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Reg. No. | | | | | | | | |

IV Semester M.Com. Degree Examination, July/August - 2026

COMMERCE

Analytics in Commerce and Business

(CBCS Scheme)

Paper : 4.1

Time : 3 Hours Maximum Marks : 70

SECTION - A

Answer any Seven questions out of Ten. Each question carries Two marks.(7×2=14)

1. a) Identify two limitations of analytics in managerial decision-making.
   b) State two situations where analytics may not add value.
   c) Distinguish between risk profiling and risk assessment.
   d) State any two key variables in financial forecasting models.
   e) Differentiate between descriptive and predictive marketing analytics.
   f) Define marketing mix optimization.
   g) State two metrics used in employee performance evaluation.
   h) Identify key components of recruitment analytics.
   i) Define propensity modelling.
   j) State two drivers of customer churn.

SECTION - B

Answer any Four questions out of Six. Each question carries Five marks. (4×5=20)

2. Analyse the SWOC of analytics in a dynamic business environment.
3. Enumerate the role of analytics in fraud detection and prevention.
4. Evaluate the role of social media analytics in marketing strategy.
5. Discuss how work force analytics supports HR decision - making.
6. Illustrate cross - sell and upsell strategies using analytics.
7. Evaluate different techniques used in financial forecasting.

SECTION - C

Answer any Two questions out of Four. Each question carries Twelve marks. (2×12=24)

8. Evaluate the effectiveness of various analytics tools in business decision-making.
9. Examine the application of analytics in portfolio management and stress testing.
10. Analyse the use of analytics in talent management and workforce planning
11. Explain the role of analytics in customer lifetime value optimization.

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SECTION - D

Answer the following question. This question carries Twelve marks. (1×12=12)

Case study : BigBasket and Analytics - Driven Transformation.

12. BigBasket is one of India's leading online grocery platforms, serving customers across multiple cities with a wide range of products, including fresh produce and daily essentials. With the rapid growth of the e-commerce sector and increasing competition from players like Blinkit and Swiggy Instamart, the company has been under pressure to improve operational efficiency and enhance customer experience.

Over time, BigBasket accumulated large volumes of customer and transaction data through its digital platforms. However, this data was not fully utilised for decision making. The company faced several challenges, such as demand fluctuations across cities, stock outs of fast-moving items, and excess inventory in warehouses, declining customer retention, and delivery-related complaints.

To address these issues, BigBasket began adopting analytics-driven practices. In marketing, customer data was analysed using clustering techniques to segment users based on purchase behaviour. This enabled targeted promotions, replacing broad discounting strategies and improving customer engagement.

In finance and operations, demand forecasting models based on historical and seasonal data were introduced to improve inventory planning and reduce wastage. The company also adopted data-driven pricing strategies to remain competitive while maintaining profitability.

From a customer relationship perspective, analytics was used to estimate customer lifetime value and predict churn. These insights helped the company design personalised offers and recommendations, leading to better retention.

Internally, HR analytics was applied to improve workforce management. By analysing delivery staff performance, schedules, and attrition trends, the company revised incentive systems and optimised shift planning, resulting in higher productivity and reduced turnover.

Despite these improvements, challenges remain in integrating data across functions, maintaining data quality, and ensuring compliance with data privacy regulations. The company is now exploring advanced solutions such as artificial intelligence and real-time analytics to strengthen its capabilities further.

Questions :

a) Briefly explain the role of integrated analytics in improving the operational performance of BigBasket. **(4)**

b) Design a comprehensive analytics framework that BigBasket can adopt to address its current challenges and enhance decision - making. **(4)**

c) Explain how BigBasket can overcome challenges related to data integration, data quality, and data privacy. **(4)**
