Enrollment No./Seat No.:

GUJARAT TECHNOLOGICAL UNIVERSITY

MBA - SEMESTER - I EXAMINATION - SUMMER 2025

Subject Code: MB01092031 **Date: 03-06-2025**

Subject Name: Information Systems and Analytics for Management Decision Making

Time: 02:30 PM TO 05:30 PM **Total Marks: 70**

Instructions

1. Attempt all questions.

2. Make suitable assumptions wherever necessary.

3. Figures to the right indicate full marks.

4. USE of SIMPLE calculators AND non-programmable scientific calculators are permitted.

			Marks
Q.1			**14**
	(a)	What is difference between Raw Data & Information?	
	(b)	List the four types of Hierarchical Information Systems.	
	(c)	List different types of Business Analytics.	
	(d)	List four KPIs of Financial Performance	
	(e)	Name different types of OLAP Operations	
	(f)	Define Sentiment Analysis.	
	(g)	What is a Dashboard?	
Q.2	**(a)**	Explain the key differences between Strategic, Tactical and Operational Decisions.	**07**
	(b)	Explain the changing External & Internal business environment factors and how IT / IS has helped to cope with these changes.	**07**
		OR	
	(b)	Explain the Key Attributes / Characteristics of Information.	**07**
Q.3	**(a)**	Explain the major differences between OLTP and OLAP systems.	**07**
	(b)	What are the Benefits of ERP and what are the challenges faced in implementation of ERP?	**07**
		OR	
	(a)	What are key functions of CRM System?	**07**
	(b)	Which types of charts and graphs are used in Visual Analytics?	**07**
Q.4	**(a)**	Explain Data Mining process.	**07**
	(b)	What are the key metrics you will like to measure / monitor for your company's web analytics. (Hint: No. of Visitors, No. of Bounce backs, etc.)	**07**
		OR	
	(a)	What is a Management Information System (MIS), and how does it support managerial decision-making?	**07**

(b) Explain the different uses of text analytics. (Hint: Summarization, Classification, etc.) **07**

Q.5 Smart Grocery is a fast-growing mid-sized grocery retail chain with 120 stores across urban and semi-urban areas in South Asia. The company has recently launched an ambitious digital transformation initiative to become a data-driven organization. They have invested in a centralized MIS, cloud-based Supply Chain Management (SCM) software, and an integrated marketing analytics platform.

The goal is to streamline operations, reduce waste in the supply chain, improve demand forecasting, and enhance personalized marketing strategies. The CIO has overseen the implementation of an OLAP-based data warehouse, enabling multi-dimensional data analysis. Additionally, a real-time dashboard displaying KPIs across departments has been rolled out for executive decision-making.

To stay competitive, Smart Grocery uses loyalty cards and mobile app data to analyse customer behaviour. Marketing analytics is leveraged to segment customers, measure campaign performance, and improve targeting. The SCM system is used to track inventory levels, supplier performance, and logistics efficiency.

However, the company faces challenges in aligning departmental KPIs, ensuring dashboard usability, and extracting actionable insights from massive data streams. Recently, a pilot visualization project using Tableau was initiated to make data storytelling more intuitive for regional managers.

(a) Explain how Smart Grocery can use OLAP and MIS to enhance decision-making at different managerial levels. Illustrate with examples from operations, finance, and marketing. **07**

(b) Which KPIs should be included in Smart Grocery Operations Analytics **07**

OR

(a) Explain how the cloud based SCM can help Smart Grocery **07**

(b) Explain how Smart Grocery can use Marketing Analytics for their chain of business **07**

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Seat No. /Enrollment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

MBA-SEMESTER-I-EXAMINATION-WINTER-2024

Subject Code: MB01092031 Date: 17/01/2025

Subject Name: Information Systems and Analytics for Management Decision Making

Time: 10:30 AM TO 01:30 PM Total Marks: 70

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Use of simple calculators and non-programmable scientific calculators are permitted.**

Q. No.		Question Text and Description	Marks
Q.1		Definitions / terms / explanations / short questions based on concepts of theory/practical (a) Snowflacke schema (b) OLTP (c) Data and Information (d) Text mining (e) Data visualization (f) Predictive Business analytics (g) KPI	**14**
Q.2	**(a)**	Discuss the components of IS in details.	**07**
	(b)	Explain different type of decision with suitable example.	**07**
		OR	
	(b)	Explain how Information system supports business organization.	**07**
Q.3	**(a)**	Discuss in details ERP.	**07**
	(b)	What is a Transaction Processing System? How does TPS work in MIS?	**07**
		OR	
Q.3	**(a)**	What are the major differences in Business Intelligence and Business Analytics?	**07**
	(b)	Explain different types of OLAP operations like Roll – up, Drill Down, Slicing, and Dicing with proper examples.	**07**
Q.4	**(a)**	What are key performance indicators of a successful business unit?	**07**
	(b)	How can Social Media analytics be useful to business?	**07**
		OR	

Q.4 **(a)** What is text mining? Discuss applications of text mining. **07**

(b) Discuss HR analytics with suitable example. **07**

CASE STUDY:

A waiter takes an order at a table, and then enters it online via one of the six terminals located in the restaurant dining room. The order is routed to a printer in the appropriate preparation area: the cold item printer if it is a *salad*, the hot-item printer if it is a hot *sandwich* or the bar printer if it is a *drink*. A customer's meal check-listing (bill) the items ordered and the respective prices are automatically generated. This ordering system eliminates the old three-carbon-copy guest check system as well as any problems caused by a waiter's handwriting. When the kitchen runs out of a food item, the cooks send out an 'out of stock' message, which will be displayed on the dining room terminals when waiters try to order that item. This gives the waiters faster feedback, enabling them to give better service to the customers. Other system features aid management in the planning and control of their restaurant business.

The system provides up-to-the-minute information on the food items ordered and breaks out percentages showing sales of each item versus total sales. This helps management plan menus according to customers' tastes. The system also compares the weekly sales totals versus food costs, allowing planning for tighter cost controls. In addition, whenever an order is voided, the reasons for the void are keyed in. This may help later in management decisions, especially if the voids consistently related to food or service. Acceptance of the system by the users is exceptionally high since the waiters and waitresses were involved in the selection and design process. All potential users were asked to give their impressions and ideas about the various systems available before one was chosen.

(a) In the light of the system, describe the decisions to be made in the area of managerial control and operational control? **07**

(b) What information would you require to make decisions in the area of strategic planning? **07**

OR

Q.5 (a) What would make the system a more complete MIS rather than just doing transaction process? **07**

(b) Explain the probable effects that making the system more formal would have on the customers and the management. **07**

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