

B. Engg. (Computer Science and Engineering)-7<sup>th</sup> Semester  
(Elective-II)

## CS-704C: Business Intelligence

Time allowed: 3 Hours

Max. Marks: 50

**NOTE:** Attempt five questions in all, including Q. No. 1 which is compulsory and selecting atleast two questions from each Section-A & B.

- \*\_ \*\_ \*-

1.	a. Explain the terms Business Intelligence and business analytics	2x5																				
	b. What are BI project team roles?	=10																				
	c. What are the measures to check performance of classifier?																					
	d. What are various perspectives of balanced scorecard?																					
	e. How NoSQL is different from SQL?																					
Section A																						
2.	List various types of OLAP servers. Describe various features of OLAP. Explain rollup, drilldown, slicing, dicing and pivot operations in OLAP.	10																				
3.	a. Explain the applications of data profiling.	5																				
	b. Describe star and snowflake schema in multidimensional data modelling	5																				
4.	Name any five types of activities that are part of ETL process. Which of these is time consuming? Explain any two.	10																				
Section B																						
5.	Consider the following dataset and describe the working of k-NN classification algorithm.	10																				
	<table border="1"> <thead> <tr> <th>Name</th> <th>Acid Durability</th> <th>Strength</th> <th>Class</th> </tr> </thead> <tbody> <tr> <td>t1</td> <td>7</td> <td>7</td> <td>B</td> </tr> <tr> <td>t2</td> <td>7</td> <td>4</td> <td>B</td> </tr> <tr> <td>t3</td> <td>3</td> <td>4</td> <td>C</td> </tr> <tr> <td>t4</td> <td>4</td> <td>4</td> <td>C</td> </tr> </tbody> </table>	Name	Acid Durability	Strength	Class	t1	7	7	B	t2	7	4	B	t3	3	4	C	t4	4	4	C	
Name	Acid Durability	Strength	Class																			
t1	7	7	B																			
t2	7	4	B																			
t3	3	4	C																			
t4	4	4	C																			
	Find the class of test data where Acid Durability=3 and Strength=7.																					
6.	Explain the concepts of Balanced scorecards and dashboards for enterprise reporting. Explain the measures in scorecards.	10																				

(2)

7.	For the following given transaction dataset generate rules using Apriori algorithm. Consider values as support=30% and confidence=80%	10																
	<table border="1"><thead><tr><th>Transaction ID</th><th>Items Purchased</th></tr></thead><tbody><tr><td>t1</td><td>Paneer, Chicken, Milk</td></tr><tr><td>t2</td><td>Paneer, Cheese</td></tr><tr><td>t3</td><td>Curd, Boots</td></tr><tr><td>t4</td><td>Paneer, Chicken, Curd</td></tr><tr><td>t5</td><td>Paneer, Chicken, Clothes, Milk, Curd</td></tr><tr><td>t6</td><td>Chicken, Clothes, Milk</td></tr><tr><td>t7</td><td>Chicken, Milk, Clothes</td></tr></tbody></table>	Transaction ID	Items Purchased	t1	Paneer, Chicken, Milk	t2	Paneer, Cheese	t3	Curd, Boots	t4	Paneer, Chicken, Curd	t5	Paneer, Chicken, Clothes, Milk, Curd	t6	Chicken, Clothes, Milk	t7	Chicken, Milk, Clothes	
Transaction ID	Items Purchased																	
t1	Paneer, Chicken, Milk																	
t2	Paneer, Cheese																	
t3	Curd, Boots																	
t4	Paneer, Chicken, Curd																	
t5	Paneer, Chicken, Clothes, Milk, Curd																	
t6	Chicken, Clothes, Milk																	
t7	Chicken, Milk, Clothes																	

- \*\_\*\_\* -