Paper ID : 250241

Roll No: | | | | | | | | | | | | | |

MCA
(SEM IV) THEORY EXAMINATION 2024-25
DATA ANALYTICS

TIME: 3 HRS **M.MARKS: 100**

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

SECTION A

1. Attempt *all* questions in brief. **2 x 10 = 20**

Q No.	Question	CO	Level
a.	Explain various applications of data analytics.	1	K2
b.	Differentiate between Analysis and Reporting	1	K2
c.	Define Bayesian inference.	2	K1
d.	Explain the stochastic search method.	2	K2
e.	How is stream processing different from traditional data processing?	3	K1
f.	Describe data streaming	3	K1
g.	Explain the significance of support and confidence in the context of frequent itemsets.	4	K2
h.	Explain the method of mining frequent itemsets.	4	K2
i.	Explain R tool's graphical user interface	5	K2
j.	List two Data Visualization Tool	5	K1

SECTION B

2. Attempt any *three* of the following: **10 x 3 = 30**

Q No.	Question	CO	Level
a.	Explain all phases of the data analytics lifecycle.	1	K2
b.	Describe the concept of extracting fuzzy models from data.	2	K1
c.	Discuss the stock market prediction case study.	3	K2
d.	Differentiate between CLIQUE and ProCLUS clustering.	4	K4
e.	Describe Hadoop and its architecture.	5	K2

SECTION C

3. Attempt any *one* part of the following: **10 x 1 = 10**

Q No.	Question	CO	Level
a.	How the data analytics is important for various industries? Explain with an example.	1	K2
b.	Discuss Bigdata, its characteristics and sources of data.	1	K2

4. Attempt any *one* part of the following: **10 x 1 = 10**

Q No.	Question	CO	Level
a.	Explain the concept of Principal Component Analysis (PCA).	2	K4
b.	Explain how support vector machines (SVMs) utilize kernel functions to handle non-linearly separable data.	2	K4

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5. Attempt any *one* part of the following: 10 x 1 = 10

Q No.	Question	CO	Level
a.	Illustrate the Real time analytics platform. Explain it with "Real time sentiment analysis" case study.	3	K3
b.	Illustrate the benefits and limitations of Filtering stream technique.	3	K3

6. Attempt any *one* part of the following: 10 x 1 = 10

Q No.	Question	CO	Level
a.	Explain hierarchical clustering with a suitable example.	4	K2
b.	Describe market-based modelling with a suitable example.	4	K2

7. Attempt any *one* part of the following: 10 x 1 = 10

Q No.	Question	CO	Level
a.	Explain MapReduce, Hive, Pig and HBase in Data Analytics.	5	K4
b.	Compare and contrast NoSQL databases with traditional SQL databases. List four main types of NoSQL databases.	5	K4