

Trim: Sep – Nov 24		
Maximum Marks: 50	Examination: ETE Exam	Date: 16-01-25 Duration: 03 hrs
Programme code: 06 Programme: MBA HCM	Class: SY	Semester/Trimester: V
College: K. J. Somaiya Institute of Management	Name of the department/Section/Center: Data Science and Technology	
Course Code: 117P06C511	Name of the Course: Business Intelligence	
Instructions: Solve any five		

Question No.		Max. Marks																						
Q. 1	<p>You are on the Datawarehouse project of AuctionsPlus.com, an Internet auction company selling upscale works of art. Your responsibility is to gather re - quirements for sales analysis. Find out the key metrics, business dimensions, hierarchies, and categories. Draw the Star Schema for the same.</p>	10 Marks																						
Q. 2	<p>A database has ten transactions. Let minimum support = 30%</p> <p>i) Find all frequent Itemsets using the Apriori Algorithm</p> <p>ii) List strong association rules.</p> <table><tr><th>Transaction_Id</th><th>Items</th></tr><tr><td>01</td><td>A, B, C, D</td></tr><tr><td>02</td><td>A, B, C, D, E, G</td></tr><tr><td>03</td><td>A, C, G, H, K</td></tr><tr><td>04</td><td>B,C, D, E, K</td></tr><tr><td>05</td><td>D, E, F, H, L</td></tr><tr><td>06</td><td>A, B, C, D, L</td></tr><tr><td>07</td><td>B, I, E, K, L</td></tr><tr><td>08</td><td>A, B, D, E, K</td></tr><tr><td>09</td><td>A, E, F, H, L</td></tr><tr><td>010</td><td>B, C, D, F</td></tr></table>	Transaction_Id	Items	01	A, B, C, D	02	A, B, C, D, E, G	03	A, C, G, H, K	04	B,C, D, E, K	05	D, E, F, H, L	06	A, B, C, D, L	07	B, I, E, K, L	08	A, B, D, E, K	09	A, E, F, H, L	010	B, C, D, F	10 Marks
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Q. 3	Suppose that a data warehouse consists of three dimensions: time, doctor, and patient, and two measures: count and charge, where charge is the fee that a doctor charges a patient for a visit. Draw a schema diagram for the above data warehouse using the Snowflake model. And show some hierarchies for a few dimensions. List down a few reports for the schema.	10 Marks
Q. 4	Write Short Notes On (Any Two) 1. Data warehouse architecture 2. Dependent and independent data marts 3. MOLAP Vs ROLAP	10 Marks
Q. 5	Explain the Star Schema and Snowflake Schema with an example	10 Marks
Q. 6	Describe Data preprocessing in detail	10 Marks