



INDIAN INSTITUTE OF MATERIALS MANAGEMENT
Post Graduate Diploma in Materials Management– 2years
Post Graduate Diploma in Logistics & SCM
Paper 5 (Enrollment code : PGMM, PGSM)
Business Analytics

Dec 2025

Date: 19.12.2025
Time: 2.00 p.m to 5.00 p.m

Max. Marks 70
Duration 3 hours

Instructions

1. Part A is compulsory. Each sub question carries one mark.
2. In Part B answer any 3 questions. Each question carries 10marks
3. Part C is a case study with sub questions and it is compulsory.

Total marks-20
Total marks-30
Total marks-20

PART A

(Total 20 marks)

Q.1. Fill in the blanks.

[5 marks]

- a. _____ signifies an element or statement of procedures without being related to other things.
- b. The qualitative data that can be grouped into categories is known as _____ data.
- c. _____ is a technique that makes it possible for organizations to dynamically regulate the use of computing resources and access them as per the need while paying only for those resources that are used.
- d. In _____ clients and database server both are based on RDBMS.
- e. _____ analytics involves summarizing and presenting historical data to gain insights into past market trends.

Q. 2. State True or False

[5 marks]

- a. CNN is a specialized type of deep learning algorithm mainly designed for tasks that necessitate object recognition, including image classification, detection, and segmentation
- b. Measures of central tendency are the statistical techniques to show the association between a pair of variables
- c. ROLAP uses array based multidimensional storage engines for multidimensional views of data
- d. EIS provides critical information such as market trends to the executives and top level management for making strategic decisions
- e. Decision Trees are the data mining technique that helps us determine which variables have an impact and how they relate to one another

Q. 3 Tick the correct option:

[5 marks]

- a. Unstructured data can come from which of the following?
i. Facebook ii. Twitter iii. Presentations iv. All of these are correct.
- b. Which type of knowledge and its offsprings can be kept in a certain media format e.g. encyclopaedia and textbooks?
i. Explicit ii. Implicit iii. Tacit iv. None of these
- c. What should the BA begin analysing stakeholders to identify those who could potentially influence the deliverables of the project? choose the best answer
i. The mission statement of the business area and its organizational charts
ii. A description of the type of solution components that will be delivered
iii. A description of the approach that will be taken to implement a new set of capabilities.
iv. A description of the methodology that will be used to deliver the new set of capabilities
- d. A Data warehouse is which of the following?
i. Can be updated by end users ii. Contains numerous naming conventions and formats
iii. Organized around important subject areas. iv. Contains only current data

- e. _____ answers the question “What has happened?”
i. *Descriptive analytics* ii. *Predictive analytics* iii. *Prescriptive analytics* iv. *None*

Q. 4. Expand the following: [5 marks]

- a. AHP b. CIF c. DSA d. RNN e. SDLC

PART B [30 marks]

(Answer any three. Each question carries 10 marks)

- Q.5.** Explain the importance of DBMS to manage the data. Also explain the different components of DBMS. [10 marks]
- Q.6** Explain the relationship between Business Intelligence and Business Analytics. Also explain the emerging trends in Business Intelligence and Business Analytics [10 marks]
- Q.7** Explain different types of decisions. Explain classification trees and their characteristics. [10 marks]
- Q.8.** What do you understand by Data warehouse. Explain its architecture. Also explain the bottom -p and top down design for data warehouse. [10 marks]
- Q.9** Explain the difference between descriptive, predictive and prescriptive analytics. Give suitable examples and the tools used for these analytics. [10 marks]

PART C [20 marks]

Q.10 Case Study (compulsory)

Today’s customers are more empowered and connected than ever before. Using channels like mobile, social media and e-commerce, customers can access just about any kind of information in seconds. This informs what they should buy, from where and at what price. Based on the information available to them, customers make buying decisions and purchases whenever and wherever it’s convenient for them.

At the same time, customers expect more. For example, they expect companies to provide consistent information and seamless experiences across channels that reflect their history, preferences and interests. More than ever, the quality of the customer experience drives sales and customer retention. Given these trends, marketers need to continuously adapt how they understand and connect with customers. This requires having data-driven insights that can help you understand each customer’s journey across channels.

But consumers today interact with companies through multiple interaction points — mobile, social media, stores, e-commerce sites and more. This dramatically increases the complexity and variety of data types you have to aggregate and analyze. With big data engineering technologies, you can bring together all of your structured and unstructured data into application like Hadoop and analyze all of it as a single data set, regardless of data type. The analytical results can reveal totally new patterns and insights you never knew existed — and aren’t even conceivable with traditional analytics. Data engineering is capable of correlating customer purchase histories and profile information, as well as behavior on social media sites. Data-driven customer insights are critical to tackling challenges like improving customer conversion rates, personalizing campaigns to increase revenue, predicting and avoiding customer churn, and lowering customer acquisition costs.

- a) What is really happening across every step in the customer journey? Also explain how data driven analysis can help to lower the customer churn?
- b) Explain the role descriptive and predictive analytics to design personalized campaigns to increase revenue.

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