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**BTECH**  
**(SEM V) THEORY EXAMINATION 2024-25**  
**BUSINESS INTELLIGENCE AND ANALYTICS**

TIME: 3 HRS

M.MARKS: 70

**Note:** Attempt all Sections. In case of any missing data; choose suitably.

## SECTION A

**1. Attempt all questions in brief. 2 x 07 = 14**

Q no.	Question	CO	Level
a.	Define Business Intelligence (BI)?	1	K1
b.	Name one common tool used for Business Intelligence.	1	K1
c.	Define data mining? Give example	2	K1
d.	With example define "validation" in Business Intelligence	3	K1
e.	Differentiate between data validation and data cleaning?	3	K3
f.	Why is the analytics process important in BI?	4	K1
g.	Define Business Activity Monitoring (BAM)?	5	K1

## SECTION B

**2. Attempt any three of the following: 07 x 3 = 21**

a.	Discuss the history and evolution of Business Intelligence. Describe its origins, key milestones in its development?	1	K2
b.	Explain the architecture of a data mining system. Describe the different stages involved in the data mining process?	2	K2
c.	Describe the process of data transformation and its significance in preparing data for Business Intelligence and analytics?	3	K2
d.	Explain descriptive analytics in the context of Business Intelligence. Discuss how descriptive analytics uses historical data to summarize?	4	K2
e.	Describe Complex Event Processing (CEP) and its role in Business Intelligence?	5	K2

## SECTION C

**3. Attempt any one part of the following: 07 x 1 = 07**

a.	Explain the importance of effective and timely decision-making in Business Intelligence. How does BI enable organizations to make informed decisions in real-time?	1	K2
b.	Describe the architectural representation of Business Intelligence?	1	K2

**4. Attempt any one part of the following: 07 x 1 = 07**

a.	Discuss the functionalities and classifications of data mining. What are the key techniques used in data mining?	2	K2
b.	Define data warehousing and explain its importance in the context of Business Intelligence. Discuss the architecture of a data warehouse?	2	K4

**5. Attempt any one part of the following: 07 x 1 = 07**

a.	Explain techniques sampling, data selection, and Principal Component Analysis (PCA). How do these methods help in reducing computational complexity while preserving the essential features of the data?	3	K2
b.	Describe data discretization and its role in the data preparation process.	3	K2



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**6. Attempt any one part of the following: 07 x 1 = 07**

a.	Discuss common techniques used in predictive analytics?	4	K2
b.	Explain the importance of social media analytics in Business Intelligence?	4	K2

**7. Attempt any one part of the following: 07 x 1 = 07**

a.	Explain Business Activity Monitoring (BAM) and its role in Business Intelligence?	5	K1
b.	Define Root Cause Analysis (RCA) and explain its significance in Business Intelligence.?	5	K1

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