M.Sc.(CS) (Sem-II)   July-2023

Computer Science : Paper IV - Elective II- Business Intelligence & Big Data Analytics (Business Intellingence).

Time: 2 1⁄2 Hours   **Marks 60**

N.B.

l) All questions are compulsory.
2) Figures to the right indicate marks.
3) Illustration, depth answers and diagram will be appreciated.
4) Mixing of sub-questions is not allowed.
5) Each question carries 5 marks.

Q.1	Attempt **Any Two** of the following:	**15 Marks**
a)	What is KDD? Explain the process of KDD in detail.	
b)	Explain in detail Business Intelligence Operational and Decision Support System.	
c)	What is Noisy data?	
d)	What is Binning? Explain Equal Width Binning , Equal Depth Binning	

Q.2	Attempt **Any Two** of the following:	**12 Marks**
a)	Write a note on data smoothing.	
b)	Explain in detail regression, clustering and sampling methods	
c)	Explain Virtual data warehouse	
d)	Explain 4th and 5th Normalization with Example	

Q.3	Attempt **Any Two** of the following:	**12 Marks**
a)	Explain the issues in data mining.	
b)	Illustrate OLTP systems in details	
c)	Identify and discuss the role of middleware tools.	
d)	What is Data cube operations?	

Q.4	Attempt **Any Two** of the following:	**12 Marks**
a)	Explain Market Basket Analysis with an example.	
b)	Explain FP-Growth algorithm with its advantages and disadvantages.	
c)	Define association rule in details.	
d)	Explain in details Hash tree	

Q.5	Attempt **Any Three** of the following:	**12 Marks**
a)	State the applications of data mining.	
b)	Differentiate among a data mart, an ODS, and an EDW.	
c)	Explain Data Mining Architecture.	
d)	Explain Apriori algorithm with its advantages and disadvantages.	

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