Reg. No. : ☐☐☐☐☐☐☐☐☐☐☐☐

Question Paper Code : 90045

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2022.

Fifth Semester

Artificial Intelligence and Data Science

AD 8551 — BUSINESS ANALYTICS

(Regulations 2017)

Time : Three hours   Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. State null and alternative hypothesis

2. What are the characteristics of Big Data?

3. Differentiate Data warehouse and data mart.

4. Contrast OLAP and OLTP.

5. What is the purpose of the Delphi method under judgmental forecasting approach?

6. Comment on Multicollinearity phenomenon.

7. Define OTD in supply chain network.

8. Identify an appropriate type of supply chain for Mobile telephony services.

9. Distinguish between target market and Strategic market definition.

10. List down the five major characteristics of good mission statements.

PART B — (5 × 13 = 65 marks)

11. (a) (i) Explain about analytics life cycle with diagram (7)

    (ii) Write short notes on two sample hypothesis tests. (6)

Or

    (b) Explain about data modelling and distribution fitting in detail. (13)

12. (a) Explain the various schemas mid OLAP operations for Multidimensional Data Model in data warehouses. (13)

Or

    (b) Explain the process of decision making using the following Utility functions: (13)

    (i) Risk-Average Utility Function

    (ii) Exponential Utility function

13. (a) Explain about Simple Linear Regression and Multiple Linear Regression in detail. (13)

Or

    (b) Explain in detail about Moving Average Model in Forecasting Models for Stationary Time Series. (13)

14. (a) (i) Write short notes on Distribution network design and Channel management in supply chain network. (9)

    (ii) Brief about Third-Party Logistics in Web-Based Firms. (4)

Or

    (b) (i) Explain the several factors on which supply chain structure affects performance. (8)

    (ii) Brief about the Bullwhip effect in supply chain. (5)

15. (a) Explain about stages involved in business unit strategic-planning process. (13)

Or

    (b) (i) Explain about the three factors affecting Consumer behavior: Cultural, Social and Personal. (6)

    (ii) Explain in detail about the Five-Stage Model of the Consumer Buying Process. (7)

PART C — (1 × 15 = 15 marks)

16. (a) Investigate and find out the type of analytics for the following and explain. (15)

    (i) Supply chain and Logistics Management

    (ii) Marketing and Sales

Or

    (b) Consider automotive industry. Examine the scenario and draw and analyze the following supply chain components. (15)

    (i) Inbound supply chain

    (ii) Outbound supply chain

    (iii) In-house supply chain

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