaints, mobile app usage, and social media feedback. Management plans to use Big Data Analytics to predict customer churn, improve customer experience, and make data-driven decisions, while also ensuring data privacy and ethical use of customer information.

Questions

- Identify the major data sources and Big Data applications used for predicting customer churn in this case.
 - Explain how predictive analytics can help reduce customer churn and improve customer experience.
- b) Evaluate the role of predictive analytics in risk and fraud detection and explain how AI, machine learning, and real-time analytics help organizations build a data-driven business strategy.

