INDIAN INSTITUTE OF MATERIALS MANAGEMENT
Post Graduate Diploma in Materials Management– 2years
Post Graduate Diploma in Logistics & SCM
Paper 21(Enrollment code : CPM, CPS)
Business Analytics

June 2023

Date:	**22.06.2023**		**Max. Marks 70**
Time:	**2.00 pm to 5.00 pm**		**Duration 3 hours**

Instructions

1.	Part A is compulsory. Each sub question carries one mark.	**Total marks-20**	
2.	In Part B answer any 3 questions. Each question carries 10marks	**Total marks-30**	
3.	Part C is a case study with sub questions and it is compulsory.	**Total marks-20**	

_____

PART A   (20 marks)

1. Fill in the blanks.   **[5 marks]**

    a. _____ is defined by the highest concentration of frequencies of a variable.

    b. _____ systems are based on relational data model

    c. In a Table, the INTERSECTION of a row and column is called a ___

    d. _____ 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

    e. _____ system is customer oriented and is used for transactions and query processing by clerks, clients and IT professionals

2. State True or False   **[5 marks]**

    a. Venn diagram is used to represent logical relations between finite collections of sets.

    b. Normal distribution is applied for irregular random variables.

    c. The definition of DSS was given by Eric Carlson

    d. The pivot operation is also known as Rotate.

    e. The Excel STDEVA function returns a normalized value (z-score) based on the mean and standard deviation.

3. Tick the correct option: **[5 marks]**

    a. Which of the following component is not part of ER diagrams?

        i. Ellipse

        ii. Double rectangle

        iii. Double Lines

        iv. Hexagons

    b. This technique supplements the past strategy in helping the administration to extract the information as required

        i. Drill down reporting

        ii. Dashboard detailing

        iii. Impromptu detailing

        iv. Logs reporting

    c. A statement made about a population for testing purpose is called?

        i. Statistics

        ii. Level of significance

        iii. Test-Statistic

        iv. Hypothesis

    d. …... is a subset of …...

        i. BI, BA

        ii. BA, AI

      iii.   BA, BI

      iv.   AI, BI

  e. Which is not social media network?

      i.   Facebook

      ii.   Wikipedia

      iii.   Twitter

      iv.   LinkedIn

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

  a. MTBF

  b. EIS

  c. OLTP

  d. BI

  e. CIF

PART B   (30 marks)

(Answer any three. Each question carries 10 marks)

5. What do you understand by structured, unstructured and semi-structured data. Explain with suitable example. Differentiate between structured and semi-structured data.

6. What do you understand by descriptive, predictive and prescriptive analysis? Explain with suitable examples.

7. Explain the difference between population, sample and sampling distribution. Explain type 1 and type 2 error in hypothesis testing

8. Explain DSS. What are the different techniques of decision making.

9. What is the difference between OLAP and OLTP. Explain the slicing and dicing operations of OLAP

PART C   `   (20 marks)

10. Case Study (compulsory)

Consumers are crucial to the success of multinational food and beverage company PepsiCo. The company supplies retailers in more than 200 countries worldwide, serving a billion customers every day. To ensure the right quantities and types of products are available to consumers in certain locations, PepsiCo uses big data and predictive analytics.

PepsiCo created a cloud-based data and analytics platform called Pep Worx to make more informed decisions regarding product merchandising. With Pep Worx, the company identifies shoppers in the United States who are likely to be highly interested in a specific PepsiCo brand or product.

For example, Pep Worx enabled PepsiCo to distinguish 24 million households from its dataset of 110 million US households that would be most likely to be interested in Quaker Overnight Oats. The company then identified specific retailers that these households might shop at and targeted their unique audiences. Ultimately, these customers drove 80 percent of the product's sales growth in its first 12 months after launch.

Questions:

  a. Why the role of business analytics is relevant in the PepsiCo Company?

  b. How predictive analytics will help to increase the consumer base of the PepsiCo Company?

****