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Total Number of Pages: 02

Course: MBA
Sub_Code: MBPC1008

2nd Semester Regular Examination: 2024-25

SUBJECT: Business Analytics

BRANCH(S): BA, FM, FM&HRM, GM, HCHM, HRM, IB, LSCM, MBA, MBA (A & M), MM, RM

Time: 3 Hours

Max Marks: 100

Q.Code: S426

Answer Question No.1 (Part-I) which is compulsory, any eight from Part-II and any two from Part-III.

The figures in the right hand margin indicate marks.

Part-I

Q1 Answer the following questions:

(2 x 10)

- What is descriptive analytics and why it is required?
- Define Big data analytics. Name two technologies commonly used for Big data analytics.
- What are the advantages and disadvantages of using artificial intelligence?
- What is Prescriptive Analytics and how is it different from Predictive Analytics?
- What are the advantages and challenges of using Big data?
- How does Business Analytics improve customer experience?
- What is the purpose of the plot () function in R, and how can it be used to create a simple line graph?
- Define Customer Segmentation and its importance in personalized marketing.
- Explain Churn Analysis and its importance in retaining customers.
- What is the significance of real time analytics in marketing?

Part-II

Q2 Only Focused-Short Answer Type Questions- (Answer Any Eight out of Twelve)

(6 x 8)

- What do you understand by data cleaning? How poor data quality can impact business decision making.
- Calculate the mean, median, and mode for the following dataset of monthly sales (in ₹1000s): [12, 15, 18, 22, 15, 20, 15, 10, 16, 20]
- How can organizations shift from a traditional business model to a Data Driven Business Model?
- How does the consumer behaviour help you in planning for marketing analytics for a business?
- What is meant by time series? Differentiate between auto correlation and auto regression.
- List and explain three key benefits organisations can gain from adopting Big data analytics.
- Explain the role of Supply Chain Analytics in optimizing logistics and inventory management.
- Describe the RFM (Recency, Frequency, and Monetary) model for customer segmentation.

- i) Briefly describe the lifecycle of Business Analytics projects, from problem identification to implementation.
- j) How Customer Segmentation is applied in the financial services industry? What do you mean by life stage segmentation?
- k) Discuss the role of R programming in data exploration and analysis. Give an example.
- l) What is the significance of Artificial Intelligence in Business analytics? Mention one real world example of AI implementation in business analytics.

Part-III

Only Long Answer Type Questions (Answer Any Two out of Four)

(16 x 2)

- Q3** An E commerce company wants to improve customer retention by leveraging analytics. (16)
- i. How can Descriptive Analytics help the company understand past customer behaviors?
 - ii. How can Predictive Analytics be used to forecast customer churn?
 - iii. What Prescriptive Analytics strategies can the company implement to reduce churn and increase engagement?
- Q4** What is Data Warehousing, and how does it support Business Analytics? Explain with an example. Compare traditional Data Warehouses with modern cloud-based Data Lakes. (16)
- Q5** Mention the significance of regression analysis for financial analyst. NPV and IRR are the techniques to evaluate the projects. As a financial analyst what is your choice between NPV and IRR and why? (16)
- Q6** Discuss the ethical considerations in business analytics, focusing on privacy, fairness, and accountability. How does it help in building a sustainable analytics strategy? (16)