

PSG COLLEGE OF ARTS & SCIENCE
(AUTONOMOUS)
BBA DEGREE EXAMINATION MAY 2026
(Fourth Semester)

Branch – **BUSINESS ADMINISTRATION (INFORMATION SYSTEMS)**
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)

Question No.	Question	K Level	CO
1	Which of the following is a data mining task? a. Data Cleaning b. OLAP c. Classification d. Data Integration	K1	CO1
2	Which of the following is a characteristic of OLAP systems? a. Fast insert operations b. High normalization c. Multi-dimensional analysis d. Transaction processing	K2	CO1
3	What is the main goal of data integration? a. To remove noise from the data b. To combine data from multiple sources c. To analyze data patterns d. To normalize data values	K1	CO2
4	Data cleaning deals with: a. Deleting data b. Formatting data c. Identifying and correcting errors d. Data mining	K2	CO2
5	Which of the following is commonly used for mining association rules in large databases? a. K-means b. Apriori Algorithm c. Decision Trees d. Linear Regression	K1	CO3
6	Which of the following is a type of Boolean association rule? a. IF age > 30 THEN buy milk b. IF item A and item B are bought, THEN item C is also bought c. SUM(sales) > 100 d. WHERE price BETWEEN 10 and 20	K2	CO3
7	Which of the following is an example of transactional processing? a. Sales report generation b. Inventory forecasting c. Bank ATM withdrawal d. Customer segmentation	K1	CO4
8	How does Business Intelligence help in decision-making? a. By automating all manual tasks b. By reducing employee strength c. By providing data-driven insights d. By increasing raw material usage	K2	CO4
9	What does ETL stand for in BI integration? a. Evaluate, Transform, Load b. Extract, Transform, Load c. Encode, Transmit, Learn d. Extract, Transmit, Link	K1	CO5
10	Which of the following best describes a BI dashboard? a. A programming script b. A visual display of key performance indicators c. A security firewall d. A user access policy	K2	CO5

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

Question No.	Question	K Level	CO
11.a.	Classify data mining systems based on the type of data to be mined and techniques used.	K2	CO1
	(OR)		
11.b.	What is a Data Warehouse? How is it different from a database? Explain with an example.		
12.a.	Differentiate between data cleaning and data reduction. Why are both necessary before performing data mining?	K2	CO2
	(OR)		
12.b.	Explain the importance of data preprocessing in the data mining process. Highlight its major steps.		
13.a.	Differentiate between single-dimensional and multidimensional association rules with suitable examples.	K3	CO3
	(OR)		
13.b.	Explain the key steps involved in mining association rules from transaction data with suitable examples.		
14.a.	Describe the relationship between changing business environments and the need for computerized decision support.	K3	CO4
	(OR)		
14.b.	Apply the BI framework to a retail business. How can it help to improve sales performance?		
15.a.	Analyze the risks and challenges faced during the integration of BI systems with legacy databases.	K4	CO5
	(OR)		
15.b.	Evaluate the impact of poor data quality on the success of a BI implementation.		

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

Question No.	Question	K Level	CO
16	Explain the architecture of a data warehouse with a neat diagram.	K3	CO1
17	Evaluate the significance of discretization and concept hierarchy generation in simplifying large business datasets for meaningful pattern discovery. Include advantages and limitations.	K4	CO2
18	Evaluate the strengths and limitations of association rule mining in business decision-making.	K4	CO3
19	Discuss the framework for Business Intelligence and explain each layer with examples.	K2	CO4
20	Analyze how real-time data integration affects business agility and operational efficiency in a BI environment.	K4	CO5