23CBA523N

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)

BCom DEGREE EXAMINATION DECEMBER 2025
(Fifth Semester)

Branch – **COMMERCE (BUSINESS ANALYTICS)**

MAJOR ELECTIVE COURSE – I: DATA MINING AND BUSINESS INTELLIGENCE

Time : Three Hours Maximum : 75 Marks

SECTION-A (10 Marks)

Answer **ALL** questions

ALL questions carry **EQUAL** marks **(10×1=10)**

Module No.	Question No.	Question	K Level	CO
1	1	Which of the following is not a characteristic of Data Warehousing? a) Subject-oriented b) Integrated c) Volatile d) Time-variant	K1	CO1
	2	Metadata in a Data Warehouse is_____ a) Data about data b) User queries c) Fact tables d) Dimensions	K2	CO1
2	3	OLAP systems are mainly used for_____ a) Transaction processing b) Analytical processing c) File management d) Data entry	K1	CO2
	4	The schema with a central fact table connected to dimension tables is_____ a) Snowflake b) Star c) Fact constellation d) None	K2	CO2
3	5	KDD is an acronym for_____ a) Knowledge Discovery in Databases b) Key Data Design c) Knowledge Design Data d) Known Data Discovery	K1	CO3
	6	Which is not part of data preprocessing? a) Data cleaning b) Data integration c) Data encryption d) Data reduction	K2	CO3
4	7	The Apriori algorithm is applied in_____ a) Clustering b) Association rule mining c) Classification d) Regression	K1	CO4
	8	Market Basket Analysis is related to: a) Regression b) Clustering c) Association rule mining d) Data reduction	K2	CO4
5	9	Data Mining in Banking is applied for: a) Credit risk management b) Fraud detection c) Customer segmentation d) All of the above	K1	CO5
	10	A Data Scientist is primarily responsible for a) Data entry operations b) Extracting insights from data c) Managing file systems d) Running OLTP transactions	K2	CO5

Cont...

SECTION-B (35Marks)

Answer **ALL** questions
ALL questions carry **EQUAL** Marks (5 ×7=35)

Module No.	Question No.	Question	K Level	CO
1	11.a.	Define Data Warehousing and list its essential Characteristics.	K2	CO1
		(OR)		
	11.b.	Explain the need for Data Warehousing in Business Intelligence.		
2	12.a.	Differentiate OLAP and OLTP with examples.	K3	CO2
		(OR)		
	12.b.	Summarize OLAP operations.		
3	13.a.	Illustrate the steps of the KDD process.	K3	CO3
		(OR)		
	13.b.	Discuss data reduction techniques in preprocessing.		
4	14.a.	Express and Demonstrate the Apriori algorithm with examples.	K3	CO4
		(OR)		
	14.b.	Explore Associative Classification.		
5	15.a.	Discriminate Data Mining applications in the Retail Industry.	K4	CO5
		(OR)		
	15.b.	Explain the phases of the Data Analytics Life Cycle.		

SECTION-C (30 Marks)

Answer **ANY THREE** questions
ALL questions carry **EQUAL** Marks **(3 ×10=30)**

Module No.	Question No.	Question	K Level	CO
1	16	Define Data Warehouse and describe its building blocks and features.	K3	CO1
2	17	Explain OLAP schemas : Star, Snow flake, and Fact Constellation with neat diagrams.	K3	CO2
3	18	Explain different steps in Data Preprocessing with suitable examples.	K3	CO3
4	19	Analyse and Discuss the A priori algorithm and the improvements made for efficiency.	K4	CO4
5	20	Evaluate Data Mining applications in Banking and Fraud Detection with case-oriented discussion.	K5	CO5

Z-Z-Z END