Reg. No.															

Question Paper Code	14144

MBA - DEGREE EXAMINATIONS, NOV / DEC 2025

Second Semester

Master of Business Administration

20MBT207 - INFORMATION SYSTEMS AND BUSINESS ANALYTICS

Regulations - 2020

Duration: 3 Hours | Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

		Marks	K – Level	CO
1.	List the characteristics of Information.	2	K1	CO1
2.	Define Management Information System.	2	K1	CO1
3.	What is Data Integrity?	2	K1	CO2
4.	Name the ACID properties.	2	K1	CO2
5.	Recall Business Intelligence.	2	K1	CO3
6.	Infer Data Mining.	2	K2	CO3
7.	Relate the term 'Model' in Machine Learning.	2	K2	CO4
8.	Interpret the applications of Prescriptive Analytics.	2	K2	CO4
9.	Rephrase 'Visual Analysis'.	2	K2	CO5
10.	Compare Dashboard and Score Card.	2	K2	CO5

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

			Marks	K – Level	CO
11.	a)	Compare and Contrast Data, Information and Knowledge with suitable examples.	13	K2	CO1
		OR			
	b)	Illustrate IS pyramid and describe its components.	13	K2	CO1
12.	a)	Summarize the types of DBMS architecture.	13	K2	CO2
		OR			
	b)	Outline the types of Data Warehouse and highlight its advantages and disadvantages.	13	K2	CO2
13.	a)	Identify the steps in Business Analytics.	13	K3	CO3
		OR			
	b)	Classify the types of data with examples.	13	K3	CO3
14.	a)	Analyze the steps in Machine Learning.	13	K4	CO4
		OR			
	b)	Examine the process of Predictive Analytics.	13	K4	CO4
15.	a)	Assess the phases in Data Visualization Cycle.	13	K5	CO5

OR

b) Evaluate the steps in Data Exploration. *13 K5 CO5*

PART - C (1× 15 = 15 Marks)
(Compulsory)

16. a) Restaurant Ordering and Management Information System *15 K5 CO5*

A waiter takes an order at a table and then enters it online via one of the six terminals located in the restaurant's dining area. The order is routed to a printer in the appropriate preparation area: the cold-item printer for salads, the hot-item printer for hot sandwiches, or the bar printer for drinks. A customer's meal check (bill) listing the ordered items and prices is automatically generated.

This computerized ordering system eliminates the old three-carbon-copy guest check system and problems arising from illegible handwriting. When the kitchen runs out of a food item, the cooks send an 'out of stock' message, which appears on the terminals, enabling waiters to inform customers immediately and suggest alternatives.

The system also supports management functions by providing real-time data on sales trends, food consumption, and voided transactions. It automatically calculates percentages showing sales of each item versus total sales, aiding menu planning according to customer preferences. Weekly sales totals are compared with food costs, helping management control expenses and improve profitability. Additionally, voided order data, along with keyed-in reasons, assist in evaluating service quality, staff performance, and operational inefficiencies.

User acceptance has been exceptionally high, as waiters and waitresses were involved in system selection and design. Their participation ensured that the chosen system aligned with actual restaurant workflows, enhancing both efficiency and user satisfaction. The system has not only improved operational speed but also strengthened communication between the kitchen and the dining area.

Moreover, with future integration of predictive analytics, inventory forecasting, mobile payment systems, and customer feedback tracking, the system can evolve into a full-fledged decision-support and performance management tool. It can provide real-time dashboards, trend analysis, and alerts to support proactive decision-making, enhance customer retention, reduce wastage, and ensure sustainable restaurant operations through continuous data-driven improvement.

Questions:

1. Recommend suitable decisions to be made at the levels of strategic planning, managerial control, and operational control. Justify the types of information that would support these decisions effectively.
2. Determine what would make the system a more complete IS rather than just doing transaction processing?