PAPER ID-310916

Roll No: ☐☐☐☐☐☐☐☐☐☐☐☐☐

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